

From public health to print: an interdisciplinary
study of the presentation of cancer awareness
messages in UK newspapers

By

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Volume 1 of 2

A thesis submitted in partial fulfilment for the requirements for the
degree of Doctor of Philosophy at the University of Central Lancashire

December 2019

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ABSTRACT

National public health cancer awareness messages focus on raising awareness of cancer signs and symptoms and encouraging early diagnosis with the aim of increasing national cancer survival rates.

While national and regional newspapers are key targets for message dissemination, evaluation documents and a scoping review identified that their representation in UK newspapers is under-researched, particularly in regional publications. The language of cancer, which is a contentious issue, has also not been explored.

In response, this thesis makes an original contribution by examining how cancer awareness messages are reported in UK newspapers, and the reasons for this, within a public health context. An interdisciplinary, multiple methods analysis is presented consisting of: 1) a manifest content analysis of the presence of key cancer awareness messages, and the people featured in, 447 national and regional UK newspaper articles, 2) a corpus linguistic analysis of the articles' language (specifically, word collocation, key words and key semantic domains), 3) a thematic analysis of fourteen semi-structured interviews with journalists and press officers. Integrated analysis was conducted using the 'following a thread' approach.

Cancer awareness messages were lacking, even in articles that explicitly highlighted the awareness campaign. People featured tended to be unrepresentative of those most at risk of cancer. Cancer was often framed in terms of negative outcomes and unpleasant treatment. Battle metaphor was prevalent. Interviews suggested that newsworthiness

factors and journalism norms are contributors to this, but that scope for change may be limited.

Currently, UK newspaper reporting of cancer often does not reflect contemporary medical opinion, may skew public perceptions of risk and reinforce cancer fear. This may contribute to delayed diagnosis and, potentially, negatively influence survival rates. Future research is needed to test the assertions of this work but may also benefit from interdisciplinary collaborative efforts to improve approaches to public health message dissemination.

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ACKNOWLEDGEMENTS

I would like to dedicate this thesis to my father, Ray. He was so excited at the prospect of me having the chance to undertake a funded PhD. Every time we spoke he asked if there was any news on the funding. He never found out that the application was successful. He would have been so happy that I got the opportunity and even happier that the journey is now complete, so this is for him. Thank you for everything you did for me.

I am very grateful to have had a fantastic supervisory team throughout this journey. I would like to everyone who has been a part of the team over the years; whilst the members changed, the quality and level of support remained constant. Dr Aengus Kelly for the qualitative support and helping me fine-tune the story, Dr Andrew Hobbs and Professor Paul Egglestone for bringing their journalism experience and insights, which were critical for me as a non-journalist. In particular, I would like to thank the two constant members of my supervisory team, Professors Paola Dey and Dawn Archer who have been a constant source of support, feedback, invaluable advice and have shared their expertise freely since the beginning. I couldn't have done this without them (and extra thanks to Paola for encouraging me to do this in the first place – I know it took immense patience!)

I'd like to thank the wonderful people I have shared an office with who allowed me to have a good moan or go out for cake when it became difficult – Emeka, Dan, Victoria, Olu, Nicola, Jenni, James, Lucy, Angelos, and Jialan.

My thanks to my mum, Sybil and brother, Ian, for helping with the inevitable “does this make sense to you if I phrase it like this?” phone calls and listening to research presentation rehearsals.

Finally, my wonderful girlfriend Katie for listening whilst I talked myself round and round in circles trying to find the story I wanted to tell, for offering endless encouragement, reminding me to take a break and crafting the best homemade curries at the end of a long day. It really did make all the difference.

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ABBREVIATIONS

BCOC: Be Clear on Cancer

BME: Black and Minority Ethnic

CAM: Cancer Awareness Measure

CAT: Cancer Awareness Toolkit

CCG: Clinical Commissioning Group

CRUK: Cancer Research UK

DoH: Department of Health

EAGC: Expert Advisory Group on Cancer to the Chief Medical Officers of England and Wales

GP: General Practitioner

HPV: Human Papilloma Virus

ICBP: International Cancer Benchmarking Partnership

ICT: Independent Cancer Taskforce

LSCCN: Lancashire and South Cumbria Cancer Network

MDT: Multidisciplinary Team

NAEDI: National Awareness and Early Diagnosis Initiative

NHS: National Health Service

NCAT: National Cancer Action Team

NCEI: National Cancer Equality Initiative

NCIN: National Cancer Intelligence Network

NCRI: National Cancer Research Institute

NICE: The National Institute for Health and Care Excellence

ONS: Office of National Statistics

PCT: Primary Care Trust

PR: Public Relations

UK: United Kingdom

US(A): United States (of America)

WHO: World Health Organization

GLOSSARY OF TERMS

Cancer awareness

(Public) knowledge of the signs and symptoms of, and risk factors for, cancer and the existence of screening programmes (Cancer Research UK (CRUK), 2018a).

Case study

An individual account used to illustrate a wider story or trend (Harcup, 2014).

Collocation

Term introduced by J.R. Firth in his semantic theory to designate characteristic word combinations which have developed an idiomatic semantic relation based on their frequent co-occurrence. Collocations are, therefore, primarily semantically (not grammatically) based, e.g. dog: bark, dark: night (Bussman, 1996).

Copy

The text of a story (Harcup, 2014).

Incidence

Cancer incidence is the number of new cases of cancer diagnosed in a specific population within a specific period of time, usually a year. It usually only refers to primary cancers and does not include secondary cancers or recurrences (CRUK, 2014a).

Inequalities

Inequalities refer to: “differences between individuals’ cancer experience or outcome which result from their social-economic status, race, age, gender, disability, religion or belief, sexual orientation, cancer type or geographical location” (All Party Parliamentary Group on Cancer, 2009, p.9). These differences may include variation in “survival, prevalence, awareness, stage of diagnosis, screening, treatment, patient experience end of life care” (National Cancer Intelligence Network, 2010).

Metastasised

Cancer that has spread to other parts of the body (CRUK, n.d.a).

Prevalence

Cancer prevalence provides a 'snapshot' of the number of people who are alive on a particular date, having previously been diagnosed with cancer in a specified geography and within a specified time frame (CRUK, 2017a).

Semantic domain/semantic field

Term introduced by Trier (1931) to denote a set of semantically related words whose meanings delimit each other and are said to cover a whole conceptual or objective field without gaps (Bussman, 1996).

Survival

Cancer survival is the percentage of people still alive after a specified amount of time, often 1, 5 or 10 years after a diagnosis of cancer at a specific time (e.g. 2010-11). It usually only refers to primary cancers and does not include secondary cancers or recurrences (CRUK, 2014b).

CHAPTER 1: INTRODUCTION

1.1: Overview

This thesis investigates how public health cancer awareness messages are represented in newspapers in the United Kingdom (UK). Cancer awareness refers to (public) knowledge of the signs and symptoms of, and risk factors for, cancer and may also be used in relation to awareness of the existence of screening programmes (Cancer Research UK (CRUK) 2018a). The thesis sits within the context of a public health approach to improving cancer survival and is concerned with newspaper articles featuring people who have experienced cancer, as well as articles that explicitly relate to a national cancer awareness campaign called *Be Clear on Cancer (BCOC)*; described in more detail in section 1.5). This research will contribute towards public health experts' understanding of how public cancer awareness messages are disseminated through newspapers, the language used to do so, and what implications this may have for consumers' levels of cancer awareness. It also examines why articles are written in this way by reporting the experiences of the people who disseminate, and report, such messages.

This thesis is interdisciplinary. While it focusses on a public health issue, it does not use purely public health research approaches. Instead, it sits between three disciplines; public health, corpus linguistics, and journalism. The reason for this is perhaps best explained by providing a short history of how the thesis came about. Some years ago, the PhD student and one of the supervisory team (PD) undertook some research to identify whether the people featured in newspaper articles about ovarian cancer were

typical of the at-risk population. The amount of educational content relating to public health cancer awareness messages was also assessed using manifest content analysis (described in more detail in section 5.1.2). This initial piece of research was undertaken from a public health perspective. As a discipline, public health has been defined as “the art and science of preventing disease, prolonging life and promoting health through the organized efforts of society” (Acheson, 1988), a definition that is currently used by the World Health Organization (WHO; n.d.). In real terms, this represents the responsibilities of public health as being to improve and protect the health of the population and reduce inequalities through various means, including health promotion campaigns, provision of vaccinations and screening, responding to health emergencies, and offering health advice (WHO, n.d.; Public Health England, n.d.). As with some current evaluations of the *BCOC* campaigns (see section 2.1.2) and papers presented in the literature review (chapter 3), what was important in this initial study was how information available at a population level may influence consumer perceptions and/or behaviours. The findings were, briefly, that the people featured were not representative of those most at risk, and that there were missed opportunities in the newspaper articles for educating the public. The conclusions were, as might be expected, that this may skew people’s perceptions about who is at risk, and that the amount of educational content featured may not facilitate consumers making an informed decision to visit their General Practitioner (GP), as recommended by the *BCOC* campaign. However, attempts to publish the paper were unsuccessful. In part, the reviewers felt that there was insufficient knowledge of how newspapers operate, and it was questioned how novel the findings were.

The project was put aside for some time, until a chance meeting with another member of the supervisory team (DA). Discussions suggested that there may be benefits in combining the previous work with additional corpus linguistic analyses in order to look at the language of these articles and what the potential influence could be on reader attitudes and perceptions. The discipline of corpus linguistics is the study of language, in respect of its patterning and structure, which is analysed via collections of naturally-occurring examples of language, known as corpora (Bennett, 2010, p.2). In basic terms, this involves the analysis of large quantities of text, such as multiple newspaper articles, with computer software. As will be demonstrated later in section 2.3, the language of cancer is a contentious issue, with metaphors around cancer having the potential to engender feelings of blame, fatalism and disempowerment (for example, Sontag, 1979; Clarke, 1992; Frank, 1997). It therefore makes sense to consider the use of corpus linguistic analytic techniques to determine whether such metaphors contribute to the fatalistic perceptions of the public towards cancer (for example, MacDonald et al 2006; Scanlon et al, 2006; LiveSTRONG, 2007; Robb et al 2014; Whitaker, 2015; 2016a; see section 2.3). These discussions formed the groundwork for what would eventually become the PhD, however, there was still an element missing, on the basis of the comments of the article reviewers. Namely, it was necessary to work with experts from the field of journalism (PE and AH) in order to gain insights into the context in which the study was taking place. The way in which the individual approaches are combined is described later in chapter 4. However, what should be highlighted here is that the interdisciplinary nature of the thesis has implications for its structure, which is outlined below:

- Chapter 1 (the current chapter) introduces the reader to the public health issue of interest, which is relatively poor cancer survival statistics in the UK. In particular, it will draw attention to one of the proposed reasons for poorer survival being patient delay in presenting to their GP with potential cancer symptoms and a public health awareness campaign developed in response to this, known as *Be Clear on Cancer (BCOC)*.
- Chapter 2 will describe why newspapers are a key target for the dissemination of key cancer awareness messages and describe the influence that newspapers might be expected to have on their readers, before describing some of the factors thought to influence newspaper article production in general.
- Chapter 3 is the literature review and will highlight what is currently known about the extent to which public health messages about cancer are featured in newspaper articles. The research question and study objectives are introduced at the end of chapter 3.
- Chapter 4 introduces the methodology utilised in this thesis, namely an interdisciplinary, multiple methods approach.
- Chapter 5 then describes the individual methods utilised in each of the three composite studies.
- Chapter 6 presents the results. It begins by explaining how the results are to be presented in line with an interdisciplinary, multiple methods approach, before presenting the findings of the three studies in a single narrative.
- Chapter 7 is the discussion and situates the findings of the thesis within the extant academic literature and provides potential explanations for the findings.

- Chapter 8 then highlights the extent to which the research questions and objectives have been addressed and the implications of the thesis for both public health practitioners and future research.

The current chapter now proceeds with describing the issue at the heart of this work - that of low cancer survival rates in the UK. It firstly provides some statistical data regarding number of cancers diagnosed and survival rates for context in section 1.2, before section 1.3 details some of the proposed reasons for the current statistics relating to early diagnosis. A modern history of the cancer strategy in England is then presented in section 1.4, before section 1.5 describes, in detail, one initiative which is of particular relevance to the thesis; the national cancer symptoms awareness and early diagnosis campaign, *BCOC*.

1.2: The current picture of cancer survival in the UK

According to CRUK (2018a), there were 359,960 cases of cancer registered in the UK in 2015. There is variation in terms of the population groups most likely to get cancer and who are most likely to die from cancer. Cancer incidence rates (that is, the number of new cases of cancer diagnosed in a specific population within a specific period of time; (CRUK, 2014a) of all cancers (except sex-specific, breast, lung and non-melanoma skin cancer) are over 50% higher in males than females, according to a report prepared by the National Cancer Intelligence Network (NCIN; Department of Health (DoH), 2015). The same report reveals that cancer incidence rates are higher amongst people with a higher degree of deprivation. This may be linked to lifestyle factors; for example, smoking is higher in more deprived groups. Some cancers are more common amongst

particular ethnic groups. As an example, black males have an increased likelihood of a prostate cancer diagnosis; 40% of cancers in Black men represent prostate cancer, compared with only 15% of Asian men and 25% of men overall.

In terms of survival rate, which is defined as the proportion of those diagnosed with cancer who are still alive after a given period (CRUK, 2014b), people over 75 years of age are less likely to be alive one year following a cancer diagnosis than younger age groups (CRUK, 2018b). Generally, death from cancer is higher in men (Independent Cancer Taskforce (ICT), 2015), but this varies by cancer site; males are more likely to survive one year than females with colorectal cancer, but the pattern is reversed for lung cancer and malignant melanoma. Overall, survival rates for some forms of cancer in the UK have improved (breast, prostate, testicular, malignant melanoma), while other have not (lung, pancreas, brain and oesophageal; ICT, 2015). However, there is also variation in terms of location. Across England, there are 195 separate Clinical Commissioning Groups (CCGs), each of which is responsible for the health of the local population. They commission services for the local population based upon the specific context of that area (National Health Service (NHS) Clinical Commissioners, n.d.). The difference in all-cancer one-year survival between the best and poorest performing CCGs has improved, but survival in Richmond (South West London) is 10 percentage points higher than in both Barking and Dagenham (East London) and Medway (Kent), with one-year survival being 77.4% and 67.0% respectively (ONS, 2017)¹. Overall, patients in more deprived areas are less likely to survive one year, particularly for colorectal, lung and ovarian

¹ Other high performing areas include Central London (Westminster; 77.1%), West London (76.5%), Barnet (North London; 76.4%) and Surrey Heath (76.3%). Poorer performing areas include Leicester City (67.3%), Swale (Kent; 67.3%), Sandwell and West Birmingham (68.0%) and Stoke on Trent (68.0%). The average one-year survival in England is 72.3%.

cancer (ICT, 2015). Socio-economic status has also been linked to the stage at which a cancer is diagnosed. Greater levels of deprivation are associated with later stage diagnosis, at least for some cancer types (e.g., melanoma, breast, endometrial and prostate cancer), and this may be linked to knowledge of cancer symptoms (Lyratzopoulos et al, 2013).

Overall, the most recent survival data for Europe shows that, on average, 49% of UK cancer patients are alive five years after their diagnosis. The European average is 54.6%, while the best performing country (Sweden) has a five-year survival rate of 64%. While improvements have been made over the last fifteen years, the UK is still frequently in the bottom half of countries regarding five-year survival for specific cancers (Allemani et al, 2018). Five-year survival rates for all cancers, except melanoma skin cancer, is lower in the UK than the European average, and lower than other Western European countries, such as Italy, Spain, France and Germany for lung, breast, bowel, prostate, pancreatic and ovarian cancers as well as Hodgkins and Non-Hodgkin's lymphoma (de Angelis et al, 2014).² UK survival rates are also some of the lowest when compared with countries with comparable wealth, universal access to health care and longstanding, high-quality, population-based cancer registration (i.e., Australia, Canada, Sweden, Denmark and Norway; International Cancer Benchmarking Partnership (ICBP), 2014).

The ICBP module 1 research group (ICBP, 2014) suggest that these international differences are likely to be, at least in part, due to differences in the stage at which cancer is diagnosed, and differences in access to treatments. Indeed, it has been found

² The interested reader can find more information here:
<http://cancercomparator.abpi.org.uk/survival.shtml>.

that a significant proportion of patients in the UK are diagnosed at a late stage; around 45% of patients are diagnosed at stage 3 (i.e., the cancer may have started to spread), and around 26% are diagnosed at stage 4 (i.e., the cancer has metastasised; CRUK, 2017b).

1.3: Proposed reasons for late-stage diagnosis

The reasons for later-stage diagnosis in England (and the UK) are multifaceted. Research from 2011 suggests that the 'gatekeeper' system (whereby patients are unable to access specialist services without first being referred by a GP may contribute to later diagnosis (Vedsted and Olesen, 2011). An international, comparative study carried out as part of the ICBP suggests that GPs in the UK were less likely to act on hypothetical patient vignettes in terms of ordering investigations than equivalent health care professionals from Australia, Canada, Sweden, Denmark, or Norway. It has been suggested that this may be a consequence of the 'gatekeeper' GP role and that this may contribute to later-stage diagnosis (Rose et al, 2015), while others have highlighted that the referral pathways available to GPs in a gatekeeper role may also be important (Vedsted and Olesen, 2015). Other proposed influences on later diagnosis are that GPs may have trouble identifying those patients at greatest risk of cancer, the length of time taken for patients to receive treatment, and inequalities (or variation) in the provision and/or quality of services across the country (DoH, 2000). For example, patients over 80 years of age are less likely to receive active cancer treatment for lung cancer than those under 65 (Health and Social Care Information Centre, 2014). Variation in active treatment for lung cancer has also been identified across the country and would appear to be associated with lung cancer survival rates (Møller et al, 2018). Issues within primary care

are just one potential contributor to early diagnosis rates and are provided as way of background information. They are beyond the scope of the thesis and referral decisions by GPs are not a part of this study. There are other influences, however, which are more pertinent to the current research.

Patient delay in going to their GP may contribute to later-stage diagnosis. The first suggestion is that patients may not be aware of the warning signs of cancer and hence may not know when to go to their GP (DoH, 2000). In other words, they may have low levels of cancer awareness. Studies suggest that there may be important gaps in symptom awareness in the general public, with further variation in awareness between minority ethnic and socio-economic groups (Robb et al, 2009; Waller et al, 2009, Nikšić et al, 2015). Those from lower socio-economic groups report lower symptom awareness (Nikšić et al, 2015). The older and younger population are less likely to recognise key symptoms such as lump, pain or changes in a mole (Nikšić et al, 2015). Some important knowledge gaps have also been noted in frontline health staff, in particular, regarding cancer risk factors (although awareness was higher than amongst the public; Cook et al, 2011).

However, symptom knowledge alone is not sufficient to determine whether or not someone goes to their GP with suspicious symptoms (Macdonald et al, 2006). A number of potential barriers to patient presentation at the GP have been identified; some of these are practical barriers, such as being too busy or difficulties in making an appointment (Robb et al, 2009; Donnelly et al, 2017). However, of more interest to this thesis are emotional barriers, such as fear. Fear of cancer and its treatment has been identified as a key mediator in patient help-seeking behaviour (Smith et al, 2005; Forbes

et al, 2014; Khakbazan et al, 2014; Whitaker et al, 2015; 2016a; Donnelly et al, 2017; Paxman et al, 2017). In the UK, over 30% of conscious delay in patient help-seeking when experiencing cancer symptoms was found to be related to fear (Forbes et al, 2014; Paxman et al, 2017), while a series of qualitative interviews by Robb et al (2014) found that the fear of cancer and its treatment was pervasive even though participants acknowledged advances in cancer treatment and survival. International studies have demonstrated that emotional barriers of embarrassment, fear of a cancer diagnosis and fear of wasting the doctor's time (or, not wanting to bother the doctor) were more likely to be reported by respondents from the UK than respondents from the other countries surveyed (Forbes et al, 2013), suggesting that embarrassment and fear may be a particular problem in the UK. Indeed, this has been highlighted in national cancer policy documents (DoH, 1995; 2000). Further, it has been shown that the fear of a cancer diagnosis in the UK is higher in those from lower socio-economic groups (Robb et al, 2009). Combined, these studies suggest that, while individual responses may vary contingent on a number of factors and the specific cancer involved, elevated levels of fear can result in delayed help-seeking, which may, in turn, influence early diagnosis and survival.

The factors outlined here represent a sample of issues thought to be key in explaining why UK survival rates lag behind comparable countries and many others in Europe. This is a long-standing problem and has been the focus of national policy since the mid-1990s. A recent history of cancer policy is outlined in section 1.4 (following).

1.4: A brief, recent history of cancer strategy in the UK with a focus on England

In order to fully understand approaches to improving rates of early diagnosis of cancer, it is first necessary to understand the context of cancer policy, before going on to explore how that policy is represented in UK newspapers. This section therefore aims to provide a brief overview of recent cancer policy in order to show how national initiatives have sought to improve cancer survival. It is divided into the time points at which relevant policy documentation has been published and makes reference to both the reports and relevant research papers, throughout. So as to provide the full picture of cancer policy, the section refers to a range of initiatives designed to improve cancer survival, although the focus is more on those relating to early diagnosis. Figure 1 provides a summary of the following sections, focusing on matters relating to early diagnosis.

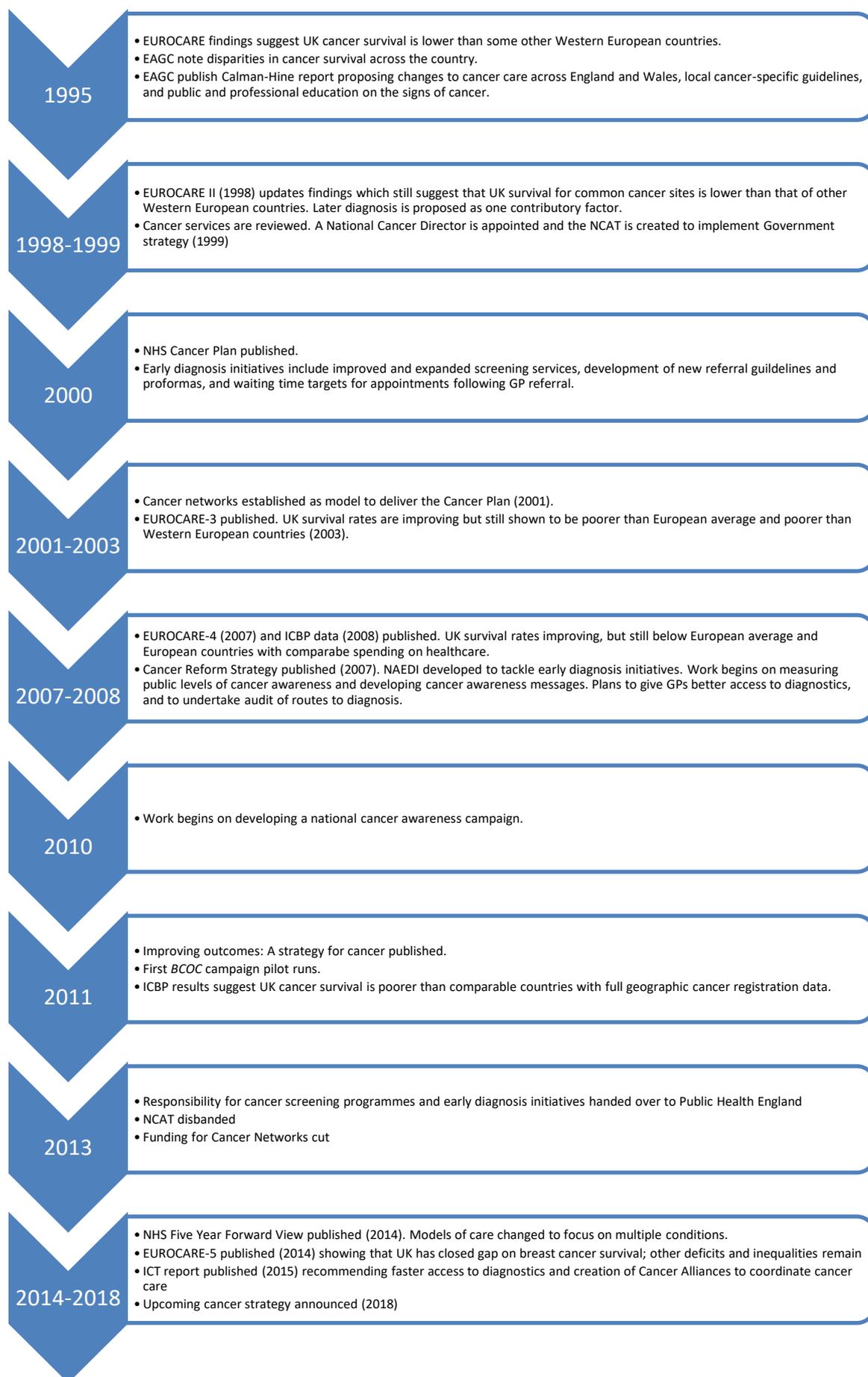


Figure 1: Summary of Government strategy related to early diagnosis of cancer

1.4.1: 1995-1999

EUROCARE 1&2 and the Calman-Hine Report

In 1995, the first evidence was presented suggesting that survival for some cancer sites in the UK was lower than other countries in Europe (Berrino, 1995, p.458-459). The study was known as EUROCARE and was based on data collected from 11 European countries (Denmark, England, Estonia, Finland, France, Germany, Italy, The Netherlands, Poland, Scotland, Spain and Switzerland) between 1978 and 1985. While there were methodological issues that meant that results should be interpreted with caution, it did generate huge interest across Europe, and some concern in the UK (Berrino et al, 1998; Coebergh et al, 1998). Around the same time, the Expert Advisory Group on Cancer to the Chief Medical Officers of England and Wales (EAGC) had noted variations in treatment outcomes across the country (DoH, 1995), which led to the development of a strategic framework created with the intent of ensuring equal, high standards of cancer care wherever people lived in England and Wales. This was known as the Calman-Hine Report (DoH, 1995). The report promoted the idea of a network of cancer care across England and Wales from local, primary care teams, to cancer units in district hospitals coordinated by a lead clinician. Larger general hospitals were to host cancer centres offering additional, specialist services. Care of patients within hospitals was to be managed by multidisciplinary teams (MDTs). The report also highlighted the importance of public and professional education to identify early cancer symptoms, along with the need for a patient centred-approach (DoH, 1995, p.6). The development of local, cancer-specific, guidelines for GPs to deal with potential cancer symptoms was also recommended (DoH, 1995, p.17). While no funding was available for the implementation of the report's recommendations, funding was provided for the

implementation of subsequent guidance documents on how to improve outcomes for specific cancers (Richards et al, 2018).

In 1998, the EURO CARE study was updated with data from patients diagnosed between 1985 and 1989 and six more countries (Austria, Iceland, Norway, Slovakia, Slovenia, and Sweden; Berrino et al, 1998). Again, there were caveats to the data, which were noted by the authors (Coebergh et al, 1998). However, the overall pattern of results still suggested that UK survival for common cancer sites, such as colorectal, lung, breast, ovarian and prostate was below the European average (Berrino et al, 1999, p.529).

In 1999, then-Prime Minister, Tony Blair, announced a review of cancer services, which included appointing the first National Cancer Director, Professor Mike Richards, and the founding of the National Cancer Action Team (NCAT; Richards et al, 2018). NCAT's role was to help implement Government cancer strategy across the patient pathway from diagnosis through to improving cancer information for patients (NCAT, 2012).

1.4.2: 2000-2006

The NHS Cancer Plan and EURO CARE-3

Five years after the Calman-Hine report, the DoH (2000) published the National Health Service (NHS) Cancer Plan. The Plan described itself as the *'first comprehensive strategy to tackle the disease'* (DoH, 2000, p.1) The report acknowledged the findings of the EURO CARE studies, stating that, while improvements have been made, cancer survival in England was, at the time, still below the European average and could be improved upon. To do this, the Cancer Plan (2000) set out plans to:

- Improve cancer prevention through stop-smoking and healthy eating initiatives, as well as increase public awareness of the signs and symptoms of cancer and the benefits of early diagnosis.
- Improve screening by extending the age of breast cancer screening, improving methods for existing screening programmes, piloting a colorectal screening scheme, investigating the appropriateness of screening for other cancers and introducing targets to reduce inequalities in screening uptake.
- Improve cancer services through new cancer guidelines and referral proformas, appointments of lead cancer GPs within Primary Care Trusts (PCTs) as well as increased funding for support services and palliative care.
- Reduce waiting times for diagnosis and treatment through the introduction of guidelines and targets. Specifically, a maximum wait of two weeks for an outpatient appointment following referral by a GP for suspected cancer was introduced, with a plan for a maximum one-month wait from GP referral to the beginning of treatment by 2005. This has since become known as the two-week wait pathway. Substantial investment was also pledged for cancer facilities including, for example, MRI and CT scanners.
- Improve treatment through increased funding to reduce inequalities in access to cancer drugs, continuing the use of MDTs to oversee the care of cancer patients, and development of national cancer datasets to record cancer incidence, survival and mortality as well as the quality of cancer treatment provided.
- Invest substantially in staff, in particular, for more nurses and radiographers.
- Increase funding for cancer research and development of National Cancer Research Institute (NCRI) to oversee, and identify gaps in, the cancer research

conducted across the country. The NCRI was a partnership between the Government, voluntary and private sectors.

- Monitoring progress of cancer initiatives through the Commission for Health Improvement and a peer-review process.

In response to the Calman-Hine report (DoH, 1995) recommendations, 28 cancer networks were created in 2001 that brought together health care providers, commissioners, the voluntary sector and local authorities in order to plan and deliver higher quality cancer care in their local areas (NCAT, 2012). Cancer networks were established as the organisational administrative model to oversee the implementation of the recommendations in the Cancer Plan (DoH, 2000).

In 2003, the next update to the EURO CARE study (EURO CARE-3; Coleman et al, 2003) was released. This update included data on cancer patients diagnosed between 1990 and 1994 who were followed up until the end of 1999. The countries participating now also included Czech Republic, Malta, Portugal, and Wales. While data represented nearly 25% of the population of Europe, data at country-level was still not complete; only data from Denmark, Estonia, Finland, Iceland, Malta, Scotland, Slovakia, Slovenia, Sweden, Norway and Wales covered the whole population. Coverage in other countries ranged from 2% to 63%, and in some countries was hospital based, meaning that not all cases may be counted, which introduced bias. In the UK, data was population-based, but not all cancer registries took part. In all, this means that some caution was still needed when interpreting the results. Nonetheless, the findings of EURO CARE-3 were similar to those of the first two phases, in that cancer survival for the UK would generally appear to be below the European average, and below other Western European countries, particularly

for women. The study did, however, highlight some significant improvements in survival, particularly in the case of breast, prostate, and colorectal cancers.

By 2006, the waiting time standards laid down in the NHS Cancer Plan (DoH, 2000) were being achieved; i.e., patients were starting their treatment within two months of receiving an urgent referral (Richards et al, 2018).

1.4.3: 2007-2010

EUROCARE-4 and the Cancer Reform Strategy

By 2007, the first results of EUROCARE-4 had been published. The latest data included people diagnosed between 1995 and 1999 and were followed up until the end of 2003. Despite the initiatives put in place, results suggested that survival in the UK was lower than that in Western Europe and also lower than in countries with similar spending on healthcare (Berrino et al, 2007). However, as with the EUROCARE-3 findings, improvements in UK survival were noted, and gaps in survival across Europe were narrowing (Coleman et al, 2003; Berrino et al, 2007). Some concerns still remained over the reliability of the data and whether findings from the UK could be compared with data from other countries. For example, Wilkinson (2007) reports an argument put forward by CRUK that, as the UK had full national cancer registry data by the time of EUROCARE-4, data from the UK could only be compared to other countries with full registry data, such as Sweden, Finland or Norway. Conversely, comparisons should not have been drawn with countries from which data only represented a small proportion of cancer diagnoses, such as Germany or France. However, Wilkinson (2007) also reported that the clinical director for cancer in the UK supported the EUROCARE-4

findings, believing that, while there were issues with the data, that differences between countries were “real differences” (p.965).

The Cancer Reform Strategy (DoH, 2007) aimed to build upon the work started as part of the NHS Cancer Plan (DoH, 2000), although, unlike the NHS Cancer Plan, no additional funding was available to implement the recommendations (Richards, 2018). Owing to increased knowledge about links between cancer and lifestyle factors, and persistent inequalities in cancer incidence, access to services and outcomes associated with socio-economic group, age, ethnicity, gender, disability, religion and sexual orientation, cancer prevention and reducing cancer inequalities became a major focus of the Cancer Reform Strategy (DoH, 2007). The Cancer Reform Strategy introduced a new approach to tackling inequalities in cancer incidence, mortality, access to screening and opportunities to take part in clinical trials and introduced the National Cancer Equality Initiative (NCEI). The NCEI was set up to bring together key stakeholders from health professional, academic, voluntary, and equality groups to develop protocols for research into cancer inequalities, test interventions, and advise on future policy.

Work on cancer prevention included the introduction of the Human Papilloma Virus (HPV) vaccine and legislation around smoking and diet. Smoking in public indoor places was banned in 2007, the legal age for purchasing tobacco was raised from 16 to 18, and hard-hitting images of the health effects of smoking on tobacco products were introduced in 2008 (DoH, 2007). Food labelling was changed to allow people to make more informed choices about their dietary intake. Furthermore, communications were designed to educate the public about the risks of poor diet, lack of exercise, drinking alcohol, smoking, and ultraviolet exposure.

Work on early diagnosis included further improvements to cancer screening programmes and the establishment of the National Awareness and Early Diagnosis Initiative (NAEDI). NAEDI had the overall aim of increasing cancer awareness and encouraging those with symptoms to present earlier to their GP. This is because an earlier cancer diagnosis, with expedited effective treatment, is usually associated with better survival (WHO, 2018). As part of this work, plans were put in place to measure public cancer awareness (which, as stated in section 1.3, demonstrated some important gaps in knowledge; Robb et al, 2009; Waller et al, 2009, Nikšić et al, 2015). Work began on developing cancer awareness campaigns for the public, based on regional projects that were underway at the time, with development of the first campaign, which was a regional bowel cancer campaign, beginning in 2010 (Taylor and Radford, 2012).

Work on diagnosing cancer earlier also focussed on GPs and primary care. Plans were made to improve GP access to diagnostic tests and undertake national audits of patient routes to diagnosis. It was also suggested that GPs may be supported by the introduction of tools to help with clinical decision making regarding an individual patient's risk of cancer. A series of studies by Hamilton and colleagues were undertaken to try to identify which symptoms are associated with common cancers and to quantify the risk of cancer associated with particular symptoms (Hamilton, 2009). This avenue of research resulted in the development of the Hamilton Risk Assessment Tool, which was designed to help GPs decide whether, and how, to refer patients based upon their presenting symptoms (Hamilton, 2009).

Other pledges in the Cancer Reform Strategy (DoH, 2007) included improvements in treatment by reducing waiting times and investing in staff and technology, and further

improving supportive and palliative care through the National Cancer Survivorship Initiative. Existing standards of a 62-day wait for first treatment following GP urgent referral was expanded to include those identified as having potential cancer symptoms through the national screening programmes and any patient having a high risk of cancer at the discretion of cancer specialists. Patient experience and choice was to be improved, and the National Cancer Intelligence Network was also set up in order to improve information and data available on cancer.

1.4.4: 2011-2014

International Cancer Benchmarking Partnership, Improving outcomes: A Strategy for Cancer, the launch of the national cancer awareness campaigns, and EUROCARE-5

In 2011, the first data from the ICBP was released, which, unlike the EUROCARE studies, compared only countries with comparable spending on healthcare and with full cancer registry data. The findings were the same as that from the EUROCARE studies; that survival rates in the UK lagged behind comparable countries (ICBP, 2011).

The financial crisis of 2010 and associated austerity measures by the new Government brought about changes in funding and the structure of the NHS (Richards et al, 2018). Against this background, *Improving outcomes: A strategy for cancer* (DoH, 2011) marked the next stage in cancer policy in England. It continued the work outlined in the Cancer Reform Strategy (DoH, 2007), and set out a desire to bring survival rates in England in line with the best in the world, with the aspiration of saving an extra 10,000 lives every year. A major focus of this was increasing public awareness of cancer symptoms and encouraging them to present to their GP. Work continued on the development of the national signs and symptoms campaign in England that began in 2010, with the first

regional pilot of a bowel cancer campaign taking place in 2011. This campaign was named *Be Clear on Cancer (BCOC)* and is of particular interest to this thesis. The campaign is detailed in section 1.5, but, briefly, the *BCOC* campaigns aim to increase public awareness of key cancer symptoms and persuade them to go to their GP quickly should they notice any of the target symptoms. Specific campaigns exist for seven cancer sites, as well as a smaller number of more general campaigns (CRUK n.d.a).

There were few new initiatives outlined in *Improving outcomes: A strategy for cancer* (DoH, 2011). The Cancer Drugs Fund was created, offering patients access to cancer drugs that were not available on the NHS (Richards et al, 2018). However, no new funding was available for implementing the strategy, and annual funding increases for the NHS were smaller than they had been in previous years (Richards, 2018). In 2013, responsibility for the national screening programmes and for raising public awareness of cancer was handed over to the newly-formed Public Health England, NCAT was disbanded, and funding for cancer networks was cut (Richards, 2018).

In 2014, the NHS Five Year Forward View (NHS England, 2014) set out a vision for the future of the NHS, which was built around changing models of care. Patient empowerment was a key factor, along with a restructuring of services towards a model focused on multiple health conditions, rather than specific diseases. For example, GPs were given the option to work with other care providers to become local multispecialty community providers, and accident and emergency, urgent care, NHS 111, ambulance services and GP out-of-hours services were merged. This meant less of a cancer-specific focus than in previous years, although cancer was still highlighted as a key concern. Indeed, the NHS Five-Year Forward View (NHS England, 2014) was not a cancer-specific

document, but did emphasise persistent issues of late diagnosis, the need for public education, and inequalities in treatment and survival as pertaining to cancer. These assertions were supported by the newly released findings of EURO CARE-5 (De Angelis et al, 2014) which now covered patients diagnosed between 2000 and 2007 who were followed up until 2008. The study now contained data from 29 countries, of which 21 had full geographical coverage, representing over 10 million patients. The results of this study showed that, across Europe, cancer survival had increased, and that for breast cancer in particular, the gap between the best and worst performing countries had narrowed. However, the UK had the lowest level of 5-year survival for stomach, lung, ovarian, and kidney cancers with disparities in survival by age noted. In particular, older people with a breast or prostate cancer diagnosis were less likely to survive five years (De Angelis et al, 2014). This might be interpreted to mean that the initiatives employed by the Government have been working, but the improvements by other countries have been of a similar level, meaning that for the most part, the UK has been unable to close the gap in survival rates.

1.4.5: 2015-2018

Achieving World Class Cancer Outcomes

In 2015, an Independent Cancer Taskforce (ICT), comprising representatives from across the cancer community, published a report, *Achieving World Class Cancer Outcomes: A Strategy for England*, setting out recommendations for the future of cancer care in England. These recommendations were accepted in full by the DoH (Richards, 2018) and include:

- Further improvements in prevention and public health, such as reducing the prevalence of smoking and commencing a national action plan on obesity.
- Faster diagnosis achieved through better access to diagnostic tools.
- Improved patient experience, including online access to relevant documentation and a dedicated key worker to coordinate their care as well as better post-treatment care.
- Investment in research, staff, equipment and furthering of the Cancer Drugs Fund.
- Developing Cancer Alliances, which work in a similar way to the previous cancer networks, to bring together patients, providers and commissioners in order to improve and integrate care pathways.

At the end of 2018, then-Prime Minister, Theresa May, announced a dedicated cancer strategy in the upcoming NHS ten-year plan and has stated that the same ambition still stands – to improve UK cancer survival. What this will look like is currently unknown.

The above summary has demonstrated the wide-ranging initiatives that have been implemented historically. Of particular relevance to this thesis are those pertaining to achieving earlier diagnosis, in particular the national cancer awareness campaign, *BCOC*. The campaigns, and their development are outlined in section 1.5 (following).

1.5: The *Be Clear on Cancer* awareness campaign

The *BCOC* campaigns aim to increase public awareness of key cancer symptoms and persuade people to go to their GP quickly should they notice any of the target

symptoms. *BCOC* is a single brand, with specific campaigns targeted at specific cancer sites (that is, 'types' of cancer, for example, breast, bowel, ovarian etc.). All of the cancer-specific campaigns share essentially the same message, which is that, if you experience symptom x, for x amount of time, then you should go and see your doctor. The importance of the 'tell your doctor' message is highlighted by the aforementioned findings about uniquely British attitudes around being more worried or embarrassed about going to the GP (ICBP, 2014). The target audience of the *BCOC* campaigns is adults aged over 50 years from lower socio-economic groups owing to cancer incidence and mortality being higher in lower socio-economic groups and the fact that cancer incidence increases with age (e.g., DoH, 2007; CRUK, 2016). As stated previously, development began in 2010 with a regional pilot of a bowel cancer campaign. An evaluation report of the first regional campaign by Taylor and Radford (2012) reveals the development of the brand, which is now described.

Creative agencies were briefed to develop a campaign that allowed consumers to be clear on the symptoms of bowel cancer, understand the need to present to their GP, and understand the benefits of an earlier cancer diagnosis. The approach was informed by focus group discussions with at-risk populations, the adult children of the at-risk population and ethnic minority groups. Individual interviews were also held with GPs. M&C Saatchi were appointed to continue development of the campaign in conjunction with the DoH, and an example of a recent *BCOC* flyer and leaflet is shown in Figures 2 and 3. The *BCOC* brand logo was designed to look like a stamp, which was perceived by those consulted during the development phase to convey seriousness and authority. A straightforward tone was used in order to normalise (bowel) cancer and its symptoms and to reflect the conversations that the public may have with their GP. The final

campaign aimed to educate people about cancer symptoms and to grant them permission to go to their GP, whilst persuading them about the benefits of early presentation and reducing barriers to presentation. This is an important aspect given the specific barriers to help seeking in the UK, which (as stated in section 1.3) include embarrassment, fear (particularly amongst the lower socio-economic groups targeted by the *BCOC* campaigns), and not wanting to bother the doctor (Robb et al, 2009; Forbes et al, 2013). For each subsequent campaign, the DoH has worked with panels of experts from disciplines such as public health, primary and secondary care, academia, communication and the third sector. Continued piloting and testing of the campaigns with GPs and the target audience has occurred for each campaign (CRUK, 2014c).



Figure 2: The most recent (at time of writing) poster for the *BCOC* bowel cancer campaign



Dr Rajive Mitra

Let's be clear.
If for the last 3 weeks you've had blood in your poo or it's been looser, tell your doctor.

BE CLEAR ON CANCER



Let's be clear...

Dr Terry Bowley

...about bowel cancer

Bowel cancer is England's third most common cancer, with around 34,000 new cases each year. When it comes to cancer death, it's the second biggest killer, but it needn't be that way.

Bowel cancer affects both men and women. Most people diagnosed with the disease are over 50 and those with a family history of bowel cancer are more at risk. However, the sooner a patient is diagnosed, the better their chances of successful treatment.

...about how to spot it

See your doctor straight away if, for the last three weeks, you've had blood in your poo or looser poo. Other bowel cancer symptoms include:

- A pain or lump in your tummy
- Feeling more tired than usual for some time
- Losing weight for no obvious reason

...about how important it is to see your doctor

You're not wasting anyone's time by getting it checked out and, if it's not serious, your mind will be put at rest. However, if it is a condition such as bowel cancer, early diagnosis can make all the difference. Over 90% of those diagnosed with early stage bowel cancer are successfully treated. A trip to your doctor's surgery could save your life.

Not all symptoms mean it's bowel cancer

They can be due to other conditions, such as haemorrhoids (piles), which may still need treatment. But don't try and diagnose yourself. Go and see your doctor now to find out for sure.

If you know anyone who has any of these symptoms, insist they see their doctor.

You can find your doctor's contact details online

...about how seeing your doctor early could save your life



As a nurse, I came across people with bowel cancer, but never thought it could happen to me. My symptoms included loose poo, occasional bleeding and some lower abdominal pain. My GP referred me to a consultant, who discussed treatment options. The care I received was first-class. I've had the all-clear for five years and can do everything I did before. I volunteer for local charities and enjoy swimming, walking my dogs and travelling.

Linda O'Donnell, aged 60



I started noticing that I was going to the toilet a lot more often and my poo was soft and loose. I did feel a little bit embarrassed about discussing my poo with my doctor, but she was very understanding. I finished my treatment in 2002 and I still live life to the full. I've turned my gardening hobby into my job, which keeps me fit. I'm glad I didn't leave it any longer before going to my doctor.

Lester Marriott, aged 61

Figure 3: A flyer for the most recent (at time of writing) BCOC bowel cancer campaign

At the time of writing, *BCOC* campaigns have been developed for the following cancer sites: bladder and kidney (as part of the blood in pee campaign), bowel, breast cancer in women over 70, lung, oesophago-gastric, ovarian and skin. There has also been a more general symptoms campaign that highlighted four of the most common cancer symptoms (entitled Know 4 Sure), and an abdominal symptoms campaign. These have all been subject to smaller-scale, local pilots in specific regions of the country, and most (blood in pee, bowel, breast cancer in women over 70, lung, oesophago-gastric) have subsequently been rolled out as national campaigns (CRUK n.d.a). More recently, the campaign has changed its focus slightly, to incorporate symptoms suggestive of heart disease and lung disease, as well as lung cancer. This respiratory symptoms campaign ran in the summers of 2016 and 2017 (CRUK, 2017c). The most recent campaign at the time of writing is a repeat of the national 'Blood in Pee' campaign, which focusses on bladder and kidney cancer.

1.6: Chapter 1 summary

Cancer survival in the UK has persistently been reported as being below the European average, and poorer than comparable countries in terms of spending on healthcare and with full geographical coverage of cancer registry data. There are also persistent inequalities in terms of cancer incidence and survival. The reasons for this are multifaceted, laying both in primary and secondary care, as well as with patients. Subsequent years of Government policy have sought to redress this with a focus on prevention, treatment, and early diagnosis. Population surveys suggest some knowledge gaps amongst the public regarding cancer signs and symptoms, while international comparisons show some unique perceptions amongst the UK population in terms of

increased fear and embarrassment and not wishing to bother the GP. These have been used as the basis for the development of a national cancer awareness campaign in England, *BCOC*, which seeks to educate the public about cancer signs and symptoms and encourage them to go to the GP early if they experience any of them, whilst minimising barriers to presentation, such as fear and embarrassment, with a view to effecting earlier diagnosis. This campaign is central to this thesis and the reasons why will be outlined in the next chapter, which will begin by explaining how the *BCOC* campaign messages are disseminated.

CHAPTER 2: DISSEMINATION OF CANCER AWARENESS

MESSAGES THROUGH THE MASS MEDIA

The aim of this chapter is to provide a justification for why the representation of cancer awareness messages in UK newspapers should be researched. To do this, the chapter will firstly describe the channels used by the *BCOC* campaigns to disseminate their messages and present evidence to support the use of the mass media for this purpose. The chapter will then explain the extent to which this has been evaluated in existing *BCOC* evaluations. The chapter will argue that the spread of *BCOC* cancer awareness messages has not been sufficiently considered and that assuming a simple effect of mass media exposure and message spread is too simplistic. In order to do this, it will draw upon communication theories (specifically, agenda-setting theory, McCombs and Shaw, 1972; cultivation theory, Gerbner and Gross, 1976; framing theory, Goffman, 1974; and gate-keeping theory, Lewin, 1947) and introduce the concept of language as being an important aspect of message spread. Finally, the chapter will conclude with an argument as to why newspapers are particularly important to investigate regarding message dissemination.

2.1: *BCOC* and the mass media

The *BCOC* campaign messages are disseminated through multiple channels. These include flyers and leaflets, social media, community engagement and, of most interest to this thesis, through the mass media. This mass media dissemination consists of TV, radio, and newspaper advertisements, as well as targeting newspapers with public relations (PR) activity (Department of Health, 2012). In a health context, PR can be

described as a 'bridge' between the health organisation and journalists who relay the message to consumers (Lynch, 2017). The use of mass media in the *BCOC* campaigns is based upon their high levels of consumption and because the public perceive the mass media as a trusted medium (Taylor and Radford, 2012). It is also perhaps fair to say that there is an assumption amongst public health policy makers and academics that exposure to campaign messages in the mass media can influence levels of public knowledge about, perceptions of, and behaviours related to, cancer. For example, it was hoped that the *BCOC* campaign pilot would lead to an increase in the number of cancers detected at early stage, via encouraging people to visit their GP quickly if they experience any suspicious symptoms (Taylor and Radford, 2012, p.7). Examples from the literature also reflect this assumption. For instance, Dodd et al (2016, p.2) state that their reason for investigating whether newspaper articles feature content related to oral cancer and HPV is that: "it is possible that media coverage of the link between HPV and oral cancer may influence public awareness and perceptions." Macdonald et al (2018; p.2), similarly, state that "the media are a key influence on the public's understandings and awareness of health issues, including cancer risk" as their reason for looking at the representation of various cancer risk factors.

Such assumptions would appear to be sensible. The potential influence of the mass media on consumers' attitudes, opinions and behaviours has been highlighted in both theoretical, and more demonstrable, capacities. According to van Dijk (2015, p.225), the media has a role as an ideological, political and social influencer. It could be argued to have a form of (social) power owing to its status as a 'symbolic elite' (KhosraviNik, 2009; Gabrielatos and Baker, 2008). That is, it has the potential to influence both the knowledge and beliefs of its consumers because it has access to and, arguably, (some)

control over them. Allern (2017) similarly describes the news media as having the power to present particular depictions of reality that, in turn, influence consumer perceptions of the world around them. Section 2.1.1 (following) will present evidence in support of these assertions, namely, evidence that the mass media can influence consumer behaviours and perceptions.

2.1.1: Evidence for mass media effects

The public health literature contains multiple examples of media coverage of cancer-related stories seemingly resulting in changes in consumer behaviour. The most famous example of this is possibly the Angelina Jolie effect.

In May 2013, international actress, Angelina Jolie, wrote an article in the *New York Times*, revealing that she had undergone a preventative double mastectomy to reduce her risk of breast cancer because she had inherited a faulty BRCA1 gene. In the article Ms Jolie explained that making the decision was not easy, but that she was happy with her choice, and she wanted women to realise that they have choices when it comes to a family history of breast and ovarian cancer (Jolie, 2013). The story was covered by multiple news outlets worldwide.

Following the story, there was a significant increase in the number of referrals to genetic centres and family history clinics. The effect was noted internationally, with studies reporting the effect in the UK (Evans et al, 2014; 2015), the USA (Guo et al, 2017; Roberts and Dusetzina, 2017; Desai et al, 2016), Australia (Freedman et al, 2017), Canada (Raphael et al, 2016) and Germany (Evers et al, 2017). Increases were seen quickly; for example, rates in May 2013 were reported as being 36-42% higher than April 2013 (Guo

et al, 2017; Roberts and Dusetzina, 2017), which is significant when considering that Ms. Jolie's announcement was made mid-May and therefore there was not a full calendar month for the effect to take place. By June and July, the increase compared to April was reported to be around 75% to 80% (Freedman et al, 2017; Guo et al, 2017), and, when compared to data from the previous twelve months, up to a high of a two-and-a-half-fold increase (Evans et al, 2014). This corresponded with a similar number of preventative mastectomies undertaken in the following months (Evans et al, 2015). The follow-up period of these studies varied considerably, but both Evans et al (2014) and Desai et al (2016) report referral rates remaining around 35% higher by the end of 2013, over six months after the story was originally published.

Another international celebrity who received international media coverage, this time regarding a cancer diagnosis, is Australian singer Kylie Minogue. Ms Minogue was diagnosed with early stage breast cancer in May 2005 at the age of 36. She had successful treatment including chemotherapy, radiotherapy, and a partial mastectomy, and was given the 'all clear' in November 2006. As with the studies of the Angelina Jolie effect, a significant increase in the number of referrals for breast imaging was observed. Kelaher et al (2008) report an increase in referral rates of 33% and 25% respectively in women aged 25-34 years and 35-44 years in Australia in the six months following the media announcement. While the number of referrals subsequently decreased, they remained higher by the end of the next year than before the media stories about Kylie Minogue's diagnosis. In Wales, Twine et al (2005) noted a 66% increase in the number of GP referrals to a rapid access breast clinic following Ms Minogue's diagnosis. Twine et al (2005) also comment on the size of the effect, commenting that it was larger than

national breast cancer awareness weeks, when no significant increase in referrals to the same clinic were noted.

There are some limitations to such studies. For example, they cannot establish causation and may not be representative of all celebrity cancer stories. While a number of these studies made use of comprehensive data sources, such as Medicare Australia (Kelaheer et al, 2008) and data from US health insurance claims (Desai et al, 2016), this does not mean that all potential patients were included as they may have been enrolled in different schemes; similarly studies such as Evans et al (2014, 2015) and Guo et al (2017) utilised data from selected centres, meaning that data is not necessarily representative of the country as a whole. However, that such findings have appeared consistently across multiple countries with multiple research teams reaching the same conclusions is striking, and similar effects have been found regarding other health issues. For example, a meta-analysis of media coverage of celebrity suicides suggested that media reporting led to increased numbers of suicides in the population, particularly after reporting of a high-profile star's death (Niederkrötenhaler et al, 2012). In all, the increased number of referrals reported following media coverage of Angelina Jolie's and Kylie Minogue's cancer stories might be taken to suggest that, at the very least, increased media attention towards a high-profile celebrity cancer story may influence the extent to which consumers consider their own cancer risk. In some cases, this may manifest in terms of seeking help or advice from health professionals.

This general trend of findings is mirrored in studies of national celebrities. In the UK, the most famous example is possibly the Jade Goody effect. Jade was a British reality TV personality. She died in March 2009 from cervical cancer seven months after being

diagnosed. Findings from studies undertaken in the UK show that there was a 19% increase in cervical screening attendance compared to the previous year (MacArthur et al, 2011) and that increases continued through until the first quarter of 2011 (Casey et al, 2013). This is significant, as NHS data consistently reveals otherwise falling numbers of women attending for cervical screening (NHS Digital, 2018). More fine-grained analyses by Lancucki et al (2012) demonstrate that the effect was less immediate than in the Angelina Jolie case described above; increases in screening attendance were around 10-15% in the first few months after the mass media covered the story of Jade's diagnosis. However, by March 2009, when media reports focussed on the end of Jade's life and her eventual death, screening attendance was 67% higher than expected based on trends at the time. Attendance at follow-up colposcopy appointments were also shown to have increased by around two percentage points in the year following Jade's death (MacArthur et al, 2011; Lancucki et al, 2012). The effect was shown to be greater in women under 50 years old (and this point will be returned to later in section 2.4.1). The effects are not permanent, however. It was reported as far back as 2012 that the 'Jade Goody effect' had worn off (ITV, 2012), and this is supported by current trends in screening attendance (NHS Digital, 2018).

Other examples of media coverage of national celebrities have suggested increased levels of public information-seeking around the time of media coverage.

- Analyses of Google search terms reveal an increase in the search terms 'Jade Goody', 'cervical cancer', and 'smear test' around the time of diagnosis but to a much greater degree around the time of her condition being described as terminal and at the time of her death (Metcalf et al, 2010).

- In Poland, actress and model, Anna Przybylska, died from pancreatic cancer in October 2014 at the age of 36; Google searches for 'pancreatic cancer' increased eleven-fold around the time of her death and funeral. Similarly, searches for 'glioma' increased 25-fold around the time of the death and funeral of Jan Kaczkowski, social activist and Catholic priest, who died at the age of 39 from a brain glioma (Waszak and Kawalec, 2017).
- In the USA, a survey in one university revealed that, following Steve Jobs' death from pancreatic cancer in 2011, 4.5% of survey respondents had engaged in information-seeking about pancreatic cancer; of these, the majority (88.2%) searched for information about prevention; 17.6% wanted to know if they were at risk (Myrick et al, 2013).
- Two surveys undertaken following First Lady Nancy Reagan's early stage breast cancer diagnosis via mammogram in 1987 showed that 6-8% of women sought advice from a doctor or other health professional as a result of the media coverage (Lane et al, 1989).
- The National Cancer Institute in the USA reported an increase of 12 percentage points in the number of people contacting the centre in the same year that then-President, Ronald Reagan had a colon cancer scare (Brown and Potosky, 1990).

In addition to evidence about the effects of media exposure on behaviours (above), there is also evidence that consumer perceptions of cancer may be influenced by media reporting, for example, in terms of cancer incidence (Jensen et al, 2014). In Jensen et al's (2014) study, participants in the USA were asked to rank cancers in order of incidence from most to least common. Participants perceived the six most common cancers to be breast, lung, colon, blood, female reproductive, and melanoma. These

perceptions do not mirror actual incidence, which, in the USA, at the time of the research, showed male reproductive cancer to be most common, followed by breast, lung, colon female reproductive, and bladder.

The authors found that consumers' distorted perceptions of cancer incidence matched the frequency with which these cancer sites were reported in the media more closely than actual incidence data. Furthermore, regression analyses revealed that level of news consumption was associated with perceived incidence for breast, bladder, and kidney cancers, with those who consumed more news being more likely to demonstrate distorted perceptions of cancer incidence.

This section has provided evidence to support the idea that mass media reporting may influence consumer behaviours and perceptions relating to cancer. However, the evidence provided merely identifies a statistical association, rather than a causative relationship. Having said this, developing an experimental study with a high level of ecological validity to test these findings would be extremely difficult. The evidence currently available is likely to be the best quality evidence that it is possible to generate that is still analogous to 'real life'. It might be concluded that, while not of the highest level of evidence, the consistency of the results does provide relatively good support for the idea that there is at least some impact of media coverage of cancer on public perceptions, information-seeking, screening, or other health behaviours.

On the face of such evidence, the use of the mass media to disseminate cancer awareness information might appear to be a sensible one. If exposure to mass media stories can influence consumer behaviours and perceptions, then it could be deemed an

appropriate approach for a more targeted message with a specific call to action, such as those in the *BCOC* campaigns. However, what is noteworthy is the extent to which this has been evaluated with regards to the campaigns. The next section will describe the current *BCOC* campaign evaluations and will highlight some specific gaps, which it will be argued are important when evaluating a public health campaign.

2.1.2: Current evaluations of Be Clear on Cancer

The *BCOC* campaigns have been evaluated through various means. NCAT evaluation reports tended to focus on the number of people attending their GP practice with suspected symptoms. This included a breakdown by factors such as age, gender and whether the symptoms the person presented with matched those featured in the campaigns (NCAT and Mayden; 2011a, 2011b, 2012). Other evaluation reports of the initial bowel cancer pilot (Taylor and Radford, 2012) and the *BCOC* campaigns as a whole (CRUK, 2013, 2014d) would suggest that the *BCOC* campaigns have been successful, at least to some degree, in improving early diagnosis rates. Ironmonger et al (2015) identified an increase in the number of people attending the GP, an increase in the number of lung cancers diagnosed, and an increase in early stage diagnoses following the lung cancer campaigns. Sahu et al (2014) found an increase in the number of haematuria referrals and a significant increase in cancer diagnoses at a single clinic following the Blood in Pee *BCOC* campaign. Symptom awareness has been shown to increase as a result of the campaigns; Ironmonger et al (2015) and Power and Wardle (2015) undertook national surveys that found recall and recognition of cancer symptoms targeted by *BCOC* campaigns running at that time to have increased significantly. The ICT (2015) report, *Achieving World Class Cancer Outcomes: A Strategy for England*,

stated that the *BCOC* campaigns have generally been effective and that there should be continued investment in the programme.

However, other evaluations suggest *BCOC* campaigns have not been effective. Findings from the regional and national bowel cancer campaigns demonstrate that, while there was indeed an increase in referrals for investigation using the two-week wait pathway in the three months following the launch of the campaign, this did not translate into higher numbers of cancers diagnosed (Bethune et al, 2013; Peacock et al, 2013). Peacock et al (2013) further looked at referrals for symptoms targeted by the campaign, finding only a small increase in referrals for rectal bleeding and a reduction in the number of referrals for a change in bowel habit. Similar results were found in two separate evaluations of the 'blood in pee' campaign, with significant increases in the number of referrals for haematuria of 53% (Patel et al, 2019) and 92% (Hughes-Hallett et al, 2015) following the campaign, but with no significant increase in the number of cancers diagnosed. Siau et al (2017), Kabir and Khoo (2016), and Koo et al, (2016) similarly reported an increase of between 36 and 120% in the number of referrals relating to the oesophago-gastric campaign, but no increase in the number of cancers diagnosed. In addition, there was no statistically significant increase in the number of cancers diagnosed at early stage, nor in one-year survival (Siau et al, 2017).

Inconsistency in the findings of the evaluation studies quoted above could be due to lack of effectiveness of campaigns, but might also be due to small samples (many of the latter studies were of a single area or hospital), differences in the success of campaigns for different types of cancer, or even differential effects across the country (which would reflect the cancer inequalities that have consistently been reported for the last 15 years

(DoH, 2007; DoH, 2011; ICT, 2015). Cook et al (2014) investigated primary care staff experiences of supporting early diagnosis initiatives finding that GPs believe that the *BCOC* campaigns are reaching the 'worried well' rather than the target audience (a conclusion also made by Peacock et al, 2013 on the basis of their findings). This may partly explain why the increased number of referrals have not led to increased diagnoses in some evaluations. Further support for the differential effects of the *BCOC* campaigns was reported by Moffat et al (2015), who considered the effects of the campaigns on symptom recognition and GP attendance by socio-economic group, age and sex. Their findings showed that increases in attendance at GPs were higher in more affluent individuals. They conclude that more efforts are needed to engage with those from lower socio-economic groups, and also suggest that older people may not receive and respond to the campaigns in the same way as younger people.

Other, less positive effects of the campaigns have also been suggested, including an increase in waiting times as a result of increased referrals (Koo et al, 2016), and increased cost per cancer diagnosed (estimated to be four times higher by Peacock et al, 2013). Cook et al (2014) showed that that primary care staff found some campaign content to be inconsistent with other sources, such as guidance from the National Institute for Health and Care Excellence (NICE) and that there were concerns about the extra work generated by national campaigns, which practices may struggle to cope with.

It will be remembered that the *BCOC* campaigns do not simply aim to increase awareness of cancer symptoms (Taylor and Radford, 2012). Unlike the improvements in symptoms awareness reported above, Power and Wardle (2015) found no change in perceived barriers to help seeking that were targeted by the campaigns (namely, being

worried about wasting the doctor's time, and concerns that the doctor would be difficult to speak to).³

Summarising the outcomes that the *BCOC* evaluations have considered shows a focus on the burden on the NHS, awareness of symptoms, use of appropriate pathways, and the number of cancers diagnosed. However, this thesis argues that there is a fundamental flaw in these evaluations. As stated earlier in section 1.5, there are three main messages in the *BCOC* campaigns. These are a statement of key symptoms, a statement that it is important to go to the GP if the symptoms have been experienced over a given time period, and a statement that early diagnosis is associated with better outcomes. Only one of the regional campaign evaluations included any information about perceptions of the campaign message. In this case, participants were asked to state what they thought the key messages of the bowel campaign materials were immediately after viewing them. Even then, only around 50% of respondents identified the main message of the campaign being to go to the GP if they have any concerns. Around 20% identified the message as being to raise awareness of bowel cancer and the treatment available. Similar numbers identified the need to act quickly for better outcomes (Taylor and Radford, 2012).

In contrast to the authors of the evaluation, this thesis argues that this is not a good indication of message recognition of the campaign materials. Despite having just seen the materials, between 50% and 80% of individuals were not able to recognise the key

³ Interestingly, the study did show changes in other attitudes that were not targeted by the campaign, such as a reduction in being scared of a cancer diagnosis. The reason for this is not clear and the authors suggest further investigation is required.

campaign messages. In this author's opinion, recognition rates would need to be much higher to be confident that consumers were taking in the intended message. Furthermore, it is remiss not to consider how these messages have been disseminated *outside* of the immediate campaign materials. Southwell and Yzer (2007) state that campaign effects can be indirect, as well as direct, because campaign messages can spread through 'unofficial' channels, such as interpersonal communication. People may talk to each other about the campaign, or share information that they found useful, for example, and not taking this into consideration could underestimate the extent to which a message has spread. A second issue here is the potential for messages to change as they spread. The complexity of issues around message spread and dissemination also raises questions as to the seemingly simple association between mass media reporting and changes in consumer behaviours or perceptions, as illustrated by the Angelina Jolie and Jade Goody effects described earlier (section 2.1.1), and seemingly assumed in the campaign evaluations. Section 2.1.3 (following) will present some of the issues with measuring media effects, while section 2.2 will introduce some communication theories (agenda-setting theory, McCombs and Shaw, 1972; cultivation theory, Gerbner and Gross, 1976; framing theory, Goffman, 1974; and gate-keeping theory, Lewin, 1947) that are particularly helpful in describing how messages may spread from an initial PR activity or press release, through the media to the consumer, and what may happen to the message along the journey. In discussing framing theory, (section 2.2.3.) brief reference will be made to the importance of language in communication; this will be picked up in much more detail in section 2.3.

2.1.3: Issues with measuring media effects

Having established that there is some evidence for the influential effect of the mass media in disseminating cancer-related messages, but that current *BCOC* evaluations have not considered the extent or content of message spread, it is now important to comment on the difficulties and complexities of doing so. In the field of communication, claims of the extent to which the media can influence the population have varied from extensive to no effect at all (Esser, 2008). Some of this may be due to methodology. According to Lang (2013), the field of communication is full of meta-analyses of media effects, which tend to show small effect sizes. While Valkenburg and Peter (2013) state that these effect sizes in communication are similar to other disciplines, such as parenting and child development, neuroscience, and behavioural genetics, they also highlight that media effects may accumulate over time and, as will be touched upon later (section 2.4.1), that the effect of any individual newspaper article will be conditional on many factors and differ between individuals. While this thesis is not a study of media effects per se, as it does not seek to measure consumer behaviours or attitudes, this is an important issue to bear in mind when appraising the existing literature on the extent of proposed media effects.

The cumulative effect of media coverage on consumer perceptions also applies to communication more widely. The effect of the media on consumers is not as simple as looking at individual reactions to a single article, or indeed, a series of articles. For example, news media may produce content that results in interpretation and discussions on social media or amongst peers that, in turn, influences the production of new content (Shah et al, 2017). In this way the mass media affects interpersonal communication and vice versa. Similarly, Lang (2013) stated that an understanding of

how messages are processed, how that processing affects what aspects of the message are remembered, understanding emotional responses and the interactions between these are key to understanding media influence. It is also important to remember Southwell and Yzer's (2007) assertion that campaign effects may be indirect owing to interpersonal communication between consumers, for example, people passing on messages that they found interesting and/or important. It will be noted that there has, thus far, been no attempt in the *BCOC* campaign evaluations to consider how the messages have been disseminated in terms of their spread, or the form that the message takes. These campaigns are not alone in this, and Southwell and Yzer (2007) state that campaign evaluations tend not to consider 'unofficial' communication channels in tracking campaign messages, yet these 'unofficial' channels may mediate campaign outcomes.

In short, it is very difficult to measure the direct effect that any form of media has on its consumers and the issue is further complicated when considering message flow. The next section (section 2.2) begins to explore this issue and the potential effect of this on public health campaign message dissemination. Before doing so, however, it is important to make explicit what the difficulties of measuring media effects mean for the current research. The findings presented in the introductory chapters, and indeed the findings of this thesis as a whole, cannot say that there is a definite effect of media representation of cancer on cancer perceptions of the individual. It cannot say that the language used, nor the content of the article definitely has a direct effect on the consumer. It cannot say that any proposed effects will be the same for everyone. However, it can provide a description of how cancer is currently represented. It can compare this to current public health awareness messages. It can provide an indication

of the background messages that public health campaigns work with and/or against and consider these in relation to key public health issues. It can suggest potential influences that the media may have on some consumers some of the time. It is these potential effects on the consumer, and the potential proliferation of such messages through interpersonal communication, that are referred to throughout, rather than concrete, observable effects.

2.2: Selected communication theories

Communication theories describe some of the mechanisms through which messages are disseminated. These theories are provided as a means to highlighting key points in the communication chain as pertaining to cancer experts, the media, and readers. It is not the intention to consider the whole work in light of any one of these theories, however reference will be made to them where relevant throughout.

2.2.1: Agenda-setting theory

Agenda-setting theory (McCombs and Shaw, 1972) posits that the mass media influences consumer perceptions of topic importance. Therefore, a news item that is featured in the media will be judged to be of greater importance. This theory has since been expanded and now comprises many facets including not only the frequency of a news story playing a role in determining a news item's perceived importance, but also the content of the story and the role that other sources play in contributing to an individual's view of the world. These are known as second- and third-level agenda setting (McCombs et al, 2014).

To apply this theory at a basic level to the concept of cancer awareness, it might be expected that a cancer that is featured and emphasised more frequently in the news would be perceived as being more important than one featured less frequently. Some support for this has already been provided with Jensen et al's (2014) study on the perceived incidence of cancers (see section 2.1.1). The attributes of that cancer (i.e., the details provided about it) would then be expected to inform the public's perspective of it. The extent to which this happens will be influenced by the level of interest of an individual, with those with more interest being more influenced (McCombs, 2002). This idea could be linked back to the findings of Cook et al (2014; see section 2.1.2), whereby the primary care staff felt that the *BCOC* campaigns tended to reach the 'worried well'. These are individuals who may be very interested in their health and so pay more attention to health messages in the news.

2.2.2: Cultivation theory

In a similar vein, cultivation theory states that those who consume more media will be exposed to more of a given viewpoint or issue which will, in turn, influence their perception of the world. Higher consumption of the media would mean a greater effect (Gerbner and Gross, 1976). Support for cultivation theory has been found regarding the topic of cancer (Lee and Niederdeppe, 2011), whereby increased amount of time spent watching television news was associated with more fatalistic beliefs about cancer prevention one year later, when controlling for fatalistic beliefs and other media use at baseline. Vergeer et al (2010) additionally found support for cultivation theory regarding newspapers specifically. Those participants who had greater exposure to newspapers that were known to publish articles about ethnic minority groups committing crimes were more likely to perceive ethnic minority groups as a threat than those participants

who had more exposure to other publications. There was also partial support for cultivation theory in Jensen et al's (2014) study of perceived cancer incidence (see section 2.1.1). In terms of cancer awareness, cultivation theory might suggest that the extent to which knowledge about cancer, or perceptions of the disease, are influenced by exposure to newspapers would depend, at least in part, on the frequency of consumption.

2.2.3: Framing theory

Building upon the essence of agenda-setting theory, Goffman (1974) highlighted the importance of the presentation of a given topic in influencing how people process information. This is known as framing. According to Entman (1993, p.52), framing involves the selection of *“some aspects of a perceived reality”* in order to *“make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation”* (italics in original). In other words, factors such as the language, layout, or images used can influence the consumer's perception of the topic at hand.

Frames may be introduced intentionally, if, for example, a left-wing and a right-wing newspaper are reporting on the same story but highlight different aspects of it in order to support or criticise the Government. Frames may also originate unintentionally; for example, in trying to distil a story down to the parts deemed most important, through the use of images and metaphor, or as a consequence of including quotes from case studies (that is, the people featured in the story; Nelson et al, 1997). In this last instance, the case studies may have their own agenda which is reflected in their quotes, and this may help to alter the overall frame of the article.

Clarke and Everest (2006) give one informative example of how framing may influence perceptions of cancer. They looked at the framing of cancer in high-circulating American and Canadian magazines and found that cancer is portrayed using the medical frame, that is, that cancer is the result of something going wrong with the body, and that medicine is the cure. The focus is therefore on treatment, as opposed to early diagnosis. As the authors discuss, this focus on cure may be problematic by reducing opportunities to cover issues such as public awareness through discussion of symptoms and risk factors. It may also be problematic owing to public fear of cancer treatments and their side effects (cf. Robb et al, 2014, section 1.3).

2.2.4: Gatekeeping theory

Gatekeeping theory was first considered by Lewin (1947) in relation to household decision making, but it has since been picked up and applied as a key communication theory. In the original context, Lewin speaks about food. However, by replacing the word *food* with *information*, it becomes possible to demonstrate how information moves step-by-step through channels (that is, groups of people or media outlets, for example). The number of channels varies, as does the amount of time information stays in different channels. Whether information enters or moves between channels is dependent on a gatekeeper. The forces that control each channel are different; therefore, there may be resistance within some channels to information passing through, whereas information may travel more freely in others. Information may travel down different channels in order to reach the same place. The individuals controlling each channel vary and may change, meaning that the gatekeeper may not be constant. To apply this to a newsroom, the outcome is that the editor as a gatekeeper will decide

what information is allowed in to the system, what stories will be published, and which ones will be discarded (Davie and Crane, n.d.a).

2.2.5: The message flow model

The message flow model (Davie and Crane, n.d.b.) is yet to be published in a peer-reviewed journal but does provide a potentially useful way in which to see the relative contributions of various communication theories. It combines agenda-setting theory (McCombs and Shaw, 1972), framing theory (Goffman, 1974) and gatekeeping theory (Lewin, 1947) to consider the audience of any message as both the receiver and transmitter. Once the original message is transmitted, it is subsequently agenda-set, and framed by the audience, who may or may not decide to further transmit the message (i.e., gatekeeping). In this model everyone is an audience – this may include the media or the original transmitter at various points in the cycle.

Looking at the theories in this way is useful to direct attention towards the following factors which are key to this thesis:

1. Individual level decisions about what messages to communicate (e.g., by the person who generates the message, the individual journalist, or the audience; i.e. gatekeeping theory, Lewin, 1947; Davie and Crane, n.d.a.).
2. The potential effect of the mass media on the public (considering the media as a symbolic elite; KhosraviNik, 2009; Gabrielatos and Baker, 2008; also agenda-setting theory, McCombs and Shaw 1972 and cultivation theory, Gerbner and Gross, 1976).
3. The language used with regards to cancer (cf. framing theory, Goffman, 1974).

4. The effect of the audience on the media (when considering audience reactions to stories and media outlets targeting their content to a given audience (cf. Shah et al, 2017)).

This section has described four communication theories and one model that begins to combine these theories together, that provide a potential mechanism through which the media may influence their readers, and *vice versa*. In doing so, it has started to highlight the importance of language (cf. framing theory; Goffman, 1974). The following section will expand on this and explain why the language used when talking about cancer is important.

2.3: The language of cancer

The language of illness and healthcare is of interest because it affects the way in which illness is experienced; language may be a source of information, support and empowerment; however, it can also contribute to misunderstandings, misdiagnosis and anxiety leading to disempowerment (Semino et al, 2018, p.4.) The representation of cancer in particular has been of interest to linguists from at least the 1970s. Topics such as cancer stigma, fear and blame have been considered (e.g., Sontag, 1978; Clarke, 1992), as well as the metaphors that cancer patients tend to use to describe their experiences (Semino et al, 2015, Demmen et al, 2015, Semino et al, 2018). In 1978, Sontag began her book *Illness as Metaphor* by stating that it is assumed that 'cancer equals death' (p.7) which imbues it with a sense of dread. While there have been major advances in cancer survival and treatment since Sontag's book was published (Masters et al, 2015), the public's fatalistic views about, and fear of, cancer still persist, even when

they acknowledge the improvements that have been made (MacDonald et al 2006; Scanlon et al, 2006; LiveSTRONG, 2007; Robb et al 2014; Whitaker, 2015; 2016a; see section 1.3). These fears may influence the ways in which patients talk about their cancer. For example, Olympic rower Zoe de Toledo gave her brain tumour the name 'Steve' in order to 'lessen the mental impact', because describing her cancer as a 'tumour' made it 'seem worse' (Falkingham, 2018).

Sontag (1978) also drew attention to the metaphors used to describe cancer and its treatments, in particular, militaristic or battling metaphors. If one describes the proliferation of cancer cells in militaristic terms, i.e., as invading or attacking the body, then the most appropriate solution is a counter-attack. The patient is therefore deemed to be responsible for their own treatment by fighting back from inside their own body (p.15). The implication here is that if the patient does not survive, they are at fault for not fighting hard enough (p.64-65). These associations of blame and death were also noted by Clarke (1992) in her analysis of six high-circulating American and Canadian magazines published in the early 1960s and 1980s. In this study, cancer was interpreted as being a 'death sentence'. The cancer risk factors presented tended to be lifestyle choices and (non-) attendance at medical check-ups, which, again, places the blame of the cancer diagnosis on the patient. Similarly, Lupton (1994) looked at breast cancer stories in major metropolitan newspapers in Australia. She found that a diagnosis of breast cancer was often linked to a reproductive choice, meaning that there was an implication that women who choose not to have a child invite the risk of breast cancer. As described in section 2.2.3, Clarke and Everest (2006) found that the medical model predominated in cancer-related articles in high-circulating American and Canadian magazines. That is, that cancer is something that is wrong with the body and that

medicine will be able to fix it and make the person healthy again. This finding was mirrored by Halpin et al (2009) who found that English-language newspaper articles about prostate cancer in Canada consistently presented medical treatments as positive, taking men from being weak or frail whilst ill, to a full picture of health after treatment. Men who had experienced prostate cancer were deemed stoic and brave. Discussions about going through treatment and/or living with cancer were omitted, generally speaking.

Framing in terms of the medical model can be problematic. In his book, *The Wounded Storyteller*, Frank (1997) warns against use of the restitutive medical model frame because, within that frame, the active agent is the treatment or the treating doctor. The patient merely has to take the medicine and get better. As such, the patient has a much more passive role, but may also become dissociated from their body (Frank uses the example “I’m fine but my body is sick and it will be fixed soon” to illustrate this point; p.86). The restitutive medical model is also problematic when a patient is given a terminal diagnosis. Frank (1997) makes the argument that once someone is aware that they are dying, and there is no hope of restitution, that their story ends before their death, which is the biggest tragedy (p.96). An alternative to this frame is the quest or journey story, whereby the patient, as the active agent, has a story to tell. It begins with the first symptoms, which are the call to the journey, before passing through various stages of the story. It continues until the individual’s return, disease-free, but marked by their illness through it being incorporated into themselves. This is not to say that the quest story is necessarily ideal. Frank (1997) uses the example of the Phoenix rising from the ashes of its illness to illustrate the journey metaphor but admits that this can devalue the efforts of individuals who do not rise from their own ashes (p.135). Frank (1997)

concludes that metaphors can be very powerful, but if they are generalised or applied to other's self-stories, they can be damaging (p.136).

Concerns about the potential pitfalls of particular metaphors and language use surrounding cancer would appear to be well-founded, given the comments and reflections on this matter from cancer patients. For example, Katz (2014), Granger (2014) and Jardin (2017) have all written about the battle metaphor associated with cancer and how this might not reflect the way in which people choose to frame their cancer experiences. Such terminology may be perceived as being insensitive, owing to the associations with blame, even though the intention might have been to be inspiring or helpful. In January 2019, Macmillan reported the findings of a survey that revealed that it can be difficult for people with cancer to find the 'right' words to describe their illness. Of the 2,040 respondents, who were deemed representative of people with cancer in the UK, 29% said that they had struggled to find an appropriate way to describe cancer or themselves as someone with cancer. Some patients reported that language relating to *fighting* cancer may be motivational, empowering, and helpful. Others believed that the use of battle metaphors puts pressure on patients to be positive at all times; not being able to do this may lead patients to feel that they are "letting people down." The word *hero* was stated by 19% of respondents to be their least favoured word to describe someone who has or has had cancer. Only *cancer-stricken* was more unpopular at 23%. Describing someone who had died as having *lost their battle* was reported to be the most inappropriate way to say that someone had died from cancer (endorsed by 44% of participants) owing to implications that they had been 'defeated by cancer' (61%) or that it 'undermines someone's strength and courage' (44%). 52% of

respondents felt that the media tended to use inappropriate language with regards to cancer (Media and PR at Macmillan, 2019).

In short, the language used to represent cancer is important. The ideas discussed in this section have highlighted that language use around cancer can be contentious and may carry unintended meanings. For this reason, this thesis argues that, when considering evaluations of the *BCOC* campaigns, it is important to consider not just where the message goes, but also what form the message takes as it spreads.

The final part of this chapter now presents the argument for why the starting point for evaluating the spread of campaign-related cancer awareness messages should be newspapers, as opposed to other forms of mass media. To make clear at the outset, newspapers should be read to include online and print editions unless otherwise stated.

2.4: The focus on newspapers

According to Taylor and Radford (2012, p.17), the justification for targeting regional and national newspapers with *BCOC* PR activity (in addition to advertising) is that, as with other forms of mass media, they have a high rate of consumption amongst the target audience (those over 50 years and lower socio-economic groups) and newspapers are a trusted and/or authoritative source that can be targeted discreetly. There is, therefore, the implicit assumption that newspapers, as a specific form of mass media, can influence their consumers. More importantly, newspapers are targeted because they consist of 'long form copy' (written material), which would facilitate retaining the call to action of the campaign clear and in its original form (Taylor and Radford, 2012, p.17). However,

as demonstrated in section 2.1.2, evaluations of the *BCOC* campaigns have not attempted to identify whether the campaign messages are indeed left intact. These two reasons for targeting newspapers with PR activity will now be addressed in turn, along with more practical reasons for this selection.

2.4.1: Influence

On a theoretical level, newspapers are important for setting the news agenda. While print circulation is falling (Department for Digital, Culture, Media & Sport, 2019), newspapers maintain an influence on the wider media that is far greater than their readership figures alone. That is, they have a strong intermedia effect. That newspapers affect the television news agenda has been consistently noted across multiple genres of news story, for example, politics (Roberts and McCombs, 1994), and international news (Golan, 2006). Online newspapers have been shown to influence the news agenda of wire services and television news, as well as slower-to-publish print editions of newspapers (Lim, 2006; Lewis et al, 2008; Vonbun et al, 2015; Harder et al, 2017). Corbett and Mori (1999) investigated 36 years' worth of media coverage of breast cancer-related medical activities based on published journals and records of research funding. They looked at media coverage in the *New York Times*, various magazines and television broadcasts, finding that the *New York Times* had the strongest intermedia effect of all mediums investigated. It had a strong influence on stories covered on TV, in news and business magazines, women's magazines, general magazines and health magazines.

As with the mass media more generally, newspapers specifically have the potential to influence their consumers. This is a power recognised by the newspapers themselves,

evidenced by the fact that newspapers are frequently the instigators of their own campaigns. Such campaigns have been shown to have wide reach and effect change. For example, in the national press, a campaign to make UK cities fit for cycling in *The Times* was supported by the three main political parties with a supporting petition signed by over 73,000 members of the public (UK Government and Parliament, 2016). *The Guardian* ran a campaign around positively influencing climate change in 2015; over a quarter of a million people from 170 countries were involved with the first phase. More related to cancer, *The Sun* teamed up with cancer charity Coppafeel to encourage breast self-examination (Brastop, 2014). Regional newspapers also have the power to influence their local communities. For example, the *Birmingham Mail* highlighted a local problem of child sex exploitation, which resulted in the implementation of new procedures to increase police coverage and raise public awareness (Oldham, 2014). More specific to cancer, there are examples of newspapers (i) running an ovarian cancer symptoms campaign (*Derby Telegraph*; Liptrot, 2011), (ii) campaigning to raise money for a local cancer centre and raising nearly £150,000 in the process (*South Wales Echo*; Mosalski, 2015), (iii) demanding a radiotherapy centre in Cumbria (*The Westmorland Gazette*; Perkins, 2011), and (iv) supporting existing local 'pink week' breast cancer awareness campaigns (*Sevenoaks Chronicle*; Brimacombe, 2013).

Studies have revealed an association between specific content of newspaper reporting and consumer perceptions. Dixon et al (2014) looked at 516 newspaper articles published over 12 years about skin cancer protection in two daily newspapers in Melbourne, Australia. Specifically, the study was interested in the frequency of messages about vitamin D, use of solaria, and education or prevention behaviours. This was used to estimate how much exposure respondents would have had to skin cancer

prevention messages. Participant attitudes towards skin tanning and skin cancer were sought through seven discrete telephone surveys over the same period. Results showed that higher potential exposure to pro-sun protection content was associated with lower odds among older participants (aged 35-69 years) reporting that a suntan looks healthy, and, amongst younger adults (aged 18-34) who like to tan, lower odds of preferring a deep tan. Similarly, there was a general trend that exposure to anti-sun protection content was associated with preference for a deep tan and reduced belief of susceptibility to skin cancer in some participants. Conversely, higher potential exposure to pro-sun protection stories was associated with increased odds of younger participants saying that they liked to tan. There was no apparent effect of potential exposure to education or prevention stories on participant attitudes.

A study by Stryker et al (2008) explored the relationship between coverage of major US newspapers and consumer knowledge of modifiable cancer risk factors. Data for risk factor awareness was obtained from a national random digit dialling telephone survey. Cancer prevention knowledge among the respondents mirrored the focus of cancer prevention knowledge in the newspapers. Where cancer prevention knowledge was presented, it tended to focus on diet and smoking behaviours. Similarly, consumer knowledge about food and smoking (but not exercise, sun or alcohol) was associated with attention paid to health news in newspapers (cf. cultivation theory, Gerbner and Gross, 1976). Similar results were found by Slater et al (2009), who investigated the content of local US newspapers. Slater et al used stratified sampling to generate a representative sample of local newspaper articles about cancer prevention that represented two months of coverage from 2002 and 2003. Cancer prevention awareness was obtained from a national, random-digit dialling telephone survey.

Results showed that, in regions where there was greater coverage of cancer prevention in newspapers, knowledge of cancer prevention was higher, and this effect remained when controlling for factors such as age, sex, and education.

There is evidence that newspaper coverage does not only affect reader perceptions, but also that it has the potential to affect their behaviour. Lo et al (2012) looked at national newspaper coverage of the UK Flexible Sigmoidoscopy Trial. The trial demonstrated that this new method of bowel cancer screening resulted in reduced mortality and incidence (Atkin et al, 2010). Twenty-six newspaper articles were published over a four-month period that reported on the trial. All articles were very positive about the trial, but less than 12% explicitly mentioned the bowel screening programme. The authors also looked at the number of bowel screening kits returned within 28 days of receipt as part of the bowel screening programme in one region of England. Despite the screening programme being rarely mentioned in the newspaper articles, the authors found that there was a modestly greater chance of bowel screening kits that were posted out at the time of the publication of articles about the trial being returned than kits sent out before or after (even when controlling for age, gender, and socio-economic status). The effect was seen to be largest in previous non-responders to the screening programme.

Studies such as the above provide evidence for first and second-level agenda-setting theory (McCombs et al, 2014, see section 2.2.1) whereby the content of newspaper articles may serve to influence what topics and what specific content of newspaper articles are deemed most important by consumers. However, these studies, like the examples of celebrity cancer diagnoses described in section 2.1.1 only provide evidence of an association, rather than a causal relationship. It may also be difficult to effectively

operationalise the outcomes in studies such as these that utilise surveys. For example, in the study by Dixon et al (2014), participants were asked whether they like to get a suntan. This is a subtly different question than whether the individual actively engages in such behaviours, and there is no indication of whether this applies all year-round, for example. There is an assumption in such studies that respondents engage with the newspaper articles of interest. Further, individual responses cannot be tracked back to specific aspects of the newspaper article, which includes the framing and language used (cf. framing theory, Goffman, 1974; see section 2.2.3). On the other hand, experimental studies provide stronger evidence as they allow the manipulation of specific aspects of cancer stories, including the language, to see whether there is an association with consumer response.

Such experimental studies do suggest language manipulation may influence consumer perceptions of cancer. Nicholson et al (2008), in a multidisciplinary study combining public health and psychology, manipulated the framing of newspaper articles about the importance of colorectal screening. They found that emphasising health inequalities in African-American populations had unintended effects. Where the framing highlighted racial disparities in colorectal cancer survival between African-American and Caucasian populations (the latter having the better survival rates), reactions among African-American participants were more negative than when progress or impact frames were used. In addition, fewer numbers of African-American participants said that they would like to be screened, which is counter-intuitive; it might be expected that such framing would act as a prompt. Conversely, framing the article in terms of recent improvements in African-American mortality from colorectal cancer resulted in the opposite effect. These results were replicated by Landrine and Corral (2015), who also extended the

Nicholson et al (2008) study. They additionally found that neither a disparities nor progress-framed article increased participants' perceptions of their own cancer risk. The disparity-frame article further increased worry that someone known to the participant may have cancer in those aged over 50 years, yet this was not associated with greater likelihood of talking about screening with social networks. Finally, the specific emotional reactions were captured in more detail; the disparities article was associated with greater feelings of anger and mistrust amongst participants under 50 years of age; those over 50 years of age felt more discouraged and insulted and were unhappy about the way the article portrayed African-American people.

Other psychology studies have experimentally demonstrated that subtle manipulations of language in newspaper articles can influence reader perceptions in non-cancer-related areas. Some examples are that acts of violence were seen as examples of terrorism or patriotism when described using words related to destruction or in a more benign manner respectively (Dunn et al, 2005) and that extremist group rallies were deemed more acceptable if framed in terms of freedom of speech than public safety (Druckman, 2001). Further, the use of medical terminology as opposed to lay terminology in recently medicalised disorders has been shown to result in greater perceived seriousness and representativeness, but lower perceived prevalence (Young et al, 2008).

A final aspect to mention at this stage is that the extent to which a newspaper article may influence consumers may depend, in part, on whether the newspaper article features case studies. In the context of this thesis, a case study is defined as an individual whose story is included in a newspaper article. Nisbett and Borgida (1975) found that

people are more influenced by an instance involving a case study because the example is more 'concrete, vivid and salient' (p.943). In this context, then, the implication is that media portrayals of individuals will affect consumers' perceptions of cancer to a greater extent than statistical evidence. Indeed, Henderson and Kitzinger (1999) found that news stories featuring the personal experiences of others tend to attract readers, and to be more vividly recalled and/or tend to generate more general discussion, thought and reflection among readers than other, more scientific, coverage (such as new cancer treatments or reporting of recent academic studies). The extent to which readers' health-related decisions can be influenced is heavily dependent upon the extent to which a particular story reports others' experiences, how the article is written, and which individual sociodemographic differences are highlighted or made explicit (Entwistle et al, 2011).

It has been suggested that the presence of case studies may influence consumer perceptions in the same way as posited by agenda-setting theory (McCombs and Shaw, 1972; cf. section 2.2.1). In the UK, research has demonstrated that older women do not believe themselves to be as at-risk of breast cancer as younger women, a trend that has persisted in studies published over the last few decades, when in reality, the opposite is true (Mah and Bryant, 1992; Grunfeld et al, 2002; Moser et al, 2007; Fehniger et al, 2014; CRUK, 2016). Across Europe, this effect is particularly strong in the UK (Forbes et al, 2013). It has been suggested that this may be influenced by the people featured in the media (Macdonald et al, 2018). Few studies exist on the demographic details of case studies in cancer articles, however one study undertaken in Ireland demonstrated that case studies featured in cancer articles are, on average, around 20 years younger than

the mean age at which cancer patients are diagnosed in the population (Fallon and O'Neill, 2016).

The demographic characteristics of case studies may also be influential when it comes to the acceptability of messages. Kreuter and McClure (2004) in reviewing the literature found that messages are more likely to be rated positively, as being trustworthy and of better quality if they are delivered by an individual who is more culturally similar to the target audience. To give a health-related (although not cancer-specific) example, Bochner (1994) developed manipulated, reconstructed television commercials featuring persuasive messages about drinking habits. The study found a trend for the message to be deemed more persuasive when the person featured in the video was the same sex as the viewer and was speaking about the effect of alcohol on people of the same sex.

In terms of behaviour change, which is important when considering campaigns such as *BCOC*, the story becomes yet more complicated. In the 18 months after Jade Goody's death from cervical cancer, 40% of women surveyed by Marlow et al (2012) were influenced in their cervical cancer screening behaviours by Jade's story. The influence was stronger in women who were more similar to Jade, that is, women who were younger, from a lower socio-economic background and with fewer educational qualifications. Ashton and Feasey (2014) interviewed young women who represent the target audience of celebrity gossip magazine *OK!* about the magazine's coverage of Jade Goody's story. A number of participants who felt that they could relate to Jade commented that the media coverage motivated them to think about their own health and to attend cervical cancer screening. This effect of young women being motivated to think about their health in response to a celebrity they can identify with corresponds to

data suggesting that the 'Jade Goody Effect' was stronger in younger women (Lancucki et al, 2012). This effect of a culturally similar case study has also been demonstrated in a study explicitly looking at a public health campaign. The Euromelanoma campaign aims to provide information about the risk factors for melanoma, who is most at risk and encourage the public to attend a dermatologist for a skin examination. The campaign is particularly targeted at older men. By changing the role model in the campaign to three older men (one of whom was the Belgian Prime Minister at the time), the proportion of male attendees increased from 33% to 53% and the proportion of those aged over 60 years presenting also increased (Del Marmol et al, 2009).

2.4.2: Maintaining the call to action in its original form: news values and news production

Unlike the other forms of mass media utilised in the BCOC campaigns, Taylor and Radford (2012) describe a key consideration of newspapers as allowing 'long form copy' and keeping the original call to action intact. While a paid advertisement would be expected to be printed in a newspaper or magazine, or broadcast on television or radio in the form that it was created, the PR activity is used in the hope that a journalist will decide to run the story in the newspaper. There are multiple influences on whether a given press release is picked up, and, if it is, how the story is then presented. Whether a story is picked up can be firstly considered by looking at what constitutes being worthy of publication in a newspaper, i.e. what is newsworthy. Schultz (2007) stated how, when asked, journalists frequently describe a 'gut feeling' about what constitutes a news story. However, this does not make explicit what aspects of any given story make it newsworthy or not.

This issue of what makes a story newsworthy has been of interest since the 1960s. Researchers have developed a number of taxonomies that attempt to explain the factors that make a story newsworthy. These factors are known as news values. Rather than asking journalists, these taxonomies of news values have been developed by looking at the types of stories that have been published and the commonalities between them. One constant factor is that a potential story meets a certain 'threshold', which may vary day to day depending on what other stories are in the news (Galtung and Ruge 1965; Schultz, 2007; Allern, 2017; Harcup and O'Neill, 2017). Other news values described in some (but not all) taxonomies include:

- being current or new
- relevance
- representing conflict
- being unusual or challenging beliefs

(Galtung and Ruge 1965; Schultz, 2007; Harcup and O'Neill, 2017).

- exclusivity

(Schultz, 2007; Allern, 2017; Harcup and O'Neill, 2017).

- featuring good or bad news
- featuring famous or elite people
- constituting light entertainment
- reflecting the newspaper's own agenda or being a follow-up from an existing story

(Galtung and Ruge, 1965; Harcup and O'Neill, 2017).

The factors listed in these taxonomies might suggest that some types of cancer story, such as those relating to a celebrity diagnosis, treatment breakthrough, or a local case studies may be deemed newsworthy, while a public health-related message may be less likely to be deemed newsworthy. However, Bednarek and Caple (2014), take an alternative approach to news values. Instead of looking only at the types of stories featured, they consider the language of newspaper stories. From this stance, news values exist in, and are constructed through, discourse. That is, Bednarek and Caple (2014) posit that news values can be analysed by looking at the ways in which news is 'sold' to consumers through the language used or the foregrounding and backgrounding of certain aspects of the text. They deem issues of eliteness, superlativeness, proximity, negativity, timeliness, personalisation, and novelty to be key news values.

Whether looked at in terms of stories published or the language used in a given story, news values are a useful way to understand what journalists are trying to produce. They describe some of the key elements of what make a news story and have been formulated on the basis of what is known to have been published. They are also used as a guide by those trying to get their news stories, or press releases, published. However, they are not the whole story (Harcup and O'Neill, 2016, p.1).

News values are just one part of the wider issue of news production. This is a wide-ranging area of the literature which ranges from theoretical discussions to published ethnographies of newsrooms and qualitative interviews with journalists. Of most interest here is what journalists do and what elements of news production lead to these behaviours, rather than more theoretical discussions around how (or whether) such factors should be conceptualised in a more abstract, theoretical sense. Indeed, Machin

and Niblock (2006, p.3) and Cottle (2007) both argue that engaging directly with journalists, either through ethnographic or qualitative interview approaches is the best way for academics to truly understand what it is like to be a journalist in a newsroom.

Early studies of news production

Studies of news production have been conducted since the 1950s. Early studies focused on what news is selected for publication, with White (1950) being considered the seminal publication (Westlund and Ekstrom, 2019). White's (1950) study was based on Lewin's (1947) gatekeeping theory, which, as detailed in section 2.2.4, described how information moved through various channels on its way to being published in the newspaper. White's (1950) study examined how gatekeeping in a newsroom worked in practice by observing a single gatekeeper - a wire editor at a non-metropolitan American newspaper. He found that nine out of every ten pieces of news sent to the newspaper via wire services were rejected for publication. This gatekeeper's judgement was frequently based upon their attitudes, experiences and expectations of what constitutes a news story (i.e. what would become to be known as news values). Stories were rejected because the editor did not feel that they were worthy of publication, either because they were not interesting enough or they did not fit the editor's view of what sort of story should be printed in this particular newspaper. However, in other cases, stories were rejected because of a lack of space or because the same story had been sent in by another source in a more appealing or appropriate format. In other words, news values were not the sole basis on which stories were selected for publication. Gieber (1956), in a study of 16 wire editors, similarly found that pressures such as time, publisher policy and space available were more important than news values in selecting which stories should be published.

Other early studies took an organisational functional approach with an emphasis on organisational bureaucracy, systems and norms and their effect on news production (Cottle, 2007). Examples of such work include Breed (1955), Tuchman (1972) and Tuchman (1973). Under the assumption that newspaper publishers have a particular angle or news policy, usually related to their target audience, and that the personal views of journalists may not match those of the publisher, Breed (1955) investigated how publishers can maintain control of the newsroom and what stories are reported. From his own experiences in the newsroom, in combination with a series of qualitative interviews with journalists at a range of publications, Breed (1955) concluded that journalists learn how to frame a story in line with the publisher's line by 'osmosis' (p.328); that is, being surrounded by the organisation's values either through observing other reporters' stories or receiving (covert) feedback from superiors. The effect may also operate through daily news meetings between reporters and editors in which it is discussed how newsworthy a proposed story is and how it shall be covered (if at all) in that day's edition. For those reporters who may consider writing a story against organisational policy, Breed (1955) postulated a number of factors that help the news organisation maintain control including: fear of sanctions, feelings of obligation and respect to both the organisation and/or their superiors for giving them the job, pressure to conform owing to aspirations for promotion in the future, absence of a group of dissenting voices against policy, and the fact that the job is enjoyable. However, it was noted that these may not always be successful. Other variables to consider included the vague nature of organisational policy, the standing of a particular journalist within the newsroom and organisational ignorance of story facts, alternative potential stories and story angles. In other cases, there may be no conflict between the views of the journalist and the publisher (and hence no control needs to be exerted) because the individual

journalist may not care enough to feel any tension around the matter, or both parties' views are in alignment.

Taking another view, Tuchman's (1972) ethnographic study, conducted as a participant observer at a single metropolitan newspaper concerned how journalists strive to ensure that their work is perceived as objective. Objectivity was reported to be viewed as critical to the journalists' role, yet potentially under threat owing to tight deadlines, the risk of libel, the expectations of the organisation and their immediate (and less immediate) superiors (in line with Breed, 1955), and, ultimately, the need for the newspaper to make a profit. In other words, the way in which the news is written was found to be influenced by (predominantly) organisational factors. Tuchman (1972) found that journalists deal with these pressures by verifying the facts of the story if practicable, but also presenting multiple sides of a disputed fact (either within the same article or in follow-up stories), presenting supporting information, using quotations and quotation marks in order to 'remove' themselves and their appraisal of the situation from the story, and presenting what they deem to be the material facts of the story first. Stories not deemed to be objective may be published under specific titles, such as *editorial* or *news analysis*.

In 1973, Tuchman sought to answer a completely different question, that of how newsrooms can, on the one hand, effectively control the flow of work through a regular work routine, whilst on the other hand reporting on major news events that may occur without warning. In other words, how a newsroom routinises the unexpected nature of the news. Tuchman (1973) proposed that one way to do this is by classifying stories into categories which would then aid the news production routine. Tuchman (1973) noted

that applying these criteria consistently was difficult. Instead, she considered more practical factors, including whether the news event is scheduled or unscheduled, how urgent the dissemination of the story is, technological resources required and whether related future events can be predicted as being key to routinising the unexpected nature of news. Generally speaking, these organisationally-focussed studies have identified issues such as time, physical organisation, working practices, hierarchy and professional culture as being important factors in news production (Cottle, 2007), in addition to the already-described factor of newsworthiness (Lau, 2004).

However, the approach of these early studies has been criticised as being too simplistic and outdated. The concept that journalists merely select news that already exists and publish it (or not) in a newspaper does not take into account the fact that news is constructed (Schudson, 1989), or, as Peterson (2003) describes it, negotiated, between various actors in the news production process, such as news sources, the reporter, editors and society more widely. Similarly, Cottle (2007) argues that the organisational theoretical approach positions the journalist as an unconscious part of a system of news routines used because they expedite the production of news, and therefore negate the individual practice and decision-making process of the individual journalist.

Later broad theoretical approaches to the construction of news have included politico-economic approaches, whereby news is produced in a given way in order to sell newspapers and cultural approaches, whereby news production is influenced by wider social constraints and norms outside that of the immediate organisation (Schudson, 1989; Lau, 2004). The politico-economic and organisational approaches have received criticism for giving too much emphasis to just one part of news production, while cultural

approaches have been criticised for being either vague or too broad and for the difficulty in studying relevant factors (Schudson, 1989; Lau, 2004; Cottle, 2007). While some authors agree that these different approaches should be looked at in combination, they do not agree on how this should be done. Lau (2004) suggests that news production could be better understood if factors which result in the construction of news are viewed as a result of cognitive and perceptual conceptions of everyday reality amongst those involved in reporting news (that is, a critical realist perspective). Others, such as Van Hout and Jacobs (2008) conceptualise the newsroom as an ongoing power struggle between the newspaper, advertisers and factors such as the rise in online journalism. Still others more explicitly incorporate the journalist as a person into their theories, considering attributes of the individual journalist, news routines, organisational influences, wider social or economic influences and ideological influences at various levels of influence (Shoemaker and Reese, 1996; Preston, 2008).

Regardless of exactly how these factors might theoretically fit together, it is certainly true to say that the range of influences is broad, sensitive to time and to the theoretical approach utilised. Many ethnographic and qualitative interview studies have been undertaken, with much ethnographic research undertaken in the decades after White's (1950) study was published (Cottle, 2007). Yet, Cotter (2010, p.21) argues that while research into the process of news production has been investigated for many years, it is only since 2010 that significant work has been done. A consideration of more contemporary literature is therefore warranted.

The modern media landscape

There has been a significant move towards online publishing and news consumption, which has impacted publishing routines. In the UK, 75% of people use online sources to access the news compared to 36% who use print media (Department for Digital, Culture, Media & Sport, 2019; Newman et al, 2019). As such, being current is important and journalists are expected to publish quickly and repeatedly throughout the day; competition is no longer limited to other newspapers, but now also includes television (Ananny, 2016; Usher 2018). Unlike Tuchman (1973) who found that newspapers had to carefully allocate resources in terms of journalists going into the field and used methods to routinise workflow in order to deal with unexpected news stories and work to deadlines, Cohen (2019) reports that deadlines in the modern newsroom have essentially disappeared. Journalists are now producing more and more content that is distributed at all times of the day, with some journalists writing almost entirely from their desks with social media becoming increasingly important (this will be returned to later in this section).

The stronger online presence also has implications for the content of newspaper articles. Boumans et al (2018) found, for example, that stories delivered to the newspaper by news agencies were more likely to be picked up by online editions of newspapers than print editions with 58% and 17% of news agency output being picked up by online and print editions respectively. Online articles based on news agency copy were less heavily edited than those in the print edition, particularly in quality newspapers.

Modern technology is another source of pressure for newspaper journalists. Ananny (2016) describes how some news is distributed (semi-)automatically to newspapers by computer algorithms that regularly query news databases and parse textual content. A mistake in the algorithm can produce erroneous stories or resurrect old stories as new ones. In some cases, these erroneous stories are picked up and published by newspapers. In this case, the publishing of the story by the newspaper, or indeed the ability to check a potential story's factual accuracy is reliant on other organisations' technology, standards, and routines (Ananny, 2016). The focus on online publishing also means that the journalist has to consider how to report the story in such a way that it appears near the top of search engine results pages, that is, search engine optimisation (dos Santos et al, 2019).

The interplay between advertisers, PR, newsworthiness, and pleasing the audience

The literature would suggest complex interplay between the need for newspapers to make revenue and their role in informing their readers. This includes various parties, including the newspaper itself, advertisers, PR organisations, and consumers.

Starting with the newspaper itself, Usher (2018) and Cohen (2019) report that journalists working in digital and online-first newsrooms receive constant feedback on audience metrics, whether that be from their organisation or from other article tracking tools. These are used to track visits to the newspaper website which hosts advertising content. In aiming to generate as much traffic as possible to their website, writing and editorial decisions are influenced. For example, Usher (2018) found that newspaper journalists publishing online have moved towards posting frequent, incremental news updates in

order to retain the attention of readers and generate traffic even if the story would not otherwise be deemed newsworthy.

Drives to increase traffic to a newspaper website may lead to journalists feeling torn between publishing stories that follow the trends of what is popular online (and thus generate money) and reporting stories that they believe to be important (Cohen, 2019). The increase in digital consumption may mean that increasingly inconsequential news is given more prominence with a greater likelihood of contradictory or confusing content spreading further than it would with traditional means of dissemination (Hynes, 2018). Well-researched news may be shared less frequently via social media than more trivial news, or propaganda (Yates, 2016). However, this is not to say that by virtue of being published online and under time pressure that news is automatically less truthful. Accuracy, credibility, fairness and balance are key standards to the field of journalism (Cotter, 2010; p.36) and poor standards may lead to journalists being held to account by their peers, watchdogs and Government agencies (Hynes, 2018).

Moving on to PR, it has been determined that press releases may have a considerable influence on the news. According to research by Lewis et al (2008), increased reporter workload has led to an increasing reliance on PR for stories. As with the use of pre-packaged agency copy (cf. Boumans et al, 2018), the 'preformulation' of news achieved by utilising PR content allows journalists to write more quickly and therefore save time (Lewis et al, 2008; Van Hout and Jacobs, 2008). Lewis et al (2008) estimated that around 20% of UK newspaper stories are mainly or wholly influenced by PR activity, with health stories being those most influenced. This influence may not be immediately obvious, or even direct, as wire services may act as a conduit for PR content, rather than a

newspaper picking up a press release directly from the source. An alternative suggestion is that journalists may not necessarily see some of their key contacts or informants as working in PR, thereby being influenced by PR unwittingly (Macnamara, 2015). However, it is also the case that within PR there are moves towards preparing publication-ready material that can simply be copied and pasted into the publication (Jackson and Moloney, 2015). Increasing pressure to produce copy may result in PR content overriding traditional news values (Lewis et al, 2008). Van Hout and Jacobs (2008) found that reporters used a routine and linear writing process featuring heavy reliance on PR and other existing materials, which included reformulating the press release headline to foreground information that may be seen as more traditionally newsworthy (see earlier in this section). Additionally, it was shown that this reframing of a press release into a potential news story was used as a way to sell the story to copy editors, desk chiefs and other reporters during daily news meetings. Therefore, the influence of PR may be social as well as through the writing process.

This is not to say that all publications are affected by PR in the same way. Smaller or niche publications who need content may be reaching out to PR organisations for content, whereas national newspapers or those publications who can afford to sift through tens or hundreds of stories may have more power to reject content from PR agencies (Jackson and Moloney, 2015). The quality and suitability of the PR would also be expected to be important; having a well-prepared press release that is targeted at specific publications would be expected to increase the likelihood that a story is picked up (Allern, 2017).

Social media

Social media is a key source of information for potential news stories (Usher, 2018; Powers and Vera-Sambrano, 2018; Cohen, 2019). However, it is also major factor that affects modern news production. Different social media platforms have different 'rhythms', i.e. different times at which the platform experiences greater traffic. This means that there is pressure on newspapers to publish stories not only throughout the day, but also at the 'right' time when a story is likely to receive most exposure. Such rhythms also influence when stories become available to journalists, meaning more constant surveillance of the online world, including social media, is necessary to stay on top of developments (Ananny, 2016).

In the UK 40% of people use social media to access news, with Facebook being the most important platform (Newman et al, 2019). Facebook's news algorithm has the potential to both dramatically increase or decrease web traffic to publication websites and, hence, dramatically affect revenue (Cohen, 2019). These algorithms are secret, meaning that journalists have to invest considerable time strategising and working out how to get through a more modern take on a gatekeeper in order to make their stories visible (Rosen, 2009). Factors that influence visibility on Facebook may be complex and potentially outside the influence of the individual journalist making article visibility difficult to manufacture (De Vito et al, 2017). Of course, the effect of social media also extends to which stories are shared by users and thus given greater visibility, resulting in increased revenue. There is evidence that sharing stories online is related to traditional newsworthiness factors but that these may differ between social media platforms (Trilling et al, 2016) and, as previously stated, the focus on social media trends may result in greater circulation of trivial news and propaganda (Yates, 2016).

Social media may influence the format of online news content. Newspapers may make greater use of video content because it is favoured by social media sites, however, this can also be a source of tension as what works on one platform may not work on another (dos Santos et al, 2019). Other journalists may take the view that video content is not applicable to a newspaper at all, given that the same content could be obtained online or through television broadcasts (Usher, 2018).

Politics

Politicians and political actors may influence the production of some news. More generally, politics is important for journalism as it provides a source of stories; similarly, the news may provide a platform for political actors to voice their views or policies (Maurer and Bieler, 2018). Government officials may be given a privileged voice in news reports; according to Bennett's (1990) indexing hypothesis this is deemed culturally appropriate as long as these voices do not exclude or marginalise major opposing voices in society. However, there are large differences between media types and in different types of story; in health-related newspaper articles, academic sources of information may be more prominent (Stroobant et al 2017).

There is some evidence that politics might be influential in news production. It has already been shown that early studies into news production highlighted that stories may be selected (or not) for inclusion based upon the political views of the editor or the position of the newspaper publisher (White, 1950). However, more common is the suggestion that the political leaning of the news organisation may affect the framing of a story. Breed (1955) and Aşık (2019) found that the framing of a news story may be

changed in order to satisfy the expectations of the news organisation, even if that view does not reflect the journalists' own views.

To provide a couple of examples, Harkins and Lugo-Ocando (2016) found a difference between right-wing and left-wing newspapers in their descriptions of people claiming benefits. Right-wing newspapers were more likely to frame these people as being personally responsible for their situation, and to blame the then-left wing Government for the situation, citing the benefits system as the cause. Conversely, left-wing publications may take a more critical perspective and instead focus on societal issues as being the root of the problem. To give a more health-related example, Nimegeer et al (2019) showed there are some differences in terms of how childhood obesity is reported in terms of statistics and burden. They found that centre-left publications were more likely to report on the burden of childhood obesity on society and the NHS, while centre-right publications focussed more frequently on rising prevalence.

Summary of news production

In summary, it is clear from the presented literature that the influences on which stories are picked up and how they are then presented are wide-ranging, from the individual journalist up to the publisher, and beyond into social and technological aspects far outside the influence of any one journalist. Such influences may affect the manifest content featured in any given article, however, another consistent issue throughout this section has been on framing. Stories may be reframed to fit the newspaper's or publisher's line (Breed, 1955; Harkins and Lugo-Ocando, 2016; Aşık, 2019; Nimegeer et al, 2019), press releases may be reframed to make them a more newsworthy story in meetings between reporters and editors (Van Hout and Jacobs, 2008) and the framing

of an article may be altered in order to make it more newsworthy for readers (Bednarek and Caple, 2014). As such, multiple decisions may need to be made during the production of a newspaper article regarding the language used to represent cancer, or the framing of the story. The framing and content of cancer awareness messages therefore has the potential to be changed as the message spreads through newspapers, which is a key consideration if it is assumed that language use can influence consumer attitudes and perceptions of cancer and makes the study of newspapers over other forms of media particularly important.

As an aside, it may be argued that non-newspaper-based online sources or social media would also be suitable for the preservation of 'long form copy' and maintaining the call to action in its original form, and thus, suitable for study in this thesis. However, Taylor and Radford (2012) make clear that online is not a preferred medium of dissemination for *BCOC* because levels of consumption, and trust in these media, are low in the campaign's target audience.

2.4.3: Practicalities

Finally, there are some practical reasons why newspapers have been chosen as a data source in this thesis. Copies of newspaper reports are easy to access due to the existence of databases such as Nexis, which holds the content of thousands of newspapers worldwide (LexisNexis, 2018a; the content of Nexis will be discussed in greater detail in section 5.1.1 and 8.4.2). The research student is not aware of a similarly accessible resource available that holds transcriptions of radio and television broadcasts. While there are recordings of broadcasts available, such as Box of Broadcasts (British Universities and Colleges Film and Video Council, 2019), these are not necessarily

complete, and considerable work would need to be undertaken to transcribe these. Given the time constraints of a PhD and the potential for incomplete data, as well as the influential nature of newspapers over, for example, television broadcasting as described above, newspapers were felt to be the most appropriate medium to investigate.

2.5: Chapter 2 summary

This chapter has demonstrated that *BCOC* campaigns utilise the mass media in order to disseminate their messages. This would appear to be a sensible choice as there is evidence that the mass media may have some influence on consumer behaviours and perceptions (although this is difficult to measure). While the *BCOC* campaigns have been evaluated in terms of burden on the NHS, awareness of symptoms, use of appropriate pathways, and the number of cancers diagnosed, they have not considered the spread of the message. This is important because, as demonstrated by the fact that communication theories consider factors such as the existence of media coverage and the characteristics of that coverage (agenda-setting theory, McCombs and Shaw, 1972; framing theory, Goffman, 1974), level of exposure, (cultivation theory, Gerbner and Gross, 1976) and the existence of message gatekeepers (Lewin, 1947; Davie and Crane, n.d.a.) the spread of campaign messages is likely to be complex. Not only this, but the publication of any story in a newspaper is reliant on complex interactions between individuals, organisations and wider societal issues. Some of these factors mean that campaign messages disseminated through newspapers are potentially susceptible to being changed (cf. Bednarek and Caple's, 2014 work on news values and Breed, 1955; Van Hout and Jacobs, 2008 and Aşık (2019)'s work on framing stories during news production). A key component of this is the language used, which is potentially

contentious when discussing cancer and has been shown, experimentally, to influence reader perceptions. The next step is to identify what is currently known about the content of newspaper articles about cancer. This is addressed in chapter 3 (following) which is the literature review.

CHAPTER 3: LITERATURE REVIEW

3.1: Introduction

The aim of the literature review is to determine what is currently known about the content of cancer-related newspaper articles from a public health perspective. The question being asked is: “what research has been undertaken into the content of cancer-related newspaper articles, and what are the key public health themes and messages that emerge from these studies?” As the aim of the review is relatively wide (i.e., does not seek to answer a tightly-focussed review question) and aims to examine the extent and range of research into the content of cancer-related newspaper articles, a scoping review is the most appropriate method to use (Arksey and O’Malley, 2005; Joanna-Briggs Institute, 2015).

The stages of a scoping review were proposed by Arksey and O’Malley (2005) to include identifying the research question, identifying relevant studies, selecting studies, tabulating data, and collating and summarising the findings. An optional step in the scoping review procedure is a consultation exercise with practitioners and key informants as a means to improving the usefulness of findings and providing insights into effectiveness and cost-effectiveness, which Arksey and O’Malley (2005) support. However, owing to the context of this scoping review being undertaken as part of a PhD, this step was omitted. A scoping review involves a systematic approach to identifying relevant research papers and, as standard, study selection and data extraction should involve two reviewers to ensure that all relevant papers are captured (Levac et al, 2010; Joanna-Briggs Institute, 2015). However, time and resource constraints of a PhD mean that this is undertaken by the research student only. This chapter will present the details

of the search terms, databases used and inclusion/exclusion criteria, before presenting the results of the search. The results first include a breakdown of the number of papers identified, before the findings of the papers are synthesised and presented, organised by theme or topic. The chapter concludes with a discussion of the findings of the review, including its strengths and limitations, as well as the implications of the findings for the current research.

3.2: Methods

3.2.1: Search

The search was undertaken in two academic databases, MEDLINE (using the EBSCO platform) and Embase (using the Ovid platform). MEDLINE was chosen based on its coverage of public health, medicine and cancer research, and because papers that had previously been identified as relevant through an informal Google Scholar search were all contained within the MEDLINE database. The Embase search was undertaken due to its potentially greater coverage of health policy and management and public health as well as cancer research. It should be noted that during initial piloting, databases containing journals relating to languages and linguistics were also searched to identify whether additional relevant papers were likely to be found. This was based on the notion that if language use around cancer is potentially contentious (see section 2.3) that there may be relevant research indexed in linguistics journals. However, those searches suggested that relevant articles were likely to be indexed in either MEDLINE or Embase.⁴

⁴ The final search strategy was run in the Modern Languages Association Bibliography database, PsycINFO, and Academic Search Complete through EBSCO, as well as JSTOR and Scopus. No relevant hits were obtained in the Modern Languages Association Bibliography database. In PsycINFO, Academic

The search terms were deliberately left very wide in order to capture the widest range of papers possible. Search terms were included for the concepts of cancer and newspaper articles. Associated subject headings were identified in MEDLINE using the Medical Subject Heading (MeSH) 2018 thesaurus and from the subject headings tree within Embase respectively. Table 1 below shows the key words and subject headings utilised in both databases. No search terms were included for attitudes or awareness in order to ensure that papers were not missed by using a list of synonyms that was too restrictive, or potentially biasing the search towards a particular type of research outcome.

Table 1: Search terms for scoping review for MEDLINE and Embase

Concept	Search terms
MEDLINE via EBSCO	
Cancer	cancer neoplasms (MeSH)
Newspapers	newspaper* Mass Media (MeSH) Journalism (MeSH) Newspapers as topic (MeSH)
Embase via ovid	
Cancer	Cancer.mp malignant neoplasms/ (subject heading)
Newspapers	newspaper*.mp publishing/ (subject heading) journalism.mp
* denotes truncation and identifies both newspaper and newspapers .mp denotes multipurpose search and includes title, abstract, heading word, drug trade name, original title, device manufacturer, drug manufacturer, device trade name, keyword, floating subheading word, candidate term word	

The MEDLINE search was run on 6th May 2018 with the following search string:

Search Complete, Scopus and JSTOR, the first 100 hits were screened and relevant papers identified. The journal containing each paper was identified and the journal then checked for indexing. None of the relevant papers were in journals not indexed in either MEDLINE or Embase.

(MH "Neoplasms" OR cancer) AND (newspaper* OR MH "Mass Media" OR MH "Journalism" OR MH "Newspapers as Topic")

(MH = Medical Subject Heading).

The Embase search was run on 28th July 2018 using the search string:

(Malignant neoplasm/ OR cancer.mp) AND (newspaper*.mp OR publishing/ OR journalism.mp)

(mp = multi-purpose search).

3.2.2: Inclusion/exclusion criteria

Inclusion criteria were:

1. Any article that investigated the content of newspaper reporting of cancer. This means that studies were included that considered any cancer site, undertaken in any country, and involving any type of newspaper.
2. Any study that considers 'general' cancer reporting, i.e., articles are not defined as being about a specific topic. Studies about a single cancer type or a celebrity cancer diagnosis are included as long as they consider all articles about that cancer or celebrity, as opposed to only focussing on a single aspect of the story. This is to ensure that findings are not skewed owing to the inclusion of articles that may be expected to have a specific frame that may be different to that expected in more general cancer reporting.
3. Any study that considers cancer-related public health content as an outcome. For example, the frequency or characteristics of newspaper reporting signs and

symptoms, risk factors, prevention, cancer statistics, or efficacy messages and signposting.

4. All primary, empirical, research designs were included. This included conference abstracts and letters to the editor/editorials that contained primary research data.
5. If a study compares newspaper reporting with an earlier time period (for example, a comparison of January to June 2017 with January to June 1997), only data from the most recent data collection period will be included in order that more contemporary reporting practices are reported.

Exclusion criteria were:

1. Studies that did not include any primary research data.
2. Studies that did not focus on newspaper reporting.
3. Studies where it was not possible to separate data pertaining to newspaper reporting from other forms of media reporting.
4. Studies that did not report on cancer specifically (as opposed to topics relating to cancer, such as access to cancer drugs, which were excluded).
5. Studies that do not report on 'general' newspaper reporting. For example, those that track newspaper articles relating to a specific intervention, or report on a local call for screening were excluded as these articles might be expected to have a different frame or purpose than those that feature cancer more generally.

3.2.3: Reference management, abstract screening and selection

Abstracts identified from searches were exported into RefWorks (ProQuest, 2018). Initially, one folder was created for abstracts obtained from MEDLINE and another created for those obtained from Embase. These two folders were then merged, and abstracts deduplicated. In order to capture all duplicates, all three commands were utilised, i.e., 'exact duplicates', 'close duplicates' and 'legacy close duplicates'. Following deduplication, all abstracts and titles were screened against the inclusion/exclusion criteria. An inclusive approach was taken, whereby no studies were excluded at this stage unless they were unquestionably not relevant to the review question. Those studies that were not relevant were moved within RefWorks to a folder entitled 'no'. Those that were definitely relevant were moved to a folder entitled 'yes', and those where it not possible to be sure were moved to a folder entitled 'maybe'. Following this, full texts were obtained for all papers in the 'yes' or 'maybe' folders. Papers were again screened against the inclusion/exclusion criteria. Those that were not relevant to the review were excluded. Those that were included were kept and went through to the data extraction stage.

3.2.4: Data extraction

Data extraction was undertaken electronically, directly into tables in Microsoft Word. This was to facilitate the creation of summary tables during the write-up. The data extraction form was developed iteratively, with data items identified through the first reading of the included papers. The full list of data extracted can be found in Appendix 1, but included information about the publication of the paper, such as author name, title and year of publication; study aim; newspapers investigated, including type, number and country of publication; outcomes of interest and results. Once the data

extraction form had been developed, it was completed for each paper and then used to create summary tables organised by the research questions addressed in the papers.

3.3: Results

The search returned a total of 4,463 abstracts (1,068 MEDLINE and 3,395 Embase), which was reduced to 4,457 following deduplication. Following screening, 108 papers were read in full and 77 were excluded. A table of excluded studies, including full references and reasons for exclusion, can be found in Appendix 2. Most studies that had the full text screened (n=30) were excluded because they did not report outcomes pertinent to the thesis, namely, being unrelated to the frequency or form of reporting cancer-related articles or information. Sixteen articles were excluded because they reported on specific cancer interventions, drug trials, or related to local advertisements for cancer screening events; these articles therefore are not representative of cancer reporting in a more general sense and are not comparable owing to the highly specific articles under investigation. Nine articles did not provide any useable information, i.e., it was not possible to distinguish data from newspaper articles from that of other forms of mass media. Seven papers provided no information about newspapers, seven were not primary research, and two were primary research that did not provide any statistical data. It was not possible to obtain the full text for two articles, so these had to be excluded on that basis. Two papers were not in English, and one was not about cancer. One was excluded because the description of analysis and results was unclear to the extent that it was not possible to determine exactly what was being measured or what the results meant for this literature review. This left a total of 31 papers for summary

and synthesis, the characteristics of which can be found in Table 2. The paper screening and selection process is summarised in a PRISMA flow diagram in Figure 4.

Table 2: Characteristics of included studies

Author and year	Country	Period of investigation	Outcomes	Newspaper type and n of publications	Cancer type investigated
Al-Naggar et al (2011)	Malaysia	1 year (2007)	<ul style="list-style-type: none"> • Main focus of articles 	National (n=1)	Breast
Atkin et al (2008)	USA	18 months (Jun 2003-Dec 2004)	<ul style="list-style-type: none"> • Frequency of reporting cancer statistics • Frequency of reporting risk factors • Frequency of reporting prevention information 	Leading newspapers (n=3)	Breast
Caburnay et al (2008)	USA	24 months (Jan 2004-Dec 2005)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Frequency of reporting cancer statistics • Frequency of reporting prevention information • Frequency of reporting efficacy/mobilising/signposting information 	Weekly Black-audience (n=24) and community-matched general audience (n=12)	All/undefined
Cai et al (2009)	China	7 years (2000-2007)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Comparison of reporting frequency with disease statistics 	National (n=152) and local (n=362)	All/undefined

Table 2: Characteristics of included studies (cont.)

Author and year	Country	Period of investigation	Outcomes	Newspaper type and n of publications	Cancer type investigated
Canto et al (1998)	USA	10 years (1987-1998)	<ul style="list-style-type: none"> • Frequency of reporting cancer statistics • Frequency of reporting risk factors • Frequency of reporting prevention information • Frequency of reporting signs/symptoms • Frequency of reporting efficacy/mobilising/signposting information 	Unclear	Oral
Cohen et al (2008)	USA	12 months (Apr 2004-Mar 2005)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Comparison of reporting frequency with disease statistics • Frequency of reporting efficacy/mobilising/signposting information 	Weekly Black-audience (n=23) and community-matched general audience (n=12)	Breast, prostate, colon and rectum, oesophagus, kidney, leukaemia, lung and bronchus, melanoma, non-Hodgkins lymphoma, oral cavity, ovary, pancreas, prostate, thyroid, urinary/bladder, uterine corpus, bone, liver, brain, cervical, testicular, other, general
Donelle et al (2005)	Canada	4 years (1996-2000 ethnic), 12 months (2000) (general)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Frequency of reporting risk factors 	Weekly, biweekly, monthly or quarterly Jewish newspapers (n=6), matched daily provincial newspapers with highest circulation (n= not reported)	Breast

Table 2: Characteristics of included studies (cont.)

Author and year	Country	Period of investigation	Outcomes	Newspaper type and n of publications	Cancer type investigated
Heneghen et al (2007)	USA	25 years (Jan 1980-Dec 2004)	<ul style="list-style-type: none"> • Comparison of reporting frequency with disease statistics 	National (n=1)	Skin
Henry et al (2012)	Canada	3 months (Apr-Jun 2008)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Main focus of articles 	Major daily (n=6)	All/undefined
Hilton and Hunt (2010)	UK	7 months (19 th August 2008-5 th April 2009)	<ul style="list-style-type: none"> • Frequency of reporting disease statistics • Frequency of reporting risk factors • Frequency of reporting prevention information • Frequency of reporting signs/symptoms 	National (n=15)	Cervical Jade Goody stories of interest
Hoffman-Goetz and Friedman (2005)	Canada	12 months (2000)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer 	Mainstream (n=7) and ethnic minority audience (n=25)	Breast, colorectal, prostate, lung
Jensen et al (2010)	USA	12 months (2003)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Main focus of articles • Comparison of reporting frequency with disease statistics • Frequency of reporting cancer statistics • Frequency of reporting risk factors 	Top mainstream (n=44)	Male reproductive, breast, lung, colon/rectum, bladder, female reproductive, lymphatic system, non-Hodgkin's lymphoma, skin, leukaemia/blood, stomach, pancreas, kidney, brain, thyroid, bone/muscle, other

Table 2: Characteristics of included studies (cont.)

Author and year	Country	Period of investigation	Outcomes	Newspaper type and n of publications	Cancer type investigated
Jones et al (2012)	UK	12 months (Jan-Dec 2009)	<ul style="list-style-type: none"> • Frequency of reporting signs/symptoms 	Top national (n=10)	Colorectal
Kamenova et al (2014)	Canada, USA, UK	13 th May-12 th June 2013	<ul style="list-style-type: none"> • Frequency of reporting risk factors • Frequency of reporting prevention information 	Top daily broadsheets (n=15; 5 per country) Angelina Jolie stories of interest	Breast, ovarian. Angelina Jolie articles of interest
Kelly et al (2016)	UK	3 years (Aug 2011-Oct 2014)	<ul style="list-style-type: none"> • Main focus of articles • Frequency of reporting efficacy/mobilising/signposting information 	National (n=10)	Oral
Kishi et al (2008)	Japan	15 years (1992-2007)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Comparison of reporting frequency with disease statistics 	Daily national (n=5)	All/undefined
Konfortion et al (2012)	UK	12 months (2011)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Comparison of reporting frequency with disease statistics 	National (n=18)	Breast, colorectal, prostate, lung

Table 2: Characteristics of included studies (cont.)

Author and year	Country	Period of investigation	Outcomes	Newspaper type and n of publications	Cancer type investigated
Konfortion et al, (2014)	UK	24 months (2011-2012)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Comparison of reporting frequency with disease statistics 	National (n=18)	Breast, colorectal, prostate, lung
Kye et al (2015)	Korea	5 years (2008-2012)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Frequency of reporting risk factors 	'General' newspapers (n=16)	All/undefined
Liu et al (2010)	China	8 years (2000-2007)	<ul style="list-style-type: none"> • Main focus of articles 	Most widely read (n=not reported)	Skin
Macdonald et al (2018)	UK	24 months (Jan 2013-Dec 2014)	<ul style="list-style-type: none"> • Frequency of reporting risk factors 	National (n=8)	Breast, colorectal, prostate, lung
MacDonald and Hoffman-Goetz (2001)	Canada (Ontario)	12 months (1991)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer 	Local, high and low circulating (n=10)	All/undefined
McDonnell et al (2008)	USA (California)	12 months (Jan-Dec 2006)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Frequency of reporting prevention information • Frequency of reporting efficacy/mobilising/signposting information 	Daily regional general audience (n=1) and daily regional Korean audience (n=1)	All/undefined

Table 2: Characteristics of included studies (cont.)

Author and year	Country	Period of investigation	Outcomes	Newspaper type and n of publications	Cancer type investigated
Metcalfe et al (2010)	UK	7 months (19 th August 2008-22 nd March 2009)	<ul style="list-style-type: none"> • Frequency of reporting prevention information 	National (n=18) Jade Goody stories of interest	Cervical Jade Goody articles of interest
Miyawaki et al (2017)	Japan	12 months (2011)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Main focus of articles • Comparison of reporting frequency with disease statistics 	Daily national (n=5)	Lung, stomach, colon, breast, leukaemia, brain, thyroid, other, childhood.
Moriarty and Stryker (2008)	USA	12 months (2003)	<ul style="list-style-type: none"> • Frequency of reporting risk factors • Frequency of reporting efficacy/mobilising/signposting information 	Top mainstream (n=44)	All/undefined
Musso and Wakefield (2009)	Canada	6 non-consecutive months (Jan, May, Aug 2003; Apr, Sept, Dec 2004)	<ul style="list-style-type: none"> • Main focus of articles 	Widest circulating English language newspapers (n=3)	All/undefined

Table 2: Characteristics of included studies (cont.)

Author and year	Country	Period of investigation	Outcomes	Newspaper type and n of publications	Cancer type investigated
Slater et al (2008)	USA	24 months (2002 and 2003)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Main focus of articles • Comparison of reporting frequency with disease statistics 	Local (n=1064; 18 sampled per day) and national (n=1)	25 sites, not listed
Smith et al (2010)	USA	4 months (Jun-Sep 2005)	<ul style="list-style-type: none"> • Main focus of articles 	National daily, (n=12), local (n=2), national news magazine (n=3)	All/undefined
Stryker et al (2007)	USA	12 months (2003)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer 	Top mainstream (n=44) and ethnic minority papers (n=283)	Non-specific, prostate, breast, lung, colorectal, skin, feminine reproductive, bladder, non-Hodgkin's lymphoma, kidney, leukaemia, pancreatic, stomach, brain
Williamson et al (2011)	UK	12 months (2009)	<ul style="list-style-type: none"> • Proportion of articles about specific cancer • Comparison of reporting frequency with disease statistics 	Top national (n=10)	Breast, lung, colorectal, prostate, non-Hodgkin's lymphoma, melanoma, bladder, kidney, oesophagus, stomach

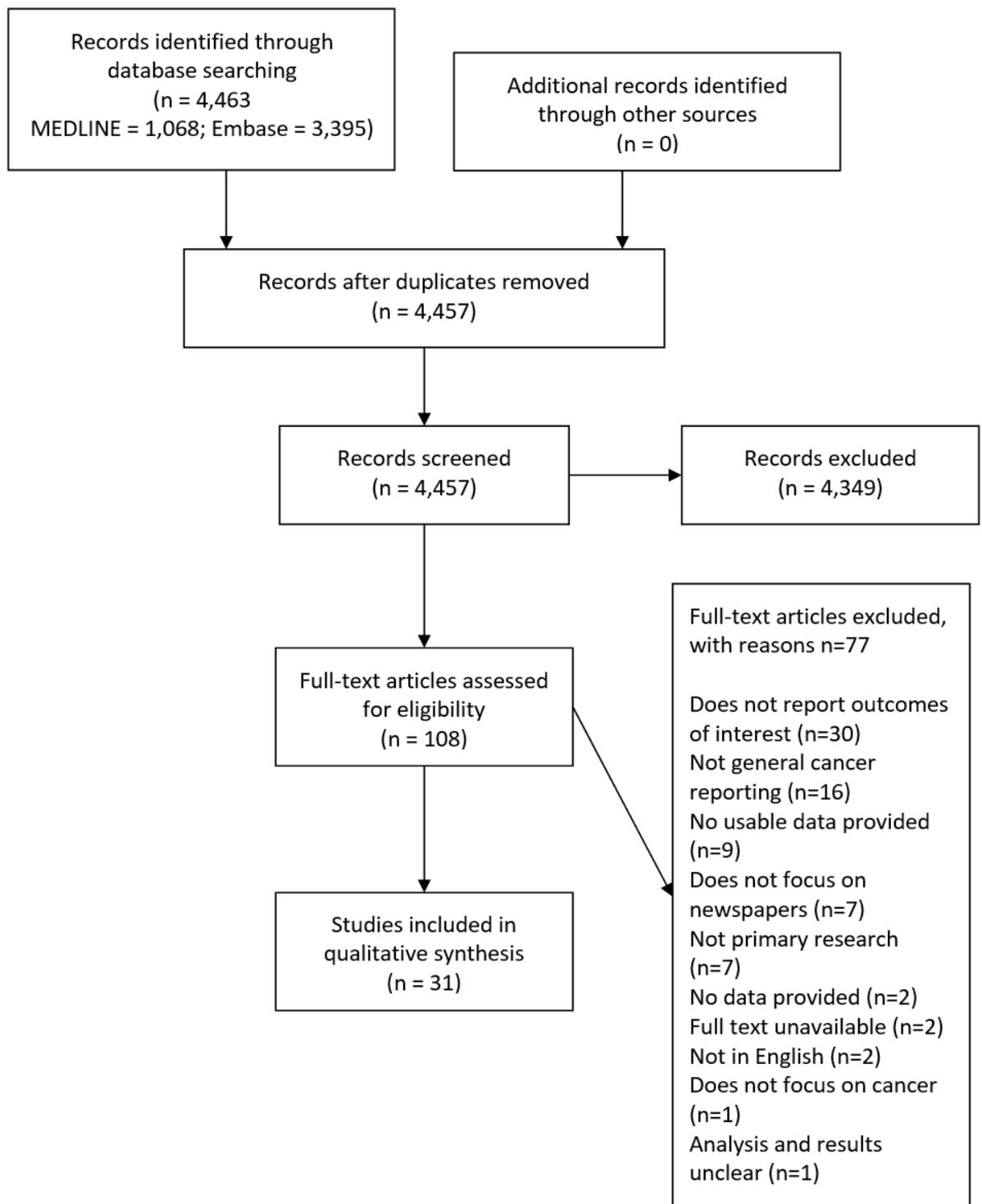


Figure 4: PRISMA flowchart of study screening and identification

The majority of research has been undertaken on national newspapers, and, where specified, tends to focus on the most widely-read publications. Countries included in analyses include the USA (n=12), UK (n=9), Canada (n=6), Japan (n=2), China (n=2), Korea (n=1) and Malaysia (n=1). The number of publications investigated ranged from one to several hundred, and in one case (Slater et al, 2008) a pool of 1,064 publications were used with 18 publications being sampled daily. The period under investigation also varies considerably from 2 months (Kamenova et al, 2014) to 15 years (Kishi et al, 2008).

Eleven studies considered all types of cancer or did not limit coding to specific cancers. A further three considered 15 to 20 cancer types (Stryker et al, 2007; Cohen et al, 2008; Jensen et al, 2010), while Williamson et al (2011) looked at 10. Miyakwai et al (2017) considered eight sites. Breast, colorectal, prostate, and lung cancers were investigated by Hoffman-Goetz and Friedman (2005), Konfortion et al (2012, 2014) and Macdonald et al (2018). Kamenova et al (2014) considered both breast and ovarian cancers. Three studies (Donelle et al, 2005; Atkin et al, 2008 and Al-Naggar et al, 2011) focussed exclusively on breast cancer, two (Hilton and Hunt, 2010; Metcalfe et al, 2010) on cervical cancer, two (Canto et al, 1998; Kelly et al, 2016) on oral cancer, two (Heneghen et al, 2007; Liu et al, 2010) on skin, and one (Jones et al, 2012) on colorectal.

Three studies investigated the content of newspaper articles focussed on general reporting of celebrity diagnoses (Hilton and Hunt, 2010; Metcalfe et al, 2010; Kamenova et al, 2014). Jade Goody's cervical cancer diagnosis was the focus of two of these papers (Hilton and Hunt, 2010; Metcalfe et al, 2010), while Kamenova et al (2014) considered Angelina Jolie's preventative mastectomy which was linked to breast and ovarian

cancer. All three studies considered UK publications, and Kamenova additionally looked at newspapers published in the USA and Canada.

While there is considerable variation in terms of time period, cancers investigated, sampling methods, country, and research questions, the methodological approach used has been relatively consistent in that all studies described using some form of content analysis. Nine studies reported using inductive approaches to coding, whereby coding categories were generated from the dataset (Donelle et al, 2005; McDonnell et al, 2008; Hilton and Hunt, 2010; Smith et al, 2010; Al-Naggar et al, 2011; Henry et al, 2012; Kamenova et al, 2014; Kelly et al, 2016; Macdonald et al, 2018). Deductive or a-priori coding schemes were used in other cases (Atkin et al, 2008; Caburnay et al, 2008; Canto et al, 1998; Cohen et al, 2008; Musso and Wakefield, 2009; Jensen et al, 2010; Kye et al, 2015; Miyawaki, 2017), while coding practices in five studies were unclear (Moriarty and Stryker, 2008; Slater et al, 2008; Liu et al, 2010; Metcalfe et al, 2010; Jones et al, 2012) and in 10 cases represented simple counts of the number of articles published (MacDonald and Hoffman-Goetz, 2001; Hoffman-Goetz and Friedman, 2005; Heneghen et al, 2007; Stryker et al, 2007; Kishi et al, 2008; Cai et al, 2009; Williamson et al, 2011; Konfortion et al, 2012; Konfortion et al, 2014).

The findings of the included studies will now be presented, organised by outcomes investigated. It can be seen from Table 2 that current research into the content of cancer-related newspaper articles has focussed on five key outcomes. These are:

1. The proportion of newspaper articles published about specific cancer types.
2. Whether the proportion of newspaper articles published on a particular cancer

is representative of current cancer statistics.

3. What is the main focus of cancer-related articles, for example, whether the article as a whole focusses on treatments or prevention.
4. What key cancer awareness messages are included in the articles.
5. The presence of signposting information, efficacy or mobilising messages.

Owing to the size of the summary results tables, these can be found in Appendix 3.

3.3.1: The proportion of newspaper articles published about specific cancer types.

Sixteen papers reported the frequency with which particular cancers are featured in newspaper articles. Thirteen of these (MacDonald and Hoffman-Goetz, 2001; Hoffman-Goetz and Friedman, 2005; Stryker et al, 2007; Caburnay et al, 2008; Cohen et al, 2008; McDonnell et al, 2008; Slater et al, 2008; Cai et al, 2009; Jensen et al, 2010; Williamson et al, 2011; Konfortion et al, 2012; Henry et al, 2012; Konfortion et al, 2014) found that breast cancer was most frequently reported in their sample. This was a consistent finding across the USA, Canada, China, and the UK. Where breast cancer was reported to be the most commonly reported, the proportion of breast cancer articles varied between 14% (MacDonald and Hoffman-Goetz, 2001) and 46% (Konfortion et al, 2012, 2014) of the sample, although denominators varied. The majority of studies reported between approximately 20% and 30% of the sample being about breast cancer. In general, publications with ethnic minority audiences tended to publish a greater proportion of articles about most cancer sites than general-audience publications, however breast cancer remained the most frequently reported site (Donelle et al, 2005; Hoffman-Goetz and Friedman, 2005; Stryker et al, 2007; Caburnay et al, 2008; Cohen et al, 2008; McDonnell et al, 2008). Breast cancer accounted for between 28.9% (Cohen et

al, 2008) and 37% (Donelle et al, 2005) of the ethnic publication sample. Slightly different results have been obtained in Japan and Korea. Kishi et al (2008) found breast cancer to be second only to lung cancer in Japanese newspapers in 2007 appearing in 19.2% and 24.4% of articles respectively; while in 2017, Miyawaki et al found leukaemia (6.2%), as well as lung cancer (10.8%), to be more frequently reported than breast cancer (5.6%). In Korea, Kye et al (2015) found that both breast and colorectal cancer were reported on equally, each accounting for around 7% of the sample.

3.3.2: Whether the proportion of newspaper articles published on a particular cancer is representative of current cancer statistics.

Twelve papers compared the frequency of newspaper reporting of cancer with national cancer statistics. While some authors have explicitly considered reporting rates as compared to disease rates (MacDonald and Hoffman-Goetz, 2001; Heneghen et al, 2007; Stryker et al, 2007; Cohen et al, 2008; Jensen et al, 2010; Williamson et al, 2011; Konfortion et al, 2012; Konfortion et al, 2014; Miyawaki et al, 2017) and, others, disease burden (Cohen, 2008; Slater et al, 2008; Cai et al, 2009; Miyawaki et al, 2017), it is generally concluded that newspaper reporting does not mirror statistical data on the occurrence of, nor outcomes of, cancer. The only exception was reported by Kishi et al (2008), who stated that coverage in Japan appeared to mirror cancer rates of morbidity and mortality (although another Japanese study by Miyawaki et al, 2017 did not reach the same conclusion regarding incidence or mortality).

3.3.3: What is the main focus of cancer-related articles

Nine papers undertook an analysis of the main focus of cancer articles. That is, what was the overriding topic of the article as a whole. Such studies were undertaken in the USA

(Slater et al, 2008; Jensen et al, 2010; Smith et al, 2010;), Canada (Musso and Wakefield, 2009; Henry et al, 2012), the UK (Kelly et al, 2016); Malaysia (Al-Naggar et al, 2011), China (Liu et al, 2010), and Japan (Miyawaki et al, 2017). In the USA and China, treatment was found to be the predominant topic in articles of various cancer types, accounting for up to 25% of articles in the USA, (Jensen et al, 2010; Smith et al, 2010) and 45% of articles in China that reported on skin cancer (Liu et al, 2010). In the USA, prevention and risk factors/causes were generally featured less frequently. Cancer prevention was the main topic between 7.2% (Slater et al, 2008) and 15% (Smith et al, 2010) of the time, and risk factors/causes between 13% (Smith et al, 2010) and 16.8% (Slater et al, 2008) of the time. Only Kelly et al (2016) report on the overall topic of cancer articles in the UK, citing recent research as being the predominant topic associated with oral cancer coverage. However, what constitutes recent research is not defined making it difficult to determine whether this is analogous to reporting on treatments, as found in the USA and China.

Results were less consistent elsewhere. In Canada, Henry et al (2012) found research (which, again, was undefined) to be the most common focus of articles, while Russo and Wakefield (2009) found risk factors to be most frequently published (32.2%). However, what was consistent with other cited research is the pattern of prevention being featured less frequently than treatment, appearing in just under 20% and 0.8% of Canadian articles respectively. In contrast, Al-Naggar et al (2011) found equal numbers of articles focussing on treatment and prevention in Malaysia (both 11.4%), with risk factors being the most frequent topic of newspaper articles at 13.9%. In Japan, Miyakwai et al (2017) found that treatment was featured least frequently, with social issues such as court cases or medical mistakes being most frequently reported (15%). Articles

focusing on risk factors and prevention was lowest in this study. Articles focussing on case studies who have had a cancer diagnosis were relatively frequent, accounting for around 20% of articles in Jensen's (2010) study of high-circulating US newspapers, and 14.5% of articles in regional US papers (Slater, 2008), however this was not looked at elsewhere.

3.3.4: What key cancer awareness messages are included in the articles

Seventeen papers looked at the content of newspaper articles with regards to public health cancer awareness-related messages (Canto et al, 1998; Donelle et al, 2005; Stryker et al, 2007; Atkin et al, 2008; Caburnay et al, 2008; Cohen et al, 2008; McDonnell et al, 2008; Moriarty and Stryker, 2008; Hilton and Hunt, 2010; Jensen et al, 2010; Metcalfe et al, 2010; Al-Naggar et al, 2011; Jones et al, 2012; Kamenova et al 2014; Kye et al, 2015; Kelly et al, 2016; Macdonald et al, 2018). These papers are heterogenous in the types of cancers and the specific awareness information investigated. Studies have looked at the presence of information about cancer statistics, risk factors, prevention, signs and symptoms and efficacy/mobilisation/signposting. These will now be presented in turn.

Cancer statistics

These studies were interested in whether newspaper articles provided information about current cancer statistics, for example, survival or incidence rates. Five studies considered whether newspaper articles provided statistical information about cancer (Canto et al, 1998; Atkin et al, 2008; Caburnay et al, 2008; Hilton and Hunt, 2010; Jensen et al, 2010). Caburnay et al (2008) and Jensen et al (2010) both considered multiple cancer sites in their analyses and therefore presented data relating to cancer in general.

Canto et al (1998), Atkin et al (2008) and Hilton and Hunt (2010) instead reported on specific cancers, which were cervical (related to Jade Goody), breast and oral cancer respectively. Only mortality was reported by more than one paper (Canto et al, 1998 and Jensen et al, 2010), however in the Canto et al (1998) study, this was combined with coding for morbidity making the results non-comparable. Overall, results suggest that such information is relatively infrequently reported. Regarding cancers in general, Jensen et al (2010) found infrequent reporting of cancer incidence (26.9%) and mortality (6.1%), while Caburnay et al (2008) reported that cancer disparities were infrequently reported in both newspapers with a general and specific ethnic minority audience. This was particularly the case for the general audience newspapers (10.4% vs 29.8% in ethnic minority-audience articles). The studies of specific cancer sites showed that prevalence information was only reported in 9.5% of articles about Jade Goody's cervical cancer diagnosis in UK newspapers (Hilton and Hunt, 2010), and 35% of articles about breast cancer in the USA (Atkin et al, 1998). Combined morbidity and mortality was featured more frequently in oral cancer articles (50.0%; Canto et al, 1998). However, of note is that Canto et al (1998) specifically included a search term of tobacco when identifying their newspaper articles. It is unclear from the paper exactly which types of newspaper article the authors were interested in, but the inclusion of the term tobacco may bias the results towards more informative articles, which is potentially reflected in the much higher proportion of articles reporting on cancer statistics. This study also had a small sample of newspaper articles, (n=18) meaning that findings may be more likely to reflect chance.

Risk factors

Nine studies investigated whether or not newspaper articles mentioned cancer risk factors (Donelle et al, 2005; Atkin et al, 2008; Moriarty and Stryker 2008; Hilton and Hunt, 2010; Jensen et al, 2010; Al-Naggar et al, 2011; Kamenova et al, 2014; Kye et al, 2015; Macdonald et al, 2018). Three studies (Jensen et al, 2010; Kye et al, 2015; Macdonald et al, 2018) considered risk factors in studies of multiple cancer sites. Comparison is difficult owing to the different settings of the studies (USA, Korea and UK respectively) time periods, years of analysis, and different risk factors coded. Of most relevance here is Macdonald et al (2018) as their analysis is most recent and undertaken in the UK. They found that risk factors most frequently reported varied with cancer type. Family history was most frequently reported in breast cancer articles published in 2013-2014 (15.3%), while age (13.6%) was most commonly reported in relation to prostate cancer, smoking (41.9%) in relation to lung, and diet (33.3%) in relation to colorectal. This is also the only study to differentiate between a mere mention of risk factors and a discussion of them. As might be expected, many fewer articles discussed cancer risk factors than simply mentioned them, with the above-reported proportions reducing to 9.4% of breast articles published 2013-2014 discussing family history, 3.6% discussing age and prostate cancer, 13.9% discussing smoking and lung cancer and 2.4% discussing diet and colorectal cancer. Kye et al (2015) found that Korean newspaper articles tended to focus on environmental or occupational risk factors (21.1%), rather than potentially modifiable risk factors (for example, diet was the most frequently reported modifiable risk factor at 13.6%). Conversely, Jensen et al's (2010) study, undertaken in USA, found the opposite; that although risk factors were not reported frequently (28.1%), when they were, lifestyle was the most frequently reported (11.7%). Environmental or occupational risks were reported in 5.6% of articles.

Of studies considering a single cancer site, the two studies of oral cancer (Canto et al, 1998 and Kelly et al, 2016) undertaken in the USA and UK respectively) found that modifiable risk factors were reported most frequently. In both cases, the focus was on tobacco and alcohol use (86% identified tobacco and 26% alcohol in Canto et al, 1998, while 57% reported tobacco or alcohol as a risk factor in Kelly et al, 2016).

In the Jade Goody cervical cancer stories, the link between oral cancer and HPV was the most frequently mentioned risk factor, although this occurred in less than 8% of articles (Hilton and Hunt, 2010). Other risk factors, such as not attending screening, sexual behaviours and lifestyle factors were each mentioned in less than 4% of articles.

Studies relating to breast cancer tended to focus on genetic or environmental risks, particularly in ethnic-audience publications (Donelle et al, 2005, Atkin et al, 2008; Al-Naggar et al, 2011). Although higher than the Jade Goody articles, data for UK publications reporting of Angelina Jolie's preventative mastectomy nonetheless shows low levels of risk factor reporting. Only 21.4% discussed the link between breast cancer and the BRCA gene, and only 7.8% mentioned that Ms Jolie's mutation was rare (Kamenova et al, 2014).

Prevention

These articles were interested in whether or not information about prevention was included in newspaper articles. This is contrasted with papers looking at whether articles provided explicit advice, provision of further resources or signposting, which is presented later under the heading of *signposting information, efficacy, or mobilisation messages* (section 3.3.5). The presence of prevention messages was investigated in ten

research papers (Canto et al, 1998; Stryker et al, 2007; Moriarty and Stryker, 2008; McDonnell et al, 2008; Caburnay et al, 2008; Atkin et al, 2008; Metcalfe et al, 2010; Hilton and Hunt, 2010; Al-Naggar et al, 2011; Kamenova et al, 2014). The findings of these studies are difficult to synthesise owing to heterogeneity in the articles identified, cancers investigated, and preventative behaviours examined. Of the four studies that consider multiple cancer sites (Stryker et al, 2007; Caburnay et al, 2008; McDonnell et al, 2008; Moriarty and Stryker, 2008), three (Stryker et al, 2007; Caburnay et al, 2008; McDonnell et al, 2008) consider the differences between general and ethnic minority-targeted publications. Stryker et al (2007), Caburnay et al (2008) and McDonnell et al (2008) demonstrate that prevention is given greater prominence in articles published in newspapers with an ethnic minority target audience than publications with a more general audience. In addition, Stryker et al (2007) and Caburnay et al (2008) showed screening to be the most frequently covered form of prevention overall; McDonnell et al (2008) found corresponding results only when considering the articles that were most explicitly related to cancer. In those articles where the focus on cancer was less pronounced, they found diet to be featured most often. Moriarty and Stryker (2008), who only considered general audience publications, show that few articles describe preventative behaviours (19%). Of these, diet was, again, most frequently reported (30.0%), followed by use of tobacco (25.0%) and screening (24.0%).

Diet and screening were less prominent in research looking at specific cancer sites, even where one might expect these to be key preventative behaviours. While diet was infrequently described in terms of a preventative behaviour in Al-Naggar et al's (2011) study of breast cancer (8.9%), it was not mentioned at all in Canto et al's (1998) study of oral cancer articles. Instead, smoking cessation was most frequently reported, featuring

in 11% of articles. Screening was only featured 8.9% of Al-Naggar et al's (2011) breast cancer articles, which was slightly less than exercise and over 5% lower than self-examination, which was the most frequent. A higher proportion of breast cancer articles mentioned screening in Atkin et al's (2008) study (23%), however this study does not break down findings into other preventative behaviours. Where investigated, limiting alcohol consumption was consistently one of the most infrequently mentioned preventative behaviours (Canto et al, 1998; Stryker et al, 2007; McDonnell et al, 2008; Moriarty and Stryker, 2008).

In the three celebrity-focussed stories, two focussed on Jade Goody and her cervical cancer story. Hilton and Hunt (2010) and Metcalfe et al (2010) found that less than 10% of articles contained information about cervical screening. In addition, Metcalfe et al (2010) found other preventative behaviours pertaining to cervical cancer, such as use of condoms and lifestyle changes to be featured in less than 1.5% of articles. One paper (Kamenova et al, 2014) focussed on stories about Angelina Jolie's preventative double mastectomy. As might be expected given the preventative nature of Ms Jolie's decision, 100% of the newspaper articles in Kamenova et al's (2014) study contained information on this subject.

Signs and symptoms

Four studies investigated whether cancer signs and symptoms were present in newspaper articles. Two of these focussed on oral cancer (Canto et al, 1998 and Kelly et al, 2016), one on colorectal cancer (Jones et al, 2011), while one looked at articles about Jade Goody's cervical cancer (Hilton and Hunt, 2010). Kelly et al (2016) report a low proportion of articles reporting signs and symptoms in the UK (8.4%), however these are

not broken down any further. Hilton and Hunt (2010) found minimal coverage of information about signs and symptoms in articles about Jade Goody (2.8%). Jones et al (2011) report only 6.4% of articles contained information on signs and symptoms of colorectal cancer. Canto et al (1998) on the other hand, state that as many as 44% of articles reported on the most frequently reported a sign, which was a sore or ulcer. One possible reason for the discrepancy is the aforementioned search terms relating to tobacco used by Canto et al (1998), which may bias results towards more informative articles, and the relatively small sample size.

3.3.5: The presence of signposting information, efficacy or mobilising messages.

Six studies reported on the prevalence of what was variously deemed by authors to be efficacy information, mobilisation information or signposting (Canto et al, 1998; Caburnay et al, 2008; Cohen et al, 2008; McDonnell et al, 2008; Moriarty and Stryker, 2008; Kelly et al, 2016). The majority of studies looked at multiple cancer sites, with the exception of Kelly et al (2016) and Canto et al (1998), who looked specifically at oral cancer.

These studies are presented together here because they relate to providing further resources or direction for readers. However, the definitions of what determines signposting, efficacy and mobilising messages varies between studies. Canto et al (1998) described the proportion of articles that reported behaviours to reduce risk (as opposed to simply stating what the risk factors for cancer are), for example, reducing alcohol consumption, smoking cessation, changes to diet and protecting oneself from the sun. Caburnay et al (2008) and Cohen et al (2008) defined mobilising information as the provision of specific recommendations for improving one's health or that of the

community and/or reducing one's risk. Moriarty and Stryker (2008) described efficacy messages as those that clearly described how an individual could perform preventative behaviours or information about a resource to help them to do this. Mobilising information was defined as the provision of contact details for further information about cancer. McDonnell et al (2008) described the provision for additional resources. Kelly et al (2016) was the only article to describe signposting in the sense reflected in the *BCOC* campaigns, i.e., to go to your doctor if you experience potential cancer symptoms. This is the most important study for the current thesis, with Kelly et al (2016) finding that 12.6% of articles advised readers to go to their GP or dentist if they had symptoms suggestive of oral cancer.

Regardless of the definition of efficacy, mobilisation or signposting, or the cancer type under study, research suggests that, in publications with a general target audience, between 5% (McDonnell et al, 2008) and 16.7% (Cohen et al, 2008) of articles contain such information targeted at the individual. Only Moriarty and Stryker's (2008) study of North American publications allows further breakdown of such content to account for differing guidance or information. Moriarty and Stryker (2008) identified that efficacy information describing how an individual could change their diet was most frequently presented, accounting for 16.3% of efficacy information. Sun (10.9%), tobacco (3.7%), exercise (3.4%), sexual activity (0.9%), and alcohol (0.4%)-related behaviours were featured less frequently.

Three studies considered the difference in efficacy, mobilisation and signposting messages relating to multiple cancer sites between publications with general and ethnic minority target audiences in the USA (Caburnay et al, 2008; Cohen et al, 2008;

McDonnell et al, 2008). Results were inconsistent regarding which type of publication featured more efficacy, mobilisation and signposting information. Caburnay et al (2008) and McDonnell et al (2008) found that there was more information on how to perform preventative behaviours and provision of further resources respectively in publications targeting ethnic minority audiences, with Cohen et al (2008) finding more publications aimed at general audiences contained specific recommendations for health-related behaviours.

No studies of celebrity cancer diagnoses considered whether efficacy, mobilisation or signposting information was included. The closest information of relevance to this was provided by Hilton and Hunt (2010), who reported that cervical cancer screening was explicitly advocated in less than 0.5% of articles.

3.4: Discussion

3.4.1: Summary of findings

The literature review has revealed that research into the content of cancer-related newspaper articles has focussed on five main areas, namely:

1. The proportion of newspaper articles published about specific cancer types.
2. Whether the proportion of newspaper articles published on a particular cancer is representative of current cancer statistics.
3. What is the main focus of cancer-related articles, for example, whether the article as a whole focusses on treatments or prevention.
4. What key cancer awareness messages are included in the articles.

5. The presence of signposting information or mobilising messages.

Trends identified in the findings of these studies show that some cancers are reported on more frequently than others, in particular, breast cancer. This similarity in findings, particularly in Western countries, is striking. Furthermore, the literature review has shown that these reporting patterns, at least in the West, tend not to match cancer statistics (MacDonald and Hoffman-Goetz, 2001; Heneghen et al, 2007; Stryker et al, 2007; Cohen et al, 2008; Slater et al, 2008; Cai et al, 2009; Jensen et al, 2010; Williamson et al, 2011; Konfortion et al, 2012; Konfortion et al, 2014; Miyawaki et al, 2017). The reason for these findings may relate to cancer incidence. Breast cancer is the most common cancer in women and the most common cancer overall (ONS, 2018). The high incidence may mean that stories about it are deemed newsworthy owing to the potential relevance to high numbers of people (see section 2.4.2). If this finding is considered in terms of agenda-setting theory (McCombs and Shaw, 1972), whereby it is assumed that those news items that are published are deemed more important by consumers (and therefore potentially more common, see section 2.2.1), there is the potential for public perceptions of cancer incidence to be skewed. Indeed, this effect was demonstrated by Jensen (2014, see section 2.1.1). While a perception of breast cancer as being most common is not incorrect, there may be the potential for other, less common cancers that are not reported as frequently to become less visible. This could potentially result in reduced public awareness and the potential for poorer survival if it is accepted that this contributes to later presentation (cf. section 1.3).

The main focus of cancer-related articles has frequently been cancer treatments or research (Slater et al, 2008; Liu et al, 2010; Jensen et al, 2010; Smith et al, 2010; Kelly et

al 2016). While cancer research is not necessarily defined in these studies, it is likely to at least include some discussions of potential new treatments. Articles with a more awareness or education-focused purpose tended to be published less frequently. This finding supports research by Clarke and Everest (2006, see section 2.2.3), who identified that cancer stories tended to highlight a restitutive or medical model of cancer care. This approach has been criticised by Frank (1997) as side-lining the individual, and instead focussing on the medical professional or the treatment as the active agent. From a more public health perspective, it could be argued that the focus on prevention and early diagnosis, and hence, the patient more actively engaging with a quest (see Frank, 1997) highlighted as a key issue in Government policy on cancer survival in recent history (see chapter 1), is at odds with a more journalistic focus on cancer treatment.

Finally, the research presented in this review has demonstrated that information that may potentially contribute to early diagnosis of cancer through increasing public cancer awareness is infrequently featured in cancer-related newspaper articles. This is the case across different cancer sites, different types of articles, and was demonstrated in studies of greatly varying duration. There is a small amount of evidence to suggest that newspapers aimed at minority ethnic groups may publish more educational content (Donelle et al, 2005; Stryker et al, 2007; Caburnay et al, 2008; McDonnell et al, 2008). The lack of information related to cancer awareness messages is important because symptom awareness is frequently related to help-seeking behaviour (Macdonald et al., 2006) and there is evidence that the public use newspapers as a source for cancer-related information (e.g. LiveSTRONG Foundation, 2007; Shankar et al, 2016). This is a viewpoint that has been raised by consumers. For example, Ashton and Feasey (2014) conducted focus groups with young women who read the celebrity gossip magazine *OK!*,

which covered Jade Goody's story. Consumers felt that there were missed opportunities for featuring educational content alongside the human interest stories about Jade and stated that, in some cases, they had not learnt anything about cervical cancer by following Jade's story.

3.4.2: Strengths and limitations of the review

The above findings should be considered in light of the strengths and limitations of the literature review. One issue that has been debated with regards to scoping reviews is that there is no consideration of the quality of included studies using critical appraisal tools, with Levac et al (2010) claiming that assertions about gaps in the literature or summaries of existing evidence could be inaccurate. This is certainly a key consideration, however, others, such as the Joanna Briggs Institute (2010) consider the lack of critical appraisal to be a defining difference between a scoping review and a systematic review. The research student would agree with this assertion; however, it is acknowledged that this may be a concern for some authors.

General concerns about scoping reviews aside, it is also important to consider the strengths and weaknesses of the specific review in question. The review consisted of a search of two academic databases, MEDLINE and Embase. They were chosen owing to the subject areas indexed and the fact that previously identified papers of interest were indexed in these databases. Databases that are recommended for use in identifying linguistic studies were also checked for relevant abstracts prior to running the final search; where relevant papers were identified, it was noted that all of the abstracts were also indexed in MEDLINE or Embase. While searching more databases would inevitably produce more hits, the number of relevant papers indexed in MEDLINE and Embase,

regardless of database searched, would suggest that a high proportion of relevant research has been identified.

The search terms used were designed to be wide in order to achieve a high degree of sensitivity. As such, terms were only included for cancer and newspapers. No outcomes were included in the search so that papers were not excluded as a result of the research student missing a potential outcome. While this resulted in a loss of specificity and only a very small proportion of the identified abstracts being included, the aim of a scoping review is to map the evidence relating to a particular topic, rather than answering a tightly focussed research question (Joanna Briggs Institute, 2015; Moher et al, 2015; Peterson et al, 2016). The use of a highly sensitive search strategy is therefore justified.

The weaknesses of this review mainly stem from the fact that the research student alone was responsible for study identification and data extraction. Guidelines for completing a scoping review suggest that there should be two independent reviewers who identify included studies and extract the data in order to minimise reporting bias (Joanna Briggs Institute, 2015). While this review had relatively relaxed inclusion and exclusion criteria and a conservative approach was taken when identifying studies to be included, it cannot be denied that a second reviewer may have deemed other studies appropriate for inclusion. Similarly, it is possible that, without a second reviewer extracting data from the papers, that errors may have been made. It would be hoped that this has been attenuated by completing data extraction electronically which allows copying information directly from the original source and checking data extraction again during the construction of summary tables, but, again, this is not guaranteed.

3.4.3: Implications of the review

If the findings of the review are accepted, then there are a number of potential implications. These fall into two main areas; the first being the responsibility (if any) of journalists with regards to reporting health information. The second relates to implications for research; more specifically, for the current thesis.

Implications for journalists and journalism

Some authors have been highly critical of the media coverage of cancer, and, in some cases, taken the view that the media are to blame for public misunderstandings. Some have stated that there is a need for guidelines or a 'code of conduct'. Rosenthal (2017) suggests that, due to the wide reach of celebrity cancer stories, the onus now falls on the media to report such stories responsibly, and to include important medical information. The reporting of human interest stories is also criticised by Dixon-Woods et al (2003). In this study, newspaper reports about childhood cancers from the US, UK and Canada were compared and parents of children with cancer were interviewed. Dixon-Woods et al (2003) concluded that such newspaper reports idealise children as brave and uncomplaining and relegate parents to being a 'resource' simply to help in the child's 'battle' with cancer. The authors argue that these representations may leave parents and children struggling to match up to a social ideal of how such a diagnosis should be handled, whilst not allowing parents the space to voice their own needs, thereby adding to an already highly stressful situation.

Others have criticised the representation of cancer research in newspapers. Senior (2008) compiles a long list of examples of poor media reporting about cancer, often treatments, which may serve to either raise expectations or mislead. She quotes

Timothy Caulfield, who describes “polarizing” coverage that tends to describe “a breakthrough or a catastrophe” (p.920). Houn et al (1995) described American newspaper reporting of research into cancer risks associated with drinking alcohol as ‘piecemeal’, in that many journal articles were ignored, and the stories that were published were confusing, contradictory, and contained poor explanations of risk. They place the responsibility on the press, but also scientists and the public. They state that scientists should do more to investigate how public health research is reported by the media and take a more active role in how findings are disseminated. Nichols and Chase (1995) comment that newspaper reports do not adequately describe study methodologies meaning that readers are not given enough information to interpret risks accurately. They also claim that positive results are more likely to be described as unequivocal, which is both misleading and dangerous. Ooi and Chapman (2003) identified that, out of 31 cancer ‘breakthroughs’ reported in one Australian newspaper between 1992 and 1994, only a quarter would end up being adopted into practice a decade later. The authors state that not only could this reporting style unduly raise consumers’ hopes but may lead to the view that they do not need to engage in preventive behaviours because a cure for cancer will soon be available. Van Dam and Renckens (2002 p.524) state in an abstract of a Dutch language paper that the press should “maintain a more responsible attitude toward medical claims and double-check medical information, even when it comes from renowned medical researchers”. Brody (1999) sees it as the job of the media to provide more context and perspective on cancer risk stories, amid fears that miniscule risks are blown up into mass hysteria, and goes so far as to say that:

“the public is not capable of rationally considering risks, and the media are at fault for perpetuating this ineptitude.”

Specialist science writers also offer negative evaluations of newspaper reporting. In discussing cancer stories that report on research into cancer treatments, Cooper et al (2002) showed that some believed journalists and newspaper editors had made irresponsible decisions about the placing and reporting of a new cancer treatment. It was suggested that stories could be improved by including more detail about the statistics presented in newspaper stories (such as what is meant by survival), better definitions of scientific terminology, better explanations of the pathway from promising treatment in laboratory experiments to proven, effective, and licensed treatment in cancer patients, and reporting on research trends as opposed to individual studies.

It would be unfair to suggest that there is no recognition of this issue in journalism. Nearly twenty years ago, Russell (1999), a journalist, suggested (amongst other things) that cancer reporting should put the disease in context by comparing the risk of cancer to other health risks. The distinction between relative and absolute risks, and personal and population risk should be made clear. The uncertainty of cancer should be emphasised, sensationalist reporting should be reduced, and more information should be provided around cancer prevention and the details of scientific studies reported. The paper concludes by stating:

“Improving coverage of cancer risks is a challenging, long-term project that involves a recognition that there is indeed a problem of often unbalanced,

hysterical coverage of cancer and a commitment to improving the product by both those who make the news and those who cover it” (p.170).

Implications for research

The findings of the review and the characteristics of the studies also reveal implications for research. Firstly, when considering the characteristics of the research, it is notable that, unlike studies included from most other countries, research looking at the content of cancer-related newspaper articles in the UK has only focussed on national publications. Yet, regional publications are read by around 50% of people at least weekly in the UK (Ofcom, 2013; 2014)⁵. It is therefore worth investigating whether the trend of findings identified in the literature review applies to regional UK publications as well as national ones.

A second key factor in terms of the educational content of newspaper articles is that, despite the national focus on signs and symptoms and efficacy/mobilisation messages towards encouraging people to see their GP through the *BCOC* campaigns (cf. chapter 1), only one study (Hilton and Hunt, 2010) investigated the frequency with which cancer signs and symptoms are reported. None of the UK studies reported explicitly on whether newspaper articles contained messages encouraging consumers to go to their GP if they experience potentially concerning symptoms. It should also be noted that the Hilton and Hunt (2010) study was conducted on stories reporting Jade Goody’s cervical cancer

⁵ More recent reports (2015) by the same publisher have changed the presentation of findings, now showing that 23% of people use local newspapers for news, however, the time period to which this equates is not clear.

journey. As such, it may be that non-celebrity cancer articles differ, as might articles about other cancer sites.

A third observation is that none of the studies included in the literature review looked at the language used when reporting cancer. Given the importance of language as identified by academics and patients (see section 2.3), the potential effects of language on emotional impact and interpretation (Lang, 2013) and the potential for these emotional responses, such as fear, to potentially influence people's attendance at the GP for potential cancer symptoms (Smith et al. 2005, Khakbazan et al. 2014, Forbes et al, 2014, Whitaker et al. 2015; 2016a, Paxman et al. 2017), it might be argued that widening the scope of investigation to include an analysis of the language would be beneficial. This has particular relevance to articles that report on the national *BCOC* campaigns owing to the fact that newspapers are targeted by the campaigns under the assumption that it is possible to retain the campaign's call to action in its original format (Taylor and Radford, 2012). It should be noted here that one study that was identified by the search but was subsequently excluded owing to the methods and results being unclear; Bell and Seale (2010) investigated the frequency of words relating to risk factors, prevention, and signs and symptoms as pertaining to cervical cancer. However, they did not look further at words that might influence the framing or interpretation of the content.

Variables analysed by the included studies did not include the demographic data of any featured case studies, which has been shown to have a potential influence on how well articles are recalled, the extent of consumer engagement and discussion, and the

acceptability and how messages are evaluated by consumers (e.g., Henderson and Kitzinger, 1999; Kreuter and McClure, 2004; see section 2.4.1).

A final observation is that, as described previously in section 3.4.3, there have been some substantial criticisms of journalists with regard to their reporting of cancer. Yet, none of the studies identified have sought to understand why the articles might be written in the way that they are. Such knowledge would help not only to explain the findings in a way more explicitly related to cancer than the existing literature on newsroom processes on more general stories but may also assist with planning interventions and developing future messages. This is important not only because of the potential to blame journalists for the portrayal of cancer and/or public understanding, but also because knowledge of the journalism field is essential for public health professionals if they wish to use newspapers as a means of disseminating cancer awareness information (as, indeed, the *BCOC* campaign does).

3.5: Research question and study objectives

These observations have led to the following research question to be addressed in this thesis, namely:

How do journalists/media professionals talk about the process that leads to the production of cancer-related articles and how does this relate to the representation of cancer in newspaper reports?

In order to answer this question, the following objectives are posed:

1. To understand the process that results in the final newspaper articles through interviewing journalists and those producing press releases.
2. To identify the demographic characteristics of people featured in cancer-related newspaper articles in the UK.
3. To consider how educational these cancer-related articles in UK newspapers are as they pertain to key public health awareness messages.
4. To use corpus linguistic methods to explore the relationship between journalists' accounts of the process of writing about cancer and the representation of cancer in newspaper reports.

The next chapter is the methodology chapter and explains the approach taken to address the above research question and objectives.

CHAPTER 4: METHODOLOGY

The chosen methodology for addressing the study aim and objectives is an interdisciplinary, multiple methods approach that is based within public health, but is informed by corpus linguistics. This chapter will firstly explain what interdisciplinary research is, why it was felt to be necessary, and the anticipated benefits and challenges of an interdisciplinary approach. The addition of corpus linguistic approaches to a public health thesis, to some extent, necessitates the use of multiple methods. Therefore, the chapter will also address what multiple methods are, justify why this approach has been taken, present the strengths and weaknesses of multiple methods, and explain how the multiple methods analysis will be undertaken. Following this, reference will be made to a pilot study that utilised, and demonstrated the value of, an interdisciplinary, multiple methods approach. This will be followed in chapter 5 by a presentation of the individual approaches used to answer the specific objectives of the study.

4.1: The multidisciplinary > interdisciplinary > transdisciplinary continuum

According to Choi and Pak (2006) the extent to which different disciplines can be combined lies on a continuum. At one end of the continuum is a multidisciplinary approach. In the centre is an interdisciplinary approach, and at the other end of the continuum is a transdisciplinary approach. A multidisciplinary approach is additive, involving different fields working together on the same problem, but the input of each discipline remains within their own pre-existing boundaries. It has been likened to looking at different faces of the same object (Clarke, 1993). With regards to the current research, it might be questioned how much added value could be obtained from this. Adding corpus linguistic approaches to a public health approach may allow the two sets

of results to be compared and contrasted, but would not allow them to be fully integrated, which may limit the extent to which the corpus linguistic analysis can contribute to the public health problem at hand in an applied way.

At the other end of the spectrum is transdisciplinary research, which was described by Choi and Pak (2006) as involving a wide range of stakeholders in a whole systems approach whereby the outcome is entirely different to the constituent inputs. Such a complex approach is beyond the scope of a single research student, and, furthermore, the outcome of the study is not intended to change a system. The purpose is more about identification and developing understanding with the potential for suggesting future changes and avenues of research.

Alternatively, in the middle of the spectrum lies the interdisciplinary approach. This involves more integration than a multidisciplinary approach, such that the boundaries of the composite disciplines begin to blur. This is a more reciprocal relationship whereby individual approaches may influence each other, change, or new methodologies may be generated with the outcome being more than the sum of its parts (Choi and Pak, 2006). This is the best for the current research because the intention from the outset was to utilise a corpus linguistics approach to expand and enrich a piece of public health research.

4.1.1: Advantages and disadvantages of an interdisciplinary approach

The main advantage of an interdisciplinary approach is the benefits gained from multiple perspectives and blending of approaches. Some have suggested that interdisciplinary research is most appropriate for solving 'real world' problems. A special edition of the

journal *Nature* (2015; p.289) stated that the biggest problems facing scientific enquiry (of which cancer is one) is that such enquires rarely sit neatly within a single discipline. Key scientific discoveries often lie on the boundaries between disciplines. No single discipline has everything needed to solve these issues alone. Interdisciplinary working can benefit the disciplines themselves, expanding their horizons and pushing them into areas they have not yet explored (Ledford, 2015; Rylance, 2015).

This is not to say that interdisciplinary working is without its challenges. A non-exhaustive list of challenges as described in the *Nature* special edition includes, for example, increased time and monetary costs. Interdisciplinary work is likely more complex, requiring additional time to set up, to build a trustful working relationship with collaborators, and to work to understand each other's approach. Relationships can be undermined when there is a lack of respect between disciplines, for example, where one sees their own approach as better or more rigorous. There may be personal or institutional resistance. Individuals may not want to work in an interdisciplinary team, while institutions may have concerns that their staff's time or money is going to be taken by other departments. Institutional organisations and funding body organisations may not favour interdisciplinary working, instead being set up more for discipline-specific approaches. It may take longer for interdisciplinary research to make an impact in terms of citations. It may be harder to publish due to interdisciplinary research being more difficult to peer-review and the discipline-specific nature of journals (although more interdisciplinary journals are being set up, Brown et al, 2015; Ledford et al, 2015; Nature (anon), 2015; van Noorden, 2015; Rylance, 2015). It is also true that an interdisciplinary approach may mean that the level of depth or detail within a given approach is reduced, owing to the blurring of the lines between the two disciplines. As will be made clear in

the following chapter which deals with the individual methods being used to address the research objectives, this thesis utilises corpus linguistics as a way to expand and enrich the public health investigation. It must be made clear, however, that it is not the intention to situate the thesis within a linguistic field. As such, the linguistics element will not be as comprehensive as it would be if this was a linguistics PhD thesis.

While the list of difficulties is perhaps considerably longer than the list of advantages, this thesis is one example of an issue/research question that cannot be addressed as effectively using a single approach as it can using an interdisciplinary approach. Challenges exist for the research student relating to making decisions about which approaches are appropriate to use and how to analyse the data effectively, around the actual practicalities of doing the work, learning multiple approaches, and writing in a way that is understandable and useful to audiences from different backgrounds with their own norms and expectations. Having said this, the developmental opportunities for the research student and benefits for the research are considerable. This topic will be returned to in section 8.1 and to a greater extent in section 8.10 when the research student will reflect on the interdisciplinary approach taken and the issues encountered.

4.2: Multiple methods research design

Partly as a consequence of methods utilised in public health and corpus linguistics, a multiple methods approach is necessary. Multiple methods is described by Morse (2003, p.190) as an approach in which studies of two or more methodologies are rigorously conducted, independently, within a single project and are then integrated in order to create a cohesive whole. Some, such as Greene (2008), have attempted to distinguish

multiple methods from mixed methods as a distinct methodological field owing to a different mindset and a greater extent of mixing at earlier stages of the research. However, definitions of mixed methods are 'messy', with disagreement over best definition, guidelines, philosophy and the effects of consensus on research quality (Leech, 2010). The current work would meet some definitions of mixed methods (e.g. the work of Johnson et al, 2007, who state that it is an intellectual and practical synthesis based on qualitative and quantitative research). However, other descriptions include strict temporal aspects to the study that dictate when various aspects of data should be collected and analysed or necessitate the transformation of one type of data (e.g., qualitative data) into another (e.g., quantitative data; see the review by Onwuegbuzie et al, 2009). This study does not do this. To further complicate the issue, some researchers, such as Creswell et al (2004), use the terms multiple methods and mixed methods interchangeably. For the sake of clarity, this study uses the term multiple methods to refer to an 'integration' of analysis (to use the terminology of Moran-Ellis et al, 2006) but without data transformation. This emphasis on integration is reflected in the structure of the results chapter, which, rather than presenting the findings of each analysis separately, draws the findings of all three approaches together into a single narrative that allows each to support and inform (and, where relevant, contradict or contrast with) the other.

Multiple methods rejects the notion that quantitative and qualitative methods are mutually exclusive due to their differing worldview (Johnson and Onwuegbuzie, 2004). This is what Howe (1988) described as the 'incompatibility thesis', which states that positivism is incompatible with constructionism because of differing philosophies surrounding truth, reality and the relationship between the investigator and participant.

From a positivist standpoint, scientific knowledge is based purely on observation that is free from: “the interests, values, purposes, and psychological schemata of individuals”, whereas from a constructionist standpoint, these aspects cannot be eliminated from understanding knowledge and are therefore explicitly incorporated (p.13). Some researchers may find this argument problematic. However, Johnson and Onwuegbuzie, (2004) suggest that, pragmatically, limiting one’s approach to only those endorsed by either quantitative or qualitative researchers limits the research questions that can be answered. Instead, the issue at hand is what methods can best solve the problem, secondary to whether or not various approaches can, or should be, combined from a philosophical standpoint.

4.3: Rationale for and advantages of multiple methods

As previously stated in section 3.4.3, it is felt important to recognise not only the *what* question in terms of how cancer is reported in UK newspapers, but also *why*. Multiple methods provides one way in which this can be addressed. Collins et al (2006) states that combining quantitative and qualitative methods helps to expand interpretation and provides additional clarity as to why particular results were obtained. It also allows for findings to be integrated, elaborated on, and for findings from one method to inform and develop the other. Similarly, Greene et al (1989) writes about the concepts of triangulation (convergence and corroboration), complementarity (elaboration, enhancement, or illustration), and expansion (extending the breadth of enquiry by selecting methods most suited for each component) as benefits of using multiple methods. Hence, a deeper understanding of study results and of areas of agreement or

contention between study strands can be obtained if quantitative and qualitative analyses are undertaken and integrated successfully.

With reference to one of the methods being used in this study specifically, Baker et al (2008) describe the addition of corpus linguistic approaches to a critical discourse analysis study, which would usually make use of purely qualitative analyses. They concluded that using the two approaches together not only allowed for findings to be compared and contrasted, but that the corpus linguistic analysis allowed them to provide some quantification of their qualitative findings. The corpus linguistic analysis itself also required qualitative interpretation of more quantitative data. This resulted in a more in-depth analysis that benefitted from the two approaches, with each approach complementing the other whilst providing its own insights. As the current study aims to identify, describe, and understand a phenomenon, utilisation of approaches from a positivist and constructionist philosophy are appropriate.

4.4: Weaknesses of multiple methods

The weaknesses of multiple methods are relatively few and are more focussed on the practicalities of the approach, rather than the theoretical (incompatibility thesis aside). The use of multiple methods is resource and labour-intensive and requires the researcher to be proficient in both qualitative and quantitative methodologies. The approach may be challenging to those who subscribe to a strictly qualitative or quantitative approach and associated worldview (Johnson and Onwuegbuzie, 2004). Integration of multiple methods research (which is discussed further in section 4.5., following) can be difficult both during data collection and analysis phases, meaning that

findings may simply be tested against one another, rather than being fully integrated (Bryman, 2007). This may lead to lost potential or misleading results (Bazeley, 2009). Further, the extent to which integration has been achieved is highly subjective (Bryman, 2008). Bryman (2007, p.20) poses a question to assist interpretation of this issue, asking:

“Has my understanding of my quantitative/qualitative findings, been substantially enhanced by virtue of the fact that I also have qualitative/quantitative findings, and have I demonstrated that enrichment? If the answer is no, it is difficult to see how the researcher can have conducted an integrated analysis beyond the bare minimum.”

Further reflection on Bryman’s question and the success of the chosen methodology will be provided in section 8.1. It is hoped that it will be possible to demonstrate the answer to this question in the affirmative.

4.5: How multiple methods are used in this work

The multiple methods approach used in the current research is inductive. This means that the predominant drive of the research is discovery. That is, to identify what is happening, what the characteristics are, and why it is happening. This is contrasted with a deductive approach, whereby the predominant drive is to test a theory, quantify, or determine relationships. This does not mean that all aspects of the study will necessarily be inductive, rather, that the majority or overall goal is aligned with this drive (Morse, 2003, p.197). This dominance of the discovery aspect can be seen in the individual studies that comprise the work.

The full details of the methods used are detailed in chapter 5 but are briefly described here. The educational content of, and characteristics of people featured in, newspaper articles are investigated in a single study using manifest content analysis. The language of those same articles is investigated in a second study that uses corpus linguistic methods (which itself combines quantitative and qualitative approaches, as will be seen in section 5.2). Finally, the work seeks to understand why newspaper articles are written in this way through in-depth, qualitative interviews with journalists and press officers analysed using thematic analysis (Braun and Clarke, 2006). These three studies then need to be brought together, and this integration is the focus of the next sub-section.

4.5.1: Study integration: following a thread

As stated earlier, this work uses the term multiple methods to refer to an ‘integration’ of analysis (Moran-Ellis et al, 2006) but without data transformation. The form of that integration and the point at which it occurs varies within multiple methods research. O’Cathain et al (2010) describe three examples of data integration: triangulation, the mixed method matrix, and following a thread (citing Moran-Ellis et al, 2006). In the context of multiple methods, triangulation refers to integrating findings at the point of interpretation. The aim of triangulation is to give a more complete picture of the phenomenon under investigation by looking for meta-inferences across the datasets. The mixed methods matrix differs from triangulation because integration takes place earlier, during analysis. This approach is suitable when a study has multiple sources of data for individual cases. Using this approach, all data collected for a single case is analysed at the same time. This allows the researcher to compare and contrast data both within and across cases. The third approach, and the one selected for this study, is

termed 'following a thread' (Moran-Ellis et al, 2006). Using this approach, integration occurs at the analysis stage, as with the mixed methods matrix. However, unlike the mixed methods matrix, all datasets are analysed independently in order to generate ideas that are to be investigated in more detail. These ideas are then followed up across datasets.

Following a thread was felt to be the most appropriate approach because it reflects the predominant drive of discovery of the research by "allowing an inductive lead to the analysis, preserving the value of the open, exploratory, qualitative inquiry but incorporating the focus and specificity of the quantitative data" (Moran-Ellis et al, 2006, p.54). It might also be expected that integration at an earlier stage (i.e., at analysis stage rather than interpretation stage) might contribute to greater effectiveness (cf. Bryman, 2007). While the early stage of integration is also a potential advantage of the mixed methods matrix approach, the mixed methods matrix would not be suitable for the current study. Specific data is being collected from newspaper articles and human participants. There will be no interviews of newspaper articles, nor content analysis of people. Therefore, it will not be possible to analyse data from multiple sources for each person or article. Furthermore, the approach of following a thread within an interdisciplinary study has been piloted by the research student and shown to be successful. This pilot is the focus of the next section.

4.6: Piloting an interdisciplinary, multiple methods approach

The proposed success of an interdisciplinary, multiple methods approach is not only based on theoretical advantages as detailed in the literature, but also on a pilot study.

This pilot study is now briefly described, with the key findings supporting the interdisciplinary, multiple methods approach highlighted. The approaches to analysis described within that are relevant to the current study will be explained in more detail in chapter 5. The contribution that the pilot study has made to the current study will then be highlighted.

4.6.1: Background

The background to this study has already been described in section 1.1 whereby the research student and PD had a chance meeting with DA, leading to discussions about improving an existing piece of research into the types of people featured in UK newspaper articles about ovarian cancer.

4.6.2: Aims/objectives

This study aimed to determine how ovarian cancer is represented in UK newspaper cancer articles that describe an individual who has had an ovarian cancer diagnosis and whether this representation aligns with contemporary medical evidence and/or opinion.

4.6.3: Methods

UK newspaper articles that reported on an individual who had received an ovarian cancer diagnosis between March 2006 and August 2014 were identified using the search terms “ovarian cancer”, “cancer of the ovary”, “ovarian carcinoma”, or “ovarian malignancy” in the Nexis database. Newspapers were analysed using manifest content analysis to determine to what extent cancer awareness messages are featured in these articles and which case studies were featured. The coding scheme was developed inductively based upon the content of the newspaper articles analysed as well as the

key public health messages of the *BCOC* campaign. Corpus linguistic analysis was used to determine the language used in these articles.

4.6.4: Key results

There were findings obtained specific to each of the methods utilised, which were strengthened when integrated together using the 'following a thread' approach (Moran-Ellis et al, 2006). The content analysis of the newspaper articles, which involved counting the number of times that various public health cancer awareness messages were featured, revealed that there was a lack of educational content in the articles. This might be expected based upon the findings of the literature review in chapter 3. The content analysis was also applied to the demographic details of the case studies featured in the articles. This demonstrated that the people featured in the articles were not representative of those most at risk, with most case studies being under 50 years of age. More positively, the majority of the people featured in the articles were living with or beyond cancer, rather than being described as having a terminal diagnosis or having died.

The analysis of language using corpus linguistic techniques found that, even though most of the people who were featured were living with or beyond cancer, there was a tendency for the articles to be negative, both in terms of the characteristics of cancer treatment and in terms of survival. Secondly, the corpus linguistic analysis showed that there was pervasive use of battle and violence metaphors, which were used both to describe individuals as being brave, but also people losing their fight with cancer. Thirdly, relationships and kin were a key part of the stories. The results suggested that that kin and family members may provide support for people with a cancer diagnosis,

however kin and relationships were sometimes framed negatively in terms of the negative effects a cancer diagnosis may have on those around the individual.

Together, these findings suggested that newspaper reporting of ovarian cancer may not reflect contemporary medical thinking and has the potential to create an overly bleak view of the chances of survival, while highlighting that a cancer diagnosis may negatively influence not only the individual but those around them. This suggests the potential to reinforce some of the fears, reported in the literature, that have been linked with people delaying presentation to the GP (Smith et al. 2005, Khakbazan et al. 2014, Forbes et al, 2014, Whitaker et al. 2015, Paxman et al. 2017). The findings also reinforced the findings of others (cf. section 3.3.4) who suggest that there is a lack of content that might educate readers about key signs and symptoms and who is at risk of cancer. This has the potential to negatively influence the chances of people recognising cancer symptoms and going to their GP as appropriate.

This pilot study also demonstrated the value of the ‘following a thread’ approach as a means of integrating findings. The following example is provided to explain to the reader how the approach can be applied, and how it led to a finding that might not otherwise have been apparent. As the terminology for the individual analyses has not yet been formally introduced (see chapter 5), the wording shall be simplified here, in order that the focus is on providing a clear example for the reader. The corpus linguistic analysis demonstrated that there were a number of closely-related words around the concept of *failure* that were identified as statistically significant within the text. This quantitative finding is the starting point for following the thread. The next step was to look at which specific words were highlighted by the analysis as being statistically significant. It was

determined that two words that were frequently used were *lost* and *loses*. This demonstrates that these two words are important for determining why the concept of *failure* was deemed statistically significant. However, the presence of words alone is not sufficient to draw a conclusion. Instead, it is also important to know how these words are used. This requires a more qualitative approach, by looking at the context in which the words *lost* and *loses* are used. To do this, the researcher looks at where the words appear in a sentence and which words they appear with. In other words, the sentence(s) around the given word is (are) analysed in order to give more meaning to the words that were identified as statistically significant. In this specific example, it became clear that the words *lost* and *loses* were being used in several different ways and referred to losing a family member, someone losing their battle with cancer, or someone losing their hair owing to chemotherapy treatment. At this point in the analysis, the loss of hair through chemotherapy treatment was considered potentially interesting to follow up, due to the known fears of the public around unpleasant cancer treatments (Robb et al, 2014). For this reason, the research student selected two words related to cancer treatment, namely *chemotherapy* and *radiotherapy* and used the corpus linguistic approach to analysis to investigate how these words are used in the newspaper articles. This was achieved by looking at the words that *chemotherapy* and *radiotherapy* regularly appeared with. The result of this revealed that *chemotherapy* and *radiotherapy* tend to be used in conjunction with words that suggest that treatment is either unpleasant or unsuccessful.

At this point, the corpus linguistic analysis had revealed that unpleasant and unsuccessful cancer treatments were a statistically significant aspect of the newspaper stories. This is an interesting finding in itself, but further elaboration is possible if this is

tracked across different sources of data, as per the 'following a thread' approach. In this instance, it was decided to see whether these descriptions of treatments as unpleasant or unsuccessful were related to the experiences of the case studies featured in the stories. Such language use would make sense if, for example, large numbers of case studies had had intensive treatment for advanced ovarian cancer but had since died. Data from the manifest content analysis was therefore looked at in terms of the disease progression of the featured case studies. This revealed that the majority of people featured were in fact living with or beyond cancer. The 'following a thread' approach led to a new, integrated finding, which was that the language of cancer would appear to be more negative than justified by the experiences of the specific case studies included.

4.6.5: Implications for the current study

This pilot study contributed to the current study in a number of ways. Firstly, it demonstrated the benefits of an interdisciplinary, multiple methods approach, as well as the use of 'following a thread' to follow up potentially interesting findings across data sources. In this case, that constituted corpus linguistic and content analytic approaches. It was therefore shown to be a suitable method for the research question under investigation, and that the content analytic and corpus linguistics approaches utilised were suitable for this approach.

The pilot study demonstrated the value of the Nexis database as a source of newspaper articles and allowed the research student to develop an appropriate search strategy. As will be seen in section 5.1.1, this was subsequently adapted for the current study by swapping search terms for 'ovarian' with those for the cancers under investigation and adding the taglines for the relevant *BCOC* campaigns.

The pilot study has also contributed to the data collection methods of the current study, specifically in terms of the content analysis. The coding scheme for the pilot study was developed inductively based upon the content of the newspaper articles analysed as well as the key public health messages of the *BCOC* campaign. This also served as an opportunity to pilot the collection of data around the demographic characteristics of the case studies featured and the newspapers themselves. The chosen approach to content analysis (described in more detail in section 5.1.2) was shown to be practical, useable, and could reasonably be expected to cover most, if not all, eventualities in terms of demographic data and key information featured.

The pilot study also contributed to the current study by raising a number of questions. While the study was able to highlight some potentially interesting findings about the representation of ovarian cancer in UK newspapers, it was unable to explain why these results were obtained. This led to the introduction of a further strand of investigation in the current study, which was to ask those involved in the creation of cancer-related newspaper articles why they write such stories in this way. This explanatory data is not only useful for research purposes but also increases the potential for the findings of the current study to be applied by public health professionals. As stated earlier in section 3.4.3, it is important to understand the context in which journalists are working if public health experts wish to develop future interventions that utilise newspapers as a means of message dissemination. The existing literature has highlighted the complexities of news production and potential pressures on journalists; further investigation into which of these are most pertinent to cancer-related newspaper articles and those reporting on campaign press releases would be beneficial to public health professionals.

The second question raised by the pilot study was whether these findings are generalisable across other cancer types. Ovarian cancer tends to be diagnosed at a later stage (World Ovarian Cancer Coalition, 2018), meaning that there may be certain themes within ovarian cancer stories that are less applicable to cancer that may be diagnosed earlier. For example, there were a number of stories in the pilot about women who had difficulties obtaining a 'correct' diagnosis of ovarian cancer. In some cases, the GP was blamed for this. Such stories may be less likely to appear in articles about breast cancer, for example, where two thirds of cancers are diagnosed in the earliest stages (McPhail et al, 2015) and the signs and symptoms are perhaps more well-known or easier to identify.

The third question raised is whether these findings are also found in articles ostensibly about cancer awareness campaigns. These were not investigated in the pilot study owing to the origins of the work being in the types of people featured in ovarian cancer stories; articles about cancer campaigns were therefore excluded unless case studies were featured. As such, they did not contribute much to the findings and results were not stratified by campaign and non-campaign articles. However, looking at articles about the *BCOC* campaign in particular would be useful for public health experts to see how specific awareness messages are disseminated through the newspapers, and whether the assumptions by Taylor and Radford (2012) - that the original call to action can be maintained in long-form copy - is accurate. The research student also thought it would be of interest to know whether the existence of national campaigns influenced the writing style of other articles in any way. It was decided, therefore, to look at reporting before, during, and after the campaigns in the current study.

4.7: Chapter 4 summary

This chapter has highlighted that an interdisciplinary, multiple methods approach has the potential of revealing new insights into the representation of cancer in UK newspapers that are more complete and detailed than would be expected using a single method or a unidisciplinary approach. This has been demonstrated both through citations from the literature and one pilot study, which has also influenced the direction of and methods utilised in the current thesis. The strengths and weaknesses of the interdisciplinary multiple methods approach will be re-assessed in section 8.1 with reflections on the current study. The next section describes the individual methods used in detail and explains how they will answer each of the study's objectives.

CHAPTER 5: METHODS FOR ADDRESSING INDIVIDUAL OBJECTIVES

This chapter describes the specific approaches used to answer the objectives of the PhD.

Namely:

1. To understand the process that results in the final newspaper articles through interviewing journalists and those producing press releases.
2. To identify the demographic characteristics of people featured in cancer-related newspaper articles in the UK.
3. To consider how educational these cancer-related articles in UK newspapers are as they pertain to key public health awareness messages.
4. To use corpus linguistic methods to explore the relationship between journalists' accounts of the process of writing about cancer and the representation of cancer in newspaper reports.

These objectives were split over three studies, which, as Morse (2003) recommends, were rigorously conducted independently and then integrated. Integration took place at the analysis stage as described in the 'following a thread' approach to integration (Moran-Ellis et al, 2006). The first study was a content analysis that looked at the demographic characteristics of the people featured in cancer-related newspaper articles and the extent to which these articles featured key cancer awareness information relevant to the national *BCOC* campaigns. The second study used corpus linguistic techniques to analyse the language of the same set of newspaper articles. Study three looked at the reasons why such findings may have been found through

qualitative interviews undertaken with journalists and press officers. The methods used for each of these studies will now be presented and justified.

5.1: Study 1: Content analysis of demographic characteristics and cancer awareness content

This section first describes the process of identifying the relevant newspaper articles used for both the content analysis and the corpus linguistic analysis. It then describes what content analysis is, before explaining how the analysis was undertaken.

5.1.1: Newspaper article identification

The first step was to identify which types of newspaper articles were relevant. Based upon the findings of the pilot study and the questions raised at its completion (section 4.6.4 and 4.6.5), it was decided to retain the focus on articles that featured a person who had previously had a cancer diagnosis, and, in addition, to look at articles that were ostensibly about the national *BCOC* campaign. At the time of planning data collection, it was known that the two most recent national campaigns focussed on oesophago-gastric cancers (oesophageal and stomach), and breast cancer in women over 70 years of age. It was also known, via an electronic mailshot, that there was an upcoming campaign on the symptom of blood in pee (which relates to kidney and bladder cancer). These were therefore chosen as appropriate cancer sites.

Relevant articles were identified using the Nexis database, which contains electronic copies of articles published in nearly 4,000 newspapers worldwide (LexisNexis, 2018). Search terms were based on the *BCOC* awareness campaigns and the cancer types of

interest. Table 3 below shows the dates that the campaigns ran, the dates of the searches and the search terms utilised. Search terms included the type of cancer as well as key parts of the campaign taglines. All searches were conducted in the Nexis database using a power search in all UK newspapers excluding newswires. The search captured online, as well as print, editions of articles, given the importance of online editions of newspapers in setting the news agenda (Lim, 2006; Vonbun et al, 2015; Harder et al, 2017), and given recent trends towards online publishing (e.g. Cornia et al, 2016; Kakar, 2018a; Mediatique, 2018; see section 2.4.2). As stated earlier in section 3.4.3, one of the major limitations of existing research into the educational content of cancer-related newspaper articles in the UK is that they have exclusively focussed on national newspapers. As regional publications are read by around 50% of people at least weekly (Ofcom, 2013; 2014), it was felt imperative to include these publications as well as national ones. The dates searched corresponded to the period between six weeks before the campaign to six weeks afterwards in order to see whether the existence of campaigns affected the reporting of non-*BCOC* stories.

Table 3: Be Clear on Cancer campaigns considered, dates Nexis searches were run and associated search terms

Campaign	Date of search	Dates searched	Search Terms
Blood in Pee	6 th December 2016	4 th January – 12 th May 2016	“bladder cancer” OR “bladder carcinoma” OR “bladder malignancy” OR “cancer of the bladder” OR “kidney cancer” OR “kidney carcinoma” OR “kidney malignancy” OR “cancer of the kidney” OR “renal cancer” OR “Be Clear on Cancer” OR “Blood in pee” OR “Blood in your pee” OR “just the once”
Oesophago-gastric	5 th November 2016	15 th Dec 2014 – 9 th March 2015	“oesophageal cancer” OR “oesophageal carcinoma” OR “oesophageal malignancy” OR “cancer of the oesophagus” OR “stomach cancer” OR “carcinoma of the stomach” OR “stomach malignancy” OR “malignancy in the stomach” OR “cancer of the stomach” OR “Be Clear on Cancer” OR Heartburn ⁶
Breast Cancer in Women over 70	29 th January 2016	1 st June – 18 th October 2015	“breast cancer” OR “breast carcinoma” OR “breast malignancy” OR “cancer of the breast” OR “Be Clear on Cancer” OR “Don’t assume you’re past it”

⁶ Gastric malignancy and gastric cancer did not add anything to the search – checked 9.11.16

The total number of articles identified from the searches was 9,497. By cancer site, this comprised 488 oesophago-gastric, 891 bladder and kidney, and 8,118 breast.

Random selection of breast cancer articles

As the number of breast cancer results was at least ten times higher than that of the other cancer sites, a random selection was used for the breast cancer articles to avoid them dominating the results. Upon obtaining the search results, all breast cancer articles were scanned to identify the *BCOC* campaign-related articles (n=60). These were set aside, leaving 8,058 non-campaign-related articles. The next step was to take a random selection of these. Owing to the disparity in number of hits compared with the other cancer sites, the aim was to obtain around 10% of the breast cancer articles before applying the inclusion/exclusion criteria (which are detailed in the following section). This would produce a number of potentially included studies of a similar size to the bladder and kidney cancers, which would make the findings more comparable. Undertaking the random selection prior to applying inclusion/exclusion criteria was for practical reasons, as it negated the need to go through all 8,000+ articles applying the criteria, before inevitably losing the majority owing to the random selection.

To do the random selection of breast cancer articles, all non-*BCOC* articles were listed in consecutive order from 1 to 8,058. A random number generator was used (random.org) to generate a list of 1,000 integers between the values of one and 15 on 19th April 2017⁷. The research student then went through the list of integers and applied them to the list of remaining breast cancer articles. For example, if the first three integers were two,

⁷ This was first piloted in order to identify which span of numbers would provide the ideal number of results; a span of 1-10 resulted in too many breast cancer articles.

nine, and seven, the first article in the list was discarded and second article retained, the next eight were discarded and the ninth retained, and then the next six discarded and the seventh retained. If upon closer inspection the article retained did not meet the inclusion criteria, it was excluded, and the next article was checked for inclusion. The integers were then applied from this point onwards, as before, until the end of the list of articles was reached.

Inclusion/exclusion criteria

All articles about bladder and kidney cancer, oesophago-gastric cancer and breast cancer articles obtained through the random selection process were scanned, in full, by the research student. Decisions of inclusion were not made on the basis of the headline alone. Given the evidence that the types of people featured may influence message persuasiveness and, potentially, behaviour change as described in section 2.4.1, articles were included if they were from UK newspapers (or UK editions of newspapers) and:

- 1) featured a case study who had experienced the cancer of interest. To be included, the story needed to provide some information about their experience; it was not sufficient to be included if their cancer was simply mentioned. To illustrate, a story that stated: "Mrs Jones, who is in remission from breast cancer, said that..." would not be included if there was no other information provided that related in some way to (breast) cancer.

And/or

- 2) were about the relevant *BCOC* campaign.

Studies were included if they met one or both of the above criteria.

The following types of article were excluded:

- teaser articles
- obituary pages
- editorials
- book reviews
- ask the Doctor columns
- letters
- articles from non-UK editions
- articles where the cancer of interest was secondary to another type that was not of interest
- articles where a cancer diagnosis was not made (i.e., about a cancer scare)
- exact duplicates.

Also excluded were diarised accounts of journalists' own cancer experience as these represent 'confessional journalism' and therefore have a different purpose and frame than stories about someone else (Coward, 2014).

5.1.2: Analysis

Content analysis

Content analysis involves the systematic classification of parts of text into a structured coding scheme, which are (often) counted. Content analysis is flexible and has been described as both a quantitative and qualitative method, depending on the approach

taken. Analysis can be manifest (i.e. concerned with the direct, observable aspects of a text) or latent (thereby requiring the researcher to look for a deeper meaning that might not be directly observable). Approaches to analysis can be either inductive, i.e., codes are developed out of the content of the text, or deductive, meaning that codes have been decided in advance (Hsieh and Shannon, 2005; Elo and Kyngäs, 2008; Bengtsson, 2016). In this study, a quantitative, manifest, deductive approach was taken. The codes utilised were deductive because they were based upon the *BCOC* campaigns and the ovarian cancer pilot study (see section 4.6). The full list of data extracted is provided later in this section. The approach taken was quantitative because the existence of key messages in the text were coded as being present or not. In the case of demographic details about the individuals featured, information taken directly from the text was entered into a database and coded where appropriate. For example, age was input in numerical form, and then coded into age bracket categories. Analysis consisted of simple descriptive statistics using SPSS 24 (IBM Corp, 2016).

Advantages and disadvantages of content analysis

Content analysis is easily understood, flexible, easily replicable (Bengtsson, 2016) and is recognised as an essential step in understanding mass communication effects (Riffe et al, 2014, p.5). However, its main limitation is that it is a purely descriptive method. Therefore, it cannot explain why something is happening, simply that something is, or is not, happening.

Coding the newspaper articles

Data concerning educational content and demographic details of the articles were extracted. Data selected for extraction was based on the pilot study presented in section 4.6 and the content of the national *BCOC* campaigns. Specific data extracted included:

1. Article information (date of publication, whether this was before, during or after the relevant *BCOC* campaign, newspaper type, i.e., regional or national). National publications were subdivided into quality/broadsheet, midmarket and redtop, based on the method used by Hilton and Hunt (2010, see Table 4). Regional and local publications were coded together as regional.

Table 4: Classification of newspapers

National Serious /broadsheet	National Midmarket	National Redtop	Regional
The Guardian/Observer	The Daily Mail	The Sun	All regional or local publications
The Telegraph	The Daily Express	The Mirror	
The Scotsman		The Daily Record	
The Independent/i			

Newspaper titles include Daily and Weekend editions, Scottish editions and online websites

2. Demographics (sex, age, type of cancer, marital status, whether the case study had children, whether the case study was a celebrity, their occupation, and their disease progression (i.e. living with or beyond cancer, described as terminal or had died from their cancer)).

3. Educational content (symptoms the person experienced, what the symptoms of the particular cancer are, who is at risk, whether early detection is linked with survival, whether it is clear to present to the GP promptly, and to be persistent with the GP if patient concerns continue).
4. The type of article. Specifically, articles were coded as 'human interest' if they were about cancer and contained a case study. This does not necessarily denote that the entire article is dedicated to an individual, simply that they are featured in the story as per the inclusion criteria. Articles were coded as 'campaign' if they were specifically about one of the *BCOC* campaigns of interest. This could be an announcement of the campaign in general or about an event happening locally, such as a *BCOC* roadshow. Articles were coded as 'campaign with human interest' if they were about the *BCOC* campaign and featured a case study.
5. Additional coding to assist the research student, specifically, name of the case study, whether they appear in more than one article, whether there was more than one case study in a given article, the name of the newspaper and any relevant comments. These data are not reported.

A database was constructed in SPSS 24 (IBM Corp., 2016) in order to conduct the content analysis. Educational content was coded as being present or not. Age was recorded as stated in the article and then subdivided into 49 or under, 50-69 and 70+. This decision was made based upon the fact that the target audience for the *BCOC* campaigns is primarily individuals aged over 50 years, and because the target audience for the breast cancer campaign is 70+ years of age (CRUK, 2014c; 2015). Occupation was recorded as a proxy measure of socio-economic status reflecting methods used by the Office for National Statistics (Office for National Statistics, 2010a) and was recorded verbatim as

stated in the article, and then coded as per the Standard Occupational Classification (Office for National Statistics, 2010b) into:

1. Managers, Directors and Senior Officials.
2. Professional Occupations.
3. Associate Professional and Technical Occupations.
4. Administrative and Secretarial Occupations.
5. Skilled Trade, Leisure, Travel and Related Personal Service Occupations.
6. Sales and Customer Service Occupations.
7. Process, Plant and Machine Operative.
8. Elementary Occupations.

Where insufficient information was provided to identify the occupation, an additional code of Unclear was used.

Turnitin similarity analysis

Another form of content analysis was used to determine the amount of shared content between newspaper articles and other sources. This aspect was interested in how similar the textual content of the newspaper articles is to other sources, primarily, the original *BCOC* press releases. This was determined using Turnitin, a software tool used to help detect plagiarism. It works by comparing the text of the submitted document against a database of 929 million student papers, 67 billion web pages (including current and archived content) and 178 million journal articles (Turnitin, 2018a). Sections of the submitted document that are the same as other documents in Turnitin's database are

highlighted by the software, allowing the user to look at both documents together and decide whether plagiarism has occurred.

In this study, the purpose was to see how much content of a submitted newspaper was shared with the original press release of the relevant *BCOC* campaigns, as well as other, potential, sources of content. As the *BCOC* press releases are posted on Public Health England's .gov website, the press releases are, in effect, already uploaded to the Turnitin database. The research student checked this by uploading a Microsoft Word copy of the press release and checking the similarity index for the .gov website. This resulted in a 100% match. Following the link provided in Turnitin to the shared content demonstrated that Turnitin is checking any submitted newspaper articles against the original press release.

The Turnitin data provided a minor contribution to the overall analysis. This is not to say that it does not provide useful information. The aim of this particular analysis was to identify how much of the content of the articles about the *BCOC* campaigns was original, as opposed to being taken from the original press release (or other, potential sources). This is important given the research focus on the language and content of the newspaper articles. It was introduced to help investigate whether any key findings relating to this might have been introduced by the journalist or the press officers. It also provided a more user-friendly way of identifying quotes that have been taken from the press release than performing this task manually. The research student concedes that a similarity index score on Turnitin does not provide proof that content has been taken from the press releases. There may be reasons why journalists rework existing pieces or why particular phrases are used (issues that will be discussed later in the results

chapter). However, in understanding how the content of newspaper stories is developed, it remains useful to be able to determine what proportion of newspaper articles about the *BCOC* campaigns are original content, and hence what aspects of press releases tend to be copied, as well as which quotes are used most frequently.

Undertaking the similarity index analysis

Articles included in this analysis were those about the existence of the *BCOC* campaign as the main subject of the story. This might be about the existence of the campaign in general, or, alternatively, it might inform readers that a *BCOC* roadshow is coming to the local area. These articles were manually identified from the text files produced by the Nexis database and extracted individually. They were then pasted one by one into individual Microsoft Word files. No further changes to the format of the articles were made. These articles were then uploaded one at a time to Turnitin, which was accessed through the University of Central Lancashire's Blackboard digital learning environment infrastructure.

Once an article was uploaded, the originality index was assessed using the 'all sources' tab. This provides a more exhaustive list of potential sources than the overview option, which is the default setting and just includes the best matches (Turnitin, 2018b). If the article itself was already in the Turnitin database, that source was excluded from the sources list before similarity indices were extracted. The list of sources was manually inspected and the percentage of similarity was noted under the following categories: the original national press release from the .gov website; other newspapers; webpages aimed at a local audience, such as those belonging to regional CCGs, or local information/blog pages; webpages with a national target audience, such as national NHS

pages or those belonging to national charities; and the British Broadcasting Corporation (BBC). The highest percentage of similarity for each category was noted and recorded in an SPSS 24 database. In addition, data was extracted about the quotes used in the articles. A list of all quotes mentioned in the national press release was drawn up and were coded in the database as being present or not. Simple descriptive statistics were used to analyse the data, again, using SPSS 24 (IBM Corp. 2016).

5.2: Study 2: Analysis of the language of newspaper articles

This study involved an analysis of the language used in the same set of newspaper articles described in study one. This section therefore describes what a corpus linguistic approach to analysis is, how the articles were prepared for analysis, and how the analysis was undertaken.

5.2.1: Corpus linguistic approaches

In order to look explicitly at the language used in the newspaper articles in terms of statistically significant key words and themes, a corpus linguistic approach was used. Corpus linguistics is the systematic and thorough study of language, in respect to its patterning and structure, via collections of naturally-occurring examples of language, known as corpora (Bennett, 2010, p.2, Semino et al, 2018, p.26-29). In basic terms, this involves the analysis of large quantities of texts, such as multiple newspaper articles, with computer software.

Statistical analyses can be used to identify words that appear together with statistical frequency (known as collocation). It is also possible to examine key words, parts-of-

speech and semantic domains that appear with unusual (in)frequency, statistically speaking, by comparing the target corpus to a reference corpus (O'Halloran, 2010).

For clarity, key words are usually individual words, such as *cancer* or *fear*, but may also represent numerical data, such as *18_per_cent*, dates, or names, such as *Aberdeen_Royal_Infirmary* or *Robert_Smith*. Key words may also relate to short phrases, such as *it's_a_good_job*. Parts-of-speech represent the category to which words belong in any given sentence. For example, pre-nominal possessive pronouns, such as *my* or *our* or general adjectives, such as *brave*. The part-of-speech analysis can also identify other types of word, such as superlative adjectives, for example, *bravest*.

According to Bussman (1996), semantic domains is a term introduced by Trier in 1931 to denote a set of semantically related words whose meanings delimit each other and cover a whole conceptual or objective field without gaps. For example, the words *luck*, *fortunately*, *luckily*, *fortunate*, *by_chance*, *luckiest*, *charmed*, and *it's_a_good_job* are all captured by the semantic field *lucky*. Similarly, words such as *bad*, *severe*, *terrible*, *poorly*, *horrendous*, *shocking*, *scallywags*, and *defect* are all captured under the semantic field of *evaluation: bad*.

Despite the use of statistical analyses, there is a considerable amount of researcher input when undertaking CL analyses (Baker et al, 2008, Semino et al, 2018, p.27). It is not an objective process. Decisions need to be made about which texts to include in the target corpus (i.e., which texts are selected for analysis), which reference corpus will be used, which analyses will be carried out and how data should be interpreted. A corpus-driven approach was used in this study (Tognini-Bonelli, 2001, p.84), in that the analyses were not designed to confirm a pre-existing notion, rather to explore an area that has,

as yet, not been investigated. Specific details about the software utilised, statistical methods used as well as corpora are provided in sections 5.2.2 – 5.2.4.

Advantages and disadvantages of corpus linguistic analyses

The statistical data obtained from corpus linguistic analyses is generally descriptive and represents frequencies and distributions of various aspects of the corpus. It helps the researcher determine, for example, whether a given element appears in a corpus, whether a given element appears more frequently than another element within the same corpus, or whether a given element occurs more frequently than would be expected by chance (when compared with a reference corpus; Gries, 2009). The computerised nature of the analysis allows the researcher to work with much larger datasets than would be possible if working by hand and may also help the researcher to uncover “*non-obvious meaning*” (Partington, 2010, p 88, italics as in original). However, in order to analyse the data, the software focuses on the text alone. It has been argued that the exclusion of other contextual material, such as intonation, images or layout results in less distraction and allows greater focus on what is actually contained within the text. However, this lack of other contextual material could be argued to mean that some meaning of the text is lost (Mautner, 2009, p.34). The descriptive nature of the findings means that they still need to be analysed more qualitatively by the user in order to determine how meaningful they are. It also means that, as with a content analysis, corpus linguistics is not able to explain why any particular findings have occurred on its own.

5.2.2: Undertaking the corpus linguistic analysis

Newspaper articles were analysed using WMatrix3⁸ (Rayson, 2008; hereafter WMatrix). WMatrix is an online tool, available at <http://ucrel.lancs.ac.uk/wmatrix/>. It was chosen because it can assign part-of-speech (POS) tags (Garside and Smith, 1997) and semantic domain tags (Archer et al., 2003) to running text automatically. POS tags are assigned using the Constituent Likelihood Automatic Word-tagging System (CLAWS) with 96-97% accuracy (Garside and Smith, 1997). Semantic tags are assigned using the University Centre for Computer Corpus Research on Language (UCREL) Semantic Analysis System (USAS). The USAS tagging system assigns semantic tags to words or phrases based upon the context of the surrounding sentence with around 91% accuracy (Semino et al, 2018, p.65). The use of such tags makes it possible for users to analyse keywords, key semantic domains and key POS using keyness analysis. To do this, two word lists are created and tagged so that they can be compared. This allows the researcher to determine which words, semantic domains or POS are salient in the text of interest, statistically speaking, when compared with a reference corpus (O'Halloran, 2010).

For the purposes of this study, three corpora were constructed. The first comprised all newspaper articles together, which consisted of 220,576 words. The second contained all articles featuring a case study. This corpus contained 161,074 words, while the third corpus, featuring any article relating to the *BCOC* campaigns, contained 69,907. These numbers added together exceed the number of words in the articles overall; this is because some articles which were about the campaign also included a case study. These articles were included in both corpora.

⁸ On 17th December 2018, WMatrix 3 was replaced by WMatrix 4 and is thus no longer accessible.

In all cases, the reference corpus was the original British National Corpus (BNC) sampler corpus (written), a collection of 1,010,690 words of which 77% are drawn from works of non-fiction. The BNC sampler (written) is included in the WMatrix web interface and the associated tags have been manually checked. Other options available within the web interface are two sub-corpora of the written sampler, one which contains only informative texts, the other which focusses on 'imaginative', or fiction, texts, as well as the BNC spoken sampler (which features examples of spoken text) and the BNC sampler corpus, which is a combination of the above. The written sampler was used, firstly because, as newspapers are a written medium, a written sampler was felt to be a closer match than a spoken corpus. Secondly, as newspapers produce both entertainment-focussed articles as well as informative content, it was not felt to be appropriate to exclude either type of content from the reference corpus. Hence, the sampler that incorporates both types of content was used. This is an appropriate approach given that Goh (2011) suggested that the genre of the texts is the most important factor in determining whether a reference corpus can be deemed appropriate.

The analysis was initially undertaken inductively; all semantic tags identified as statistically significant were examined in order to guide further analysis into key words and collocations. The aim was not simply to confirm the findings of the pilot in the new corpus, but to approach analysis afresh. However, the fact that a pilot study had been conducted on a similar topic does mean that the results of the pilot may have influenced interpretation to some degree. For this reason, concordance lines were checked carefully for every semantic field chosen for analysis, regardless of whether the theme had arisen in the pilot, as it was felt possible that different cancers will be associated

with different stories and approaches when appearing in newspapers, as stated in section 4.6.5

5.2.3: Statistics – keyness analysis

Both Log Likelihood (LL) and Log Ratio (LR) statistics were used to undertake keyness analysis. The default setting in WMatrix is LL. LL measures statistical significance, that is, a measure of the difference between different word lists. LL scores can be positive or negative, indicating overuse or underuse in the target corpus when compared with the reference corpus. An LL score of 6.63 or above is interpreted as a statistically significant finding at the 99% level. That is, that there is a 99% chance that a difference between word lists is not due to chance. This was defined as the cut-off point for this study.

LR, on the other hand, is a measure of effect size and measures how large the difference is between the two corpora. The statistic is interpreted as the number of times bigger the relative frequency is in one corpus as opposed to the other. Therefore, a LR score of 1 shows that the key word or semantic field appears in the corpus of interest twice as often as it does in the reference corpus. An LR score of 2 shows that the key word or semantic field appears four times as often in the corpus of interest than in the reference corpus and so on (Hardie, 2014).

The following are two examples from the ovarian cancer pilot study to show how these two statistics are interpreted. The pilot study showed that the word *her* was significantly overused in the newspaper articles compared with the reference corpus. An LL of +4932.20 was obtained, which demonstrated its very high statistical significance, compared with the cut-off of 6.63. The word appeared 4,340 times in articles about ovarian cancer and had an effect size (LR) of 2.53 (meaning that the word *her* was used

just over 5 times as often in the corpus of interest when compared to the reference corpus). Alternatively, the word *him* was significantly *underused* in the newspaper articles compared with the reference corpus, with an LL score of -1134.46 (n=201, LR=-83.92). The word occurred 201 times in the articles about ovarian cancer and the effect size was nearly -84, which means that it was used nearly 168 times less frequently in the ovarian cancer articles than in the reference corpus.

5.2.4: Statistics – word collocation

WMatrix also allows users to examine word collocation using a range of statistical tests. Collocation is the statistically significant co-occurrence of two words within a given span, i.e., they appear together with greater frequency than would be expected, statistically speaking (Semino et al, 2018, p.28). In this case, the statistical significance is based on the frequency of the target word, the frequency of the collocating word, and the frequency of the words appearing together (collocating). The default statistical tests in WMatrix are mutual information (MI) and t-score. Mutual information compares the probability of observing two words appearing together with the probability of observing the two words independently (Church et al, 1991). The t-score, on the other hand, compares the difference between the observed frequency of a word and its collocates with the expected frequency via a standard deviation, taking into account the frequency of the words within the dataset (Martínez, 2008). These two approaches yield different lists of collocates if used on the same dataset; Martínez (2008) found that fewer than 45% of the resulting words were shared. This is because MI collocates favour those word pairs that appear infrequently. Conversely, the t-score accounts for low frequency, and instead favours collocates with a high overall frequency. Martínez (2008) suggests the best solution is to take advantage of the different information provided by the two

approaches. Therefore, a combination of MI and t-scores have been used in this particular study. Specifically, the research student follows the approach of Salama (2011) with collocations that reached an MI score of 3 and a t-score of 2 being considered statistically significant.

5.2.5: Preparation of newspaper articles for analysis

Articles identified in the Nexis database are provided as plain text files, which is the preferred format for WMatrix. The preferred formatting guide for WMatrix, as provided by the UCREL team at Lancaster University, was followed in order to prepare the articles for analysis (UCREL, n.d.). This generally meant ensuring that double quotation marks (“”) were used for any form of quote, rather than an apostrophe, and that quotes which ran over multiple paragraphs were clearly demarcated as a single quote. Other common changes included the addition of full stops at the end of titles and headings to make clear that they were not included as part of the next part of speech and ensuring that there were no hyphens that linked a single word over two lines. Obvious spelling errors were corrected. Headlines and picture captions were retained. However, by-lines and details about page numbers or length of the article were removed.

5.3: Study 3: Understanding why cancer is represented in a particular way

Exploratory, qualitative interviews were undertaken in order to understand how and why journalists and press officers carry out their work in the way that they do. This section will describe the methods used to identify and recruit participants, undertake and analyse the interviews.

5.3.1: Study population

Target individuals were journalists who were either health correspondents or were known to have written about cancer and press officers working in a health context. In order to obtain the greatest amount of information from participants, and owing to the complexity of potential influences on news production, it was felt to be beneficial to target individuals with experience in a number of roles from a range of different newspapers, or even experience of both journalism and PR, where possible.

5.3.2: Sampling strategy

Theoretical sampling was used in that the research student decided what data would be gathered next and where the information might be obtained (Boeije, 2002). Target individuals were identified using a variety of methods. These included:

- browsing LinkedIn profiles
- browsing lists of journalists with an association to the university
- snowballing methods from the research student's contacts both within, and external to, the university and other recruited participants
- searching google for journalists' personal websites
- contacting specialist organisations (Medical Journalists Association)
- identifying cancer-related newspaper articles and noting the name of the journalist
- looking at newspaper websites to try to identify health correspondents.

Similar methods were used to obtain contact details of press officers, with the addition of contacting various cancer charities and national and local Governmental

organisations identified through twitter and google searches and trying to identify their press officers. During initial interviews with reporters, it was suggested it would be beneficial for the research student to speak to people who were currently subeditors and newspaper editors; the research student again used LinkedIn and google searches, as well as snowballing techniques to try to identify potential participants who had editorial roles.

5.3.3: Recruitment method

Potential participants were approached initially via email and sent an information sheet that explained the purpose of the study. Unless a response was obtained in the meantime, the research student then contacted them a week later to ask whether they would like to take part in an interview. Participants were offered semi-structured interviews via telephone or face-to-face at a time and location convenient to them.

Telephone versus face-to-face interviews

Face-to-face interviewing is generally considered the 'gold standard' for qualitative interviews (McCoyd and Kerson, 2006, p.390), yet there is relatively little evidence to support the claim that one method is better than the other (Novick, 2008). Stephens (2007) discusses the use of telephone-based, semi-structured, qualitative interviews with 'elite' participants, that is, participants who are in a position of raised power and stature compared to either the researcher or the ordinary citizen. As previously discussed in chapter 2, journalists could be considered one group of participants who hold such a position both compared to the general population (van Dijk, 2015), and the research student, who did not have a journalism background, nor any real knowledge of journalism at the outset of the interviews. Stephens (2007) reports initially being

hesitant at using telephone interviews in his research, given the prevailing attitudes of qualitative researchers that face-to-face interviewing helps to develop rapport, which leads to better interviews, and that telephone interviews may have a detrimental effect on the depth of data obtained. The quality of the interviews may be negatively affected by issues such as perceived interruption arising from a lack of visual cues, unclear articulation, topic and environmental control, power, perceived similarities and differences between the researcher and participant being harder to negotiate without visual cues, and lack of visual communication. Indeed, Irvine et al (2012) identified the possibility of some differences in speech patterns when using telephone interviews. Interview length may be shorter, with less speech on behalf of the researcher and more checking on behalf of the interviewee that their response was adequate. Yet, while Stephens (2007) did identify some differences observed between face-to-face and telephone interviewing (including some aspects specific to their sample), it was concluded that telephone interviews with elites can be valid and, hence, provide a useful methodological tool. This does, of course, depend on how the researcher assesses their situation and accounts for such issues (by measures such as more direct conversation direction, clearer articulation, explicit identification of the similarities and differences between researcher and participant, and more detailed preparation and replacement of visual cues with audio ones).

This conclusion is echoed by Sturges and Hanrahan (2004), who conclude that telephone interviewing may provide information 'comparable' to that obtained by face-to-face interviewing in situations where immersion in the environment is not necessary. In particular, they may be useful where participants are used to frequent telephone conversations – which is a key part of press officer and (in particular) journalist's

everyday job roles. Holt (2010), who, like Stephens (2007), was hesitant about utilising telephone interviews in narrative research, similarly found not only that the method provided rich data, but also that the increased flexibility of telephone interviews proved to be a benefit for both researcher and participant. Participants described their experience as enjoyable, particularly if they were used to interaction over the telephone. Novick (2008) also suggests there is no evidence to support the concerns of researchers that data loss or distortion occurs due to a lack of visual cues. For these reasons, along with the practical issues associated with travelling to interview busy professionals at their place of work, the offer of telephone interviews to journalists, press officers and editors was seen to be appropriate.

5.3.4: Consent

Written consent was obtained prior to the interview taking place. At the time when participants agreed to take part and a mutually convenient time was arranged, participants were sent an electronic copy of the consent form and requested to return it, signed, by email, prior to the scheduled time. A copy of the consent form can be found in Appendix 4.

5.3.5: Interview recordings

As all participants requested a telephone interview, all interviews were audio recorded using a digital audio recorder plugged into a desk-based telephone. Interviews lasted between 20 and 73 minutes, with a mean duration of 46 minutes and a combined length of 10 hours, 49 minutes.

5.3.6: Interview schedule

Semi-structured interview schedules were used for all interviews. Constant comparison, a concept derived from Grounded Theory (Glaser and Strauss, 1967), was utilised to develop the interview schedule. As Boeiye (2002) explains, one aspect of constant comparison is comparing interviews with each other and attempting to verify concepts or answer questions that have arisen in earlier interviews. For the reporters, the interview schedule was informed by informal discussions with a health journalist at a regional newspaper carried out in the study planning stage. The schedule was added to and amended as interviews progressed and new topics for exploration were identified. The interview schedule for the press officers was developed based on the discussions with journalists and further expanded upon as the interviews continued. A further, third, interview schedule was developed for use with subeditors based on the content of the preceding interviews with journalists. This was not modified over time due to the low number of subeditor participants.

Reporters were asked questions such as where cancer-related stories come from and how they go about developing them into a story, how they see their role in disseminating public health information, whether cancer is seen as a priority story and what pressures the reporters work under. Specific questions were also asked around their use of language, namely battle metaphors, and their decisions around what to include in cancer-related articles on the basis of the 'following a thread' approach. Subeditors were asked similar questions but from their perspective, and also asked in more detail about their role.

Press officers were asked about the development of press releases, where the messages come from and the intentions of PR. They were also asked specific questions about the content and language used in the press releases as well as their working relationships with newspapers and journalists.

Each interview differed slightly based upon the topics that arose and comments made, however full versions of the base interview schedules for reporters, press officers and subeditors can be found in Appendix 5.

5.3.7: Transcription

Transcription was undertaken by the research student directly into NVivo 10 (QSR, 2012) as soon as possible after the interview took place. Any potentially identifying information, such as names, place of work, or major stories or campaigns that the participants had been involved with were redacted from the transcripts.

5.3.8: Ethical considerations

The study was approved by the University of Central Lancashire STEMH ethics committee (STEMH430); a copy of the approval letter can be found in Appendix 6. Given the potentially distressing nature of discussions around cancer, the contact details of support groups and/or information services (i.e. Samaritans, Macmillan, Cancer Research UK) were provided on the information sheet (see Appendix 7). It was made clear that participants did not have to answer any questions that they did not want to and that they could end the interview at any time. It was also made clear that they could withdraw their data for up to one month following the interview. University guidelines

on data handling and storage were adhered to. Collection of participant characteristics was kept to a minimum; namely sex, place of work, job role and work history. Such data was collected verbally during interviews and subsequently redacted during transcription. Any redacted content was stored in a password-protected Microsoft Excel spreadsheet so that a summary of participant characteristics could be provided.

5.3.9: Analysis

Thematic analysis

Braun and Clarke's (2006) description of thematic analysis was used to guide analysis of the qualitative interviews. Braun and Clarke (2006) describe an iterative process with multiple stages. The first is data familiarisation, which includes transcription and reading transcripts multiple times. The second step is generating initial codes. This is done by coding single lines or sections of text, which will then allow the data to be organised into meaningful groups. Following this comes searching for initial themes; i.e., once data is organised into meaningful groups, the researcher attempts to identify themes across different codes, that is, looking more widely for relationships, meanings and patterns between different codes. Themes are then reviewed and refined using thematic maps to ensure that the data fits the themes identified. The next step is naming and defining themes, i.e. what they are, and what they are not, and identification of sub-themes. The final stage is producing the report. The process is not linear and may involve moving backwards and forwards between stages multiple times.

Information Power

In conducting the interviews, the concept of information power (Malterud et al., 2015) was used when considering recruitment. Information power can be considered as an

alternative to the concept of data saturation. Data saturation is perhaps the more well-known of the two concepts. In order to demonstrate the difference, data saturation will briefly be described, followed by a description of information power.

Data saturation was initially conceived as part of grounded theory (Glaser and Strauss, 1967). In a grounded theory approach, the researcher is attempting to develop a theory that is grounded in their data. In order to do this, data collection and analysis occur simultaneously. A participant is interviewed, the data from their interview is analysed, and then gaps in the data, or the next steps necessary to further develop the theory, inform which type of participants will be approached next. This process continues until no new themes are generated, after which recruitment stops. This is data saturation. As Fusch and Ness (2015) highlight, knowing when one has reached saturation can be difficult. Different researchers will define saturation in different ways and there is no single approach that will work for all qualitative study designs. An alternative approach, that of information power, was thus proposed by Malterud et al (2015).

There are five aspects that comprise information power and help the researcher to determine an appropriate sample size. A study with a wider aim will require more participants than a study with a narrower aim. Fewer participants are required when participants share the specific, key characteristics required by the study aim. A study that is not based on existing theoretical perspectives would require a larger number of participants in order to generate sufficient information power than a study that is based upon an existing theory. The dialogue in the interviews is also key; rich, focussed and clear conversation between the researcher and participants will generate higher information power. Finally, an analysis that is looking across cases rather than being

focussed on one individual case will, clearly, require a higher number of participants. The relevance of these concepts to this study is addressed in section 8.2 (especially in respect to whether adequate information power has been achieved).

Reflexivity

The epistemological stance of qualitative research is that of constructionism (cf. section 4.2). The researcher forms part of the social world under study and, hence, their background and outlook influences what is selected to be studied, the approach used, what results are deemed useful, how these are framed and how they are presented (Malterud, 2001). This presents a need for self-examination and reflection, which aids the researcher in identifying issues such as their own underlying preconceptions, assessment of the quality of research interviews, and noting additional, contextual content that might not be effectively represented in an interview transcript, such as behavioural cues (Malterud, 2001; Nadin and Cassell, 2006). Nadin and Cassell (2006) suggest that the best way of approaching the issue of reflexivity is keeping a research diary. In their experience, it had significant value not only in making themselves aware of their own preconceptions and keeping track of research progress, but also allowed reflection on how they experienced the research and what influence this might have had on their own interpretations and conclusions, whilst also being simple and easy to maintain.

This was also the approach taken by the research student. A reflexive diary was kept throughout the research process, but was predominantly used around the time of recruitment, conducting interviews and undertaking analysis. The diary was simply an A4 ruled pad that was completed by hand at various times. Prior to interviews, entries

focused on the approach that would be taken in the upcoming conversation and any particular issues that it was felt necessary to address. Notes were taken during the interview relating to key issues that arose and were used later on when planning for future interviews. Post-interview, the research student reflected on how well the interview went and considered any issues or potential changes for future data collection. During analysis, notes were made on major decisions around coding and key themes for investigation. This became a valuable tool as it significantly influenced analysis, in particular the coding of interviews, which is described next.

Evolution of coding practices

The coding scheme was developed through an iterative process of line-by-line coding, consolidation and reflection. The first step after transcription was to undertake manual line-by-line coding of the transcripts of interviews undertaken with reporters, which corresponds to Braun and Clarke's (2006) step of development of initial coding. Depending on the content of the transcript, this meant that there were occasions where multiple codes were generated per line and instances where larger sections of text were assigned a single code. The aim of this step was to identify every topic that was discussed in the interviews to ensure that no data was lost and that each point was given the same attention and prominence. This was undertaken by hand on printed copies of transcripts. Initially, five transcripts undertaken with reporters were used to generate codes. This resulted in a large number of codes generated directly from the data but with a large amount of duplication and no structure. The next step was to try to develop a first draft coding scheme comprising a structure and unique codes that could be used electronically with NVivo. This was again done by hand, and an example of the process can be seen in Figure 5 below.

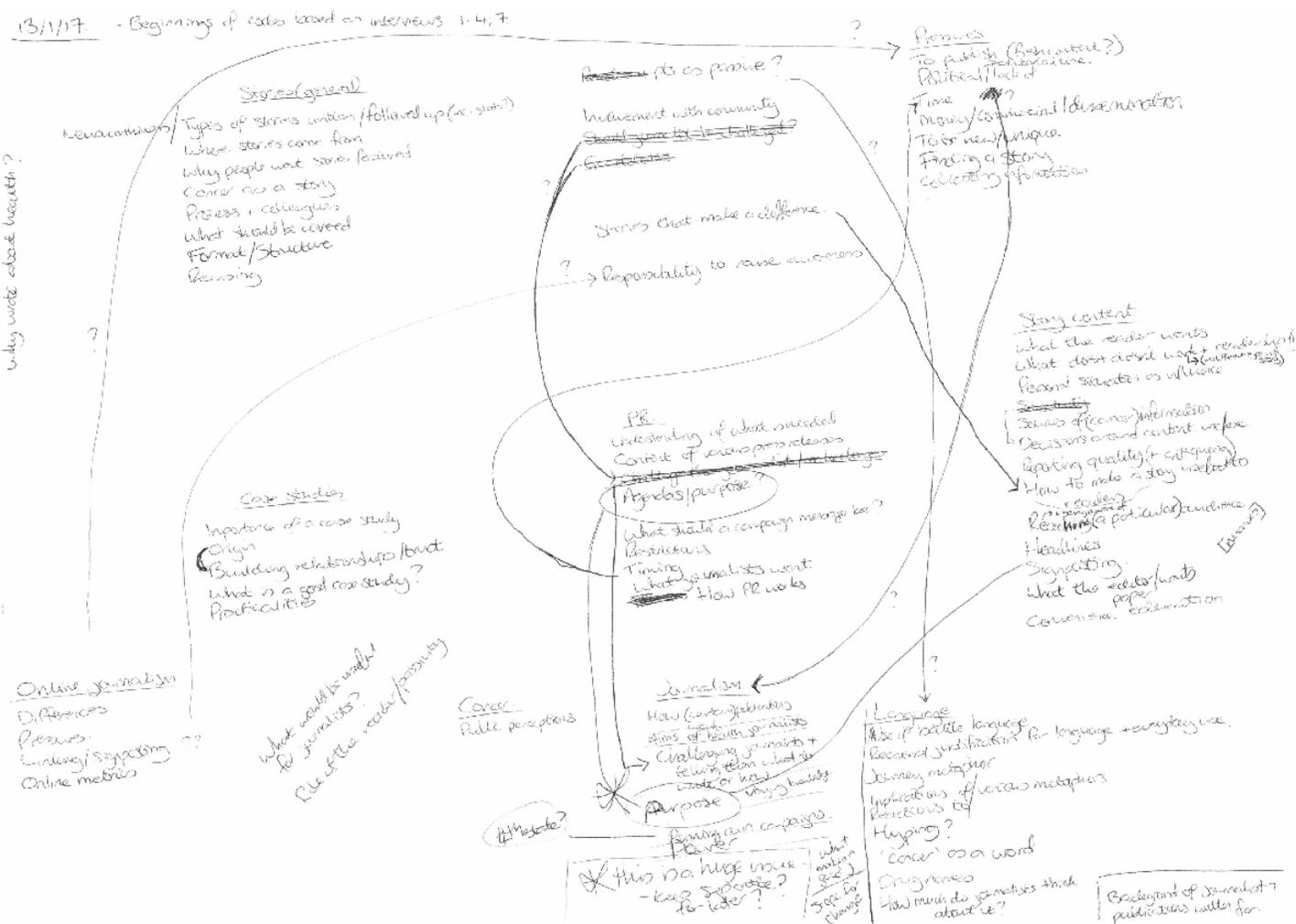


Figure 5: Example of identifying unique codes and beginning to develop a structure for the coding scheme by linking similar codes together

Following this process, a first draft coding scheme was produced that categorised 65 codes into eight topics. The remaining two interviews undertaken with reporters were then also coded, this time using the draft coding scheme. This was for two reasons. Firstly, as a mid-way check that it worked in theory at this stage, and secondly to identify any new codes not present in the first five interviews. Some additional codes were identified resulting in 78 codes across the same eight topics. These are presented in Appendix 8.1.

This first coding scheme was only partially successful. While it did capture all of the most basic elements that came up during the interviews, there were two major problems. The first was that it was too simplistic. Upon re-reading the transcripts, this coding scheme did not capture sufficient complexity, nor did it allow related (potential) themes and ideas to be coded together. The second issue related to the research student's stance as a public health researcher. While trying to generate a new coding scheme, it became apparent that the stance of the research student needed to change in order to avoid a potentially judgemental interpretation of the data. From a public health perspective, it is easy to ask, for example "why aren't cancer symptoms included in these articles?" This assumes that doing so is both possible and the 'correct' thing to do. Instead, the research student actively changed their coding scheme in an attempt to mitigate this to a more neutral stance. Hence, the structure of the codes was changed to reflect the needs, wants and practicalities of journalism and PR, with public health being removed from the coding scheme. The first attempt at this was the second coding scheme, which is shown in Figure 6 below. This also marks a transition in the development of the coding scheme where themes are starting to be identified (step 3). From this point on, the two

stages of looking for themes and developing codes progressed somewhat in tandem, as will be seen below.

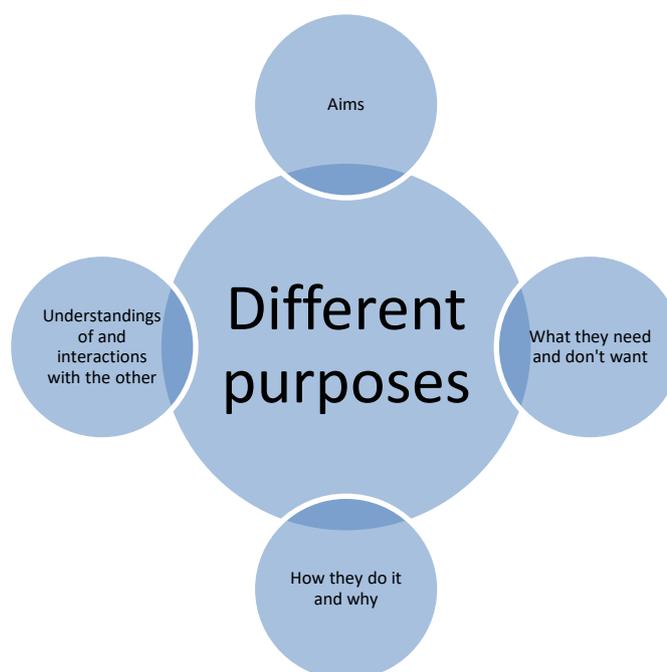


Figure 6: Second coding scheme, which is based upon the job roles of journalists

This coding scheme was applied to the transcripts but did not completely fit. It went through a series of further iterations based upon the content of the transcripts and was further tightened up through a process of ensuring that all of the previously identified codes fit into one of the new codes. Appendix 8.2 shows a scanned document providing an example of how the step between the second coding scheme and the third iteration of the coding framework, which was now starting to represent some initial themes, was carried out. One of the advantages of the third coding scheme is that it could be applied across interviews with both journalists and press officers. As can be seen in Figure 7, it was possible to split some codes into what is important for each group, while others are applicable across both.

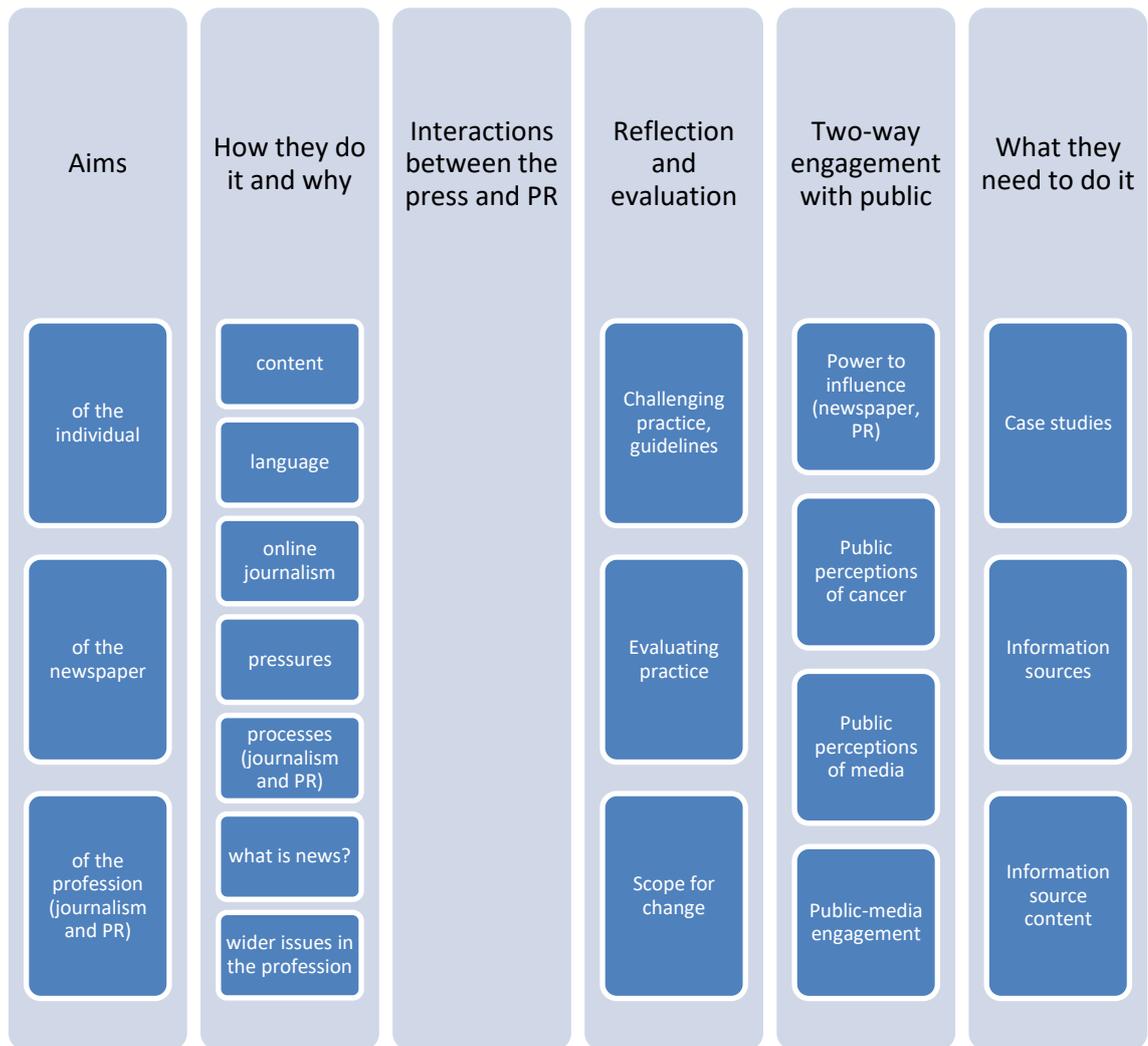


Figure 7: Third draft of the coding scheme

This third draft of the scheme was then set up in NVivo and all seven interviews with journalists were coded using it. In the process, a few more codes were added, suggesting that some elements had been lost in the previously described process. The press officer interviews were then also coded using the same coding scheme and, where relevant, new codes were added, and names changed. While undertaking this process, some further themes started to be identified which also informed the coding, such as elements of communication and relationships between newspapers and the community, and the journalists and the press officers, as well as these groups' perceptions of each other. This resulted in a fourth draft, outlined below in Figure 8.

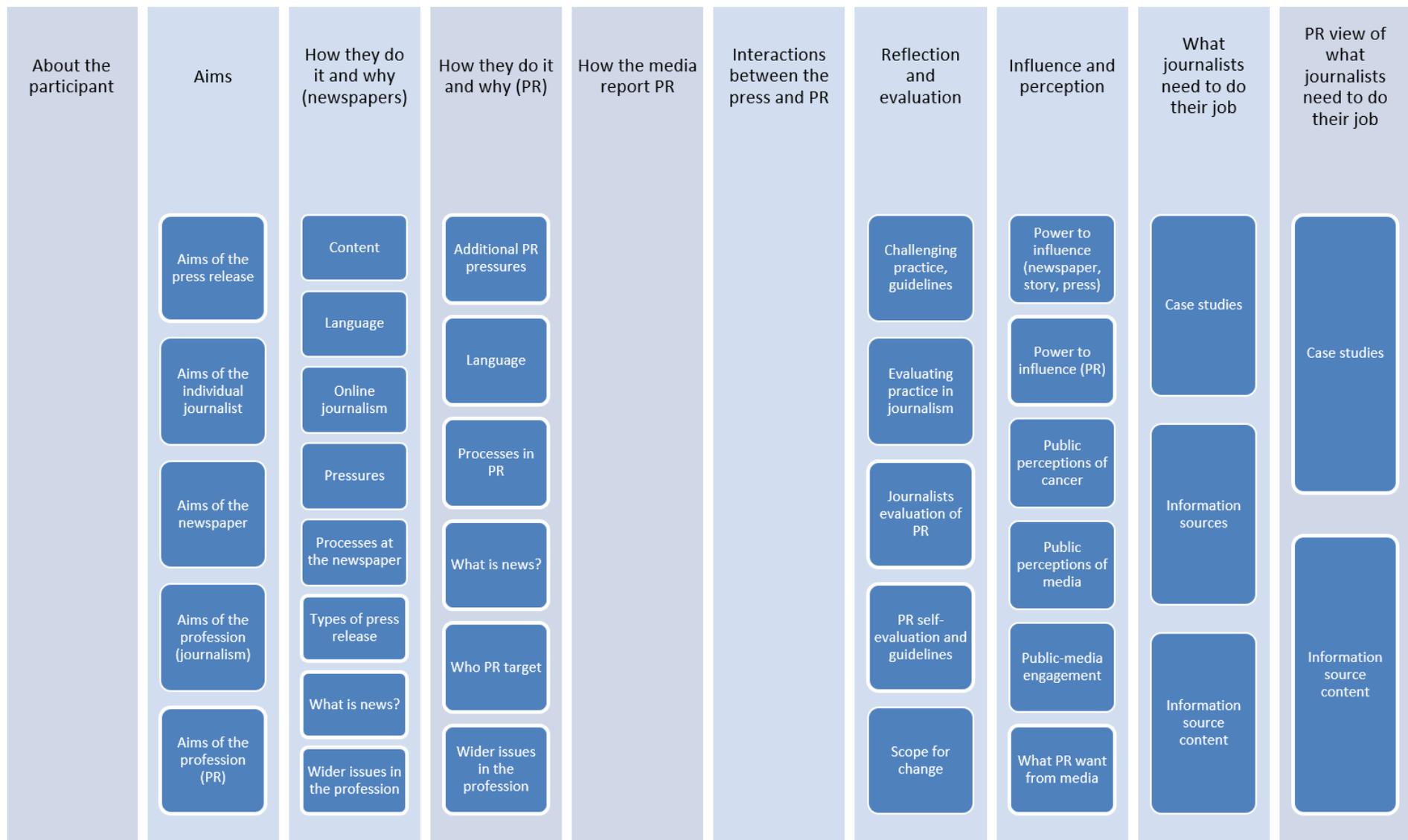


Figure 8: Fourth iteration of the coding scheme.

The final step in the coding process was for independent corroboration. A member of the supervisory team (AK) with experience in qualitative methodologies looked at a selection of transcripts and developed their own coding scheme which was checked against the research students' fourth iteration to challenge the codes identified. This is essential as it improves replicability and transparency, as well as highlighting the potential for codes that have been missed to be included. AK looked at 5 transcripts independently (interviews 1 [reporter], 7 [reporter], 8 [press officer], 10 [subeditor] and 11 [press officer]), and developed his own coding scheme, following which a meeting was held with the research student in order to compare schemes and identify any major differences. The research student firstly presented their own draft of the coding scheme, and then AK presented his (presented in Figure 9).

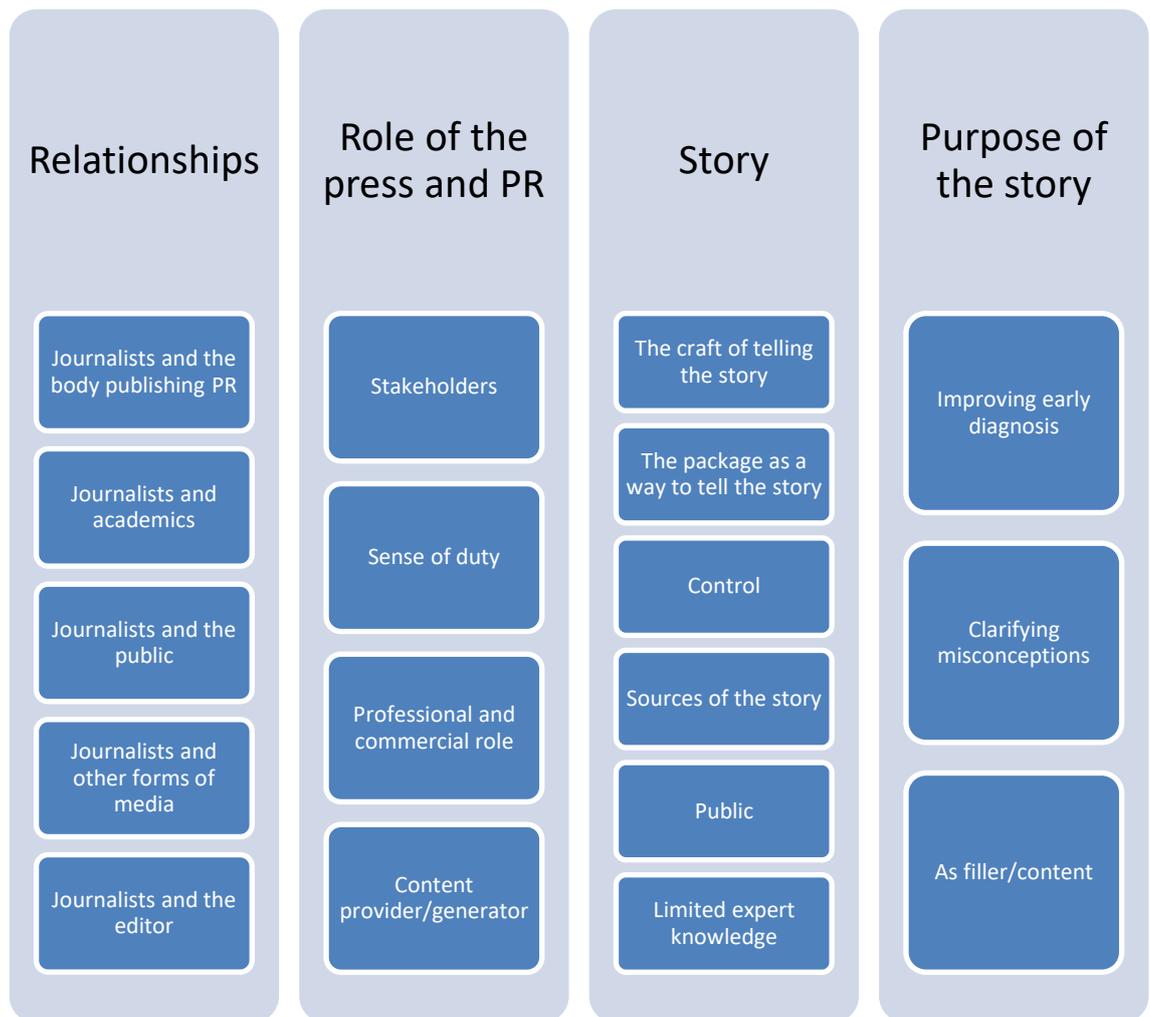


Figure 9: Coding scheme generated by AK

In this discussion, AK commented that there was ‘a lot of similarity’ between the two schemes and that any differences were due to ‘semantics’ and ‘how it was organised’. The research students’ coding scheme was felt to have ‘all that there and a lot more besides’ and, in relation to whether it was efficiently organised, it seemed to be ‘pretty clearly done’. Following this, the research student and AK went through the entirety of the coded content as a check that appropriate sections of text had been coded for each code, that each code was distinct and that everything that needed to be coded had been. It was also discussed how conflicting viewpoints would be identified and whether additional codes were needed. The research student expressed their

preference for the use of memos with NVivo to highlight these, and this was agreed to be appropriate. It was discussed whether some of the codes should be separated or combined, but it was agreed that they were 'sensible' choices. The research student's fourth coding scheme was therefore retained as the final coding scheme, with a single change; the definition and use of the 'information sources' sub-code, as part of the 'what journalists need to do their job' code was altered to ensure it was clear from the coding that not all stories stemmed from a press release.

Identification of themes

From this point onwards, analysis moved towards identifying themes. This was not undertaken in isolation from other studies (cf. following a thread; Moran-Ellis et al, 2006).

As the results section was planned to integrate the various findings from different study designs together, it meant having to identify these themes more widely, that is, across different types of data as well as across codes. Braun and Clarke (2006) advise that writing is an integral part of analysis, rather than just something that happens at the end of a project. They also state that a key aspect of presenting analysis is telling a story that is "concise, coherent, logical, nonrepetitive, and interesting" (p.23). Therefore, it was decided to begin the development of themes by attempting to tell a story that incorporated all sources of data, referring to them where relevant. This was achieved by looking at the chronicity of developing a newspaper article, and splitting it down into:

1. identifying what a news story is
2. describing what stories are selected for publication
3. why certain stories are selected for publication
4. how these stories are presented.

This approach allowed not only the themes from the interviews to be refined, but also data from other sources to be integrated. A consideration of the success of this approach will be returned to in chapter 8.

5.4: Chapter 5 summary

This chapter has presented the justification for the component studies that comprise the overall multiple methods approach to this research. In short, the research comprises three studies that pertain to UK newspaper stories that either feature a case study who has had breast, liver, kidney, oesophageal or gastric cancer, or is about the associated *BCOC* campaigns (breast cancer in women over 70, blood in pee, oesophago-gastric). The first study is a quantitative content analysis of the people featured and the extent to which cancer awareness messages are featured. The second study is a corpus linguistic analysis of the same set of newspaper articles, which aims to identify how language is used to represent cancer in UK newspapers. This comprises both quantitative and qualitative approaches owing to the need for the researcher to determine the relevance and meaning of quantitative data (Baker et al, 2008). The third study is qualitative and involves undertaking interviews with journalists and press officers in order to understand why the articles are written in the way that they are. This study is analysed using thematic analysis (Braun and Clarke, 2006). These studies are

initially undertaken independently, and then integrated at the analysis stage, following the approach of 'following a thread' as described by Moran-Ellis et al (2006).

The following chapter is the results. Owing to the analytical approach taken, the structure of the results does not follow the convention of presenting each study independently with a related summary before presenting the next study and so on. The reasoning for this and the anticipated advantages of not following a more traditional structure are presented at the beginning of the results chapter, before the findings are presented.

CHAPTER 6: RESULTS

This chapter now presents the findings of this work. The first section of this chapter explains how the results are presented, before reporting the general characteristics of the newspaper articles obtained and the participants interviewed. Findings are then presented under three sub-headings, namely, newsworthiness, PR and press release content and story content (which includes the language used).

6.1: Reporting the results

As previously discussed, this work utilised multiple methods and this has informed the presentation of results. Many authors have written about the need for those undertaking multiple methods research to develop 'meta inferences' that is, increased understanding through quantitative and qualitative studies being 'integrated' or 'linked' in some way, rather than presenting data as separate and distinct strands (Creswell and Tashakkori, 2007; Onwuegbuzie and Combs, 2010, p398). Bryman (2007, p.21) states that in a truly integrated study, qualitative and quantitative findings will be "mutually informative" and will "talk to each other" and "debate". The goal for the researcher is to construct a narrative of what the results mean as a whole. To aid with this, the researcher is advised not to lose sight of the reason why they have adopted multiple methods as their chosen approach. The underlying issue with this study is to identify how cancer is represented in UK newspapers, and, then, to understand why this might be. With this in mind, and reflecting on Bryman's (2007) comments, the results in this work shall be presented as a single narrative. That is, rather than presenting the findings from different objectives or studies separately, the results will be presented by topic. This is in line with Moran-Ellis et al's (2006) concept of 'following a thread' (described in

section 4.5.1) by taking key findings from one approach and using this to guide the story of the results, interweaving findings from different datasets as it proceeds. Each topic will be given a unique section. As some sections are of substantial length, a header shall be provided for each to remind the reader which section they are currently reading. The type of data presented (whether coming from corpus linguistic analysis, thematic analysis or content analysis) and the sample from which it is drawn will be that which is most appropriate to inform that section.

On a practical level, this will allow the story to be told with a minimum of repetition, backtracking or reference to information yet to be provided. It will also allow the various elements to talk to each other. To take an example that will be shown later, it will be possible to provide a table of data showing what educational content is provided in newspaper articles, and then, rather than the research student speculate on why these results may have been obtained, have a quote from a journalist that explains the reasoning immediately underneath. The presentation of results in this format will be returned to in the discussion section, so that the additional benefits garnered by presenting the results as a single narrative can be (re)considered.

Throughout, example quotes from the qualitative interviews will be presented with the participant number (e.g. P5), along with a code which denotes whether the participant has experience within Journalism (J), PR (PR) or both (JPR). Those with editorial experience (at any level) are further labelled with an E. While further details were provided about the specific types of publications that participants had worked for, these are not reported to ensure that anonymity is retained.

6.2: Results – General characteristics

6.2.1: Newspapers

Tables 5-8 below provide a breakdown of all articles collected by different types of newspapers and by cancer site. There were 447 articles in total; the majority of articles were about breast cancer (n=196, 43.8%). It will be remembered that this followed a random selection of the initial 8,118 results obtained by the search (described in section 5.1.1). The second most frequent set of articles was about bladder and kidney cancers (n=142, 31.8%), with oesophago-gastric cancers featured least frequently (n=109, 24.4%). The majority of articles featured in regional or local newspapers (82.4%, n=368), and this was the case for all three groups of cancer sites. The majority of articles (67.8%, n=303) were published during the time that campaigns were running, which is to be expected given that articles about the campaign would only be expected to be published during this time period. However, this was not only driven by the campaign articles. With the exception of national redtop publications, publications of all story types in all newspaper types increased during the period of the campaigns.

Table 5: Characteristics of newspaper articles in the corpus by article type and newspaper type for all cancers combined (n=447)

Newspaper type and publishing period	Total n (%)	Human interest n (%)	Campaign n (%)	Campaign with human interest n (%)
National Heavyweight	17 (3.8)	10 (58.8)	7 (41.2)	0 (0.0)
Before campaign	1 (5.9)	1 (10.0)	0 (0.0)	0 (0.0)
During campaign	13 (76.5)	6 (60.0)	7 (100.0)	0 (0.0)
After campaign	3 (17.6)	3 (30.0)	0 (0.0)	0 (0.0)
National Midmarket	29 (6.5)	23 (79.3)	4 (13.8)	2 (6.9)
Before campaign	5 (17.2)	4 (17.4)	1 (25.0)	0 (0.0)
During campaign	15 (51.7)	11 (47.8)	3 (75.0)	1 (50.0)
After campaign	9 (31.0)	8 (34.8)	0 (0.0)	1 (50.0)
National Redtop	33 (7.4)	24 (72.7)	8 (24.2)	1 (3.0)
Before campaign	4 (12.1)	4 (16.7)	0 (0.0)	0 (0.0)
During campaign	16 (48.5)	7 (29.2)	8 (100.0)	1 (100.0)
After campaign	13 (39.4)	13 (54.2)	0 (0.0)	0 (0.0)
Regional/local	368 (82.4)	172 (46.7)	179 (48.6)	17 (4.6)
Before campaign	54 (14.7)	52 (30.2)	2 (1.1)	0 (0.0)
During campaign	259 (70.4)	68 (39.5)	174 (97.2)	17 (100.0)
After campaign	55 (14.9)	52 (30.2)	3 (1.7)	0 (0.0)
Total	447 (100.0)	229 (51.2)	198 (44.3)	20 (4.5)
Before campaign	64 (14.3)	61 (26.6)	3 (1.5)	0 (0.0)
During campaign	303 (67.8)	92 (40.2)	192 (97.0)	19 (95.0)
After campaign	80 (17.9)	76 (33.2)	3 (1.5)	1 (5.0)

Table 6: Characteristics of oesophago-gastric newspaper articles in the corpus by article type and newspaper type (n=109)

Newspaper type and publishing period	Total n (%)	Human interest n (%)	Campaign n (%)	Campaign with human interest n (%)
National Heavyweight	6 (5.5)	3 (50.0)	3 (50.0)	0 (0.0)
Before campaign	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
During campaign	6 (100.0)	3 (100.0)	3 (100.0)	0 (0.0)
After campaign	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
National Midmarket	3 (2.8)	1 (33.3)	1 (33.3)	1 (33.3)
Before campaign	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
During campaign	2 (66.7)	0 (0.0)	1 (100.0)	1 (100.0)
After campaign	1 (33.3)	1 (100.0)	0 (0.0)	0 (0.0)
National Redtop	6 (5.5)	1 (16.7)	4 (66.7)	1 (16.7)
Before campaign	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
During campaign	5 (83.3)	0 (0.0)	4 (100.0)	1 (100.0)
After campaign	1 (16.7)	1 (100.0)	0 (0.0)	0 (0.0)
Regional/local	94 (86.2)	32 (34.0)	56 (59.6)	6 (6.4)
Before campaign	14 (14.9)	14 (43.8)	0 (0.0)	0 (0.0)
During campaign	72 (76.6)	12 (37.5)	54 (96.4)	6 (100.0)
After campaign	8 (8.5)	6 (18.8)	2 (3.6)	0 (0.0)
Total	109 (100.0)	37 (33.9)	64 (58.7)	8 (7.3)
Before campaign	14 (12.8)	14 (37.8)	0 (0.0)	0 (0.0)
During campaign	85 (80.0)	15 (40.5)	62 (96.9)	8 (100.0)
After campaign	10 (9.2)	8 (21.6)	2 (3.1)	0 (0.0)

Table 7: Characteristics of bladder and kidney cancer newspaper articles in the corpus by article type and newspaper type (n=142)

Newspaper type and publishing period	Total n (%)	Human interest n (%)	Campaign n (%)	Campaign with human interest n (%)
National Heavyweight	3 (2.1)	2 (66.7)	1 (33.3)	0 (0.0)
Before campaign	1 (33.3)	1 (50.0)	0 (0.0)	0 (0.0)
During campaign	2 (66.7)	1 (50.0)	1 (100.0)	0 (0.0)
After campaign	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
National Midmarket	6 (4.2)	5 (83.3)	1 (16.7)	0 (0.0)
Before campaign	2 (33.3)	1 (20.0)	1 (100.0)	0 (0.0)
During campaign	2 (33.3)	2 (40.0)	0 (0.0)	0 (0.0)
After campaign	2 (33.3)	2 (40.0)	0 (0.0)	0 (0.0)
National Redtop	5 (3.5)	4 (80.0)	1 (20.0)	0 (0.0)
Before campaign	1 (20.0)	1 (25.0)	0 (0.0)	0 (0.0)
During campaign	3 (60.0)	2 (50.0)	1 (100.0)	0 (0.0)
After campaign	1 (20.0)	1 (25.0)	0 (0.0)	0 (0.0)
Regional/local	128 (90.1)	45 (35.2)	81 (63.3)	2 (1.6)
Before campaign	17 (13.3)	15 (33.3)	2 (2.5)	0 (0.0)
During campaign	102 (79.7)	21 (46.7)	79 (97.5)	2 (100.0)
After campaign	9 (7.0)	9 (20.0)	0 (0.0)	0 (0.0)
Total	142 (100.0)	56 (39.4)	84 (59.2)	2 (1.4)
Before campaign	21 (14.8)	18 (32.1)	3 (3.6)	0 (0.0)
During campaign	109 (76.8)	26 (46.4)	81 (96.4)	2 (100.0)
After campaign	12 (8.5)	12 (21.4)	0 (0.0)	0 (0.0)

Table 8: Characteristics of random sample of breast cancer newspaper articles in the corpus by article type and newspaper type (n=196)

Newspaper type and publishing period	Total n (%)	Human interest n (%)	Campaign n (%)	Campaign with human interest n (%)
National Heavyweight	8 (4.1)	5 (62.5)	3 (37.5)	0 (0.0)
Before campaign	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
During campaign	5 (62.5)	2 (40.0)	3 (100.0)	0 (0.0)
After campaign	3 (37.5)	3 (60.0)	0 (0.0)	0 (0.0)
National Midmarket	20 (10.2)	17 (85.0)	2 (10.0)	1 (5.0)
Before campaign	3 (15.0)	3 (17.6)	0 (0.0)	0 (0.0)
During campaign	11 (55.0)	9 (52.9)	2 (100.0)	0 (0.0)
After campaign	6 (30.0)	5 (29.4)	0 (0.0)	1 (100.0)
National Redtop	22 (11.2)	19 (86.4)	3 (1.6)	0 (0.0)
Before campaign	3 (13.6)	3 (15.8)	0 (0.0)	0 (0.0)
During campaign	8 (36.4)	5 (26.3)	3 (100.0)	0 (0.0)
After campaign	11 (50.0)	11 (57.9)	0 (0.0)	0 (0.0)
Regional/local	146 (74.5)	95 (65.1)	42 (28.8)	9 (6.2)
Before campaign	23 (15.7)	23 (24.2)	0 (0.0)	0 (0.0)
During campaign	85 (58.2)	35 (36.8)	41 (97.6)	9 (100.0)
After campaign	38 (26.0)	37 (38.9)	1 (2.4)	0 (0.0)
Total	196 (100.0)	136 (69.4)	50 (25.5)	10 (5.1)
Before campaign	29 (14.8)	29 (21.3)	0 (0.0)	0 (0.0)
During campaign	109 (55.6)	51 (37.5)	49 (98.0)	9 (90.0)
After campaign	58 (29.6)	56 (41.2)	1 (2.0)	1 (10.0)

6.2.2: Qualitative Interviews

For the qualitative interview data, fourteen participants were recruited. At the time of interview, seven were reporters, six were press officers, and one was a newspaper subeditor. Many participants had experience in other roles; Table 9 below provides information about the career experience of participants. Data are presented to summarise both the roles that participants have worked in and which type of publications participants have worked for. No further breakdown is provided to ensure participant anonymity is retained. Numbers in the table exceed 14 because numbers denote the number of participants with experience in that role. In addition, it should be noted that some participants had worked for multiple publications of the same type, however these are only counted once. Participants' experience covered a range of national and regional publications. Multiple participants had experience of both PR and journalism, and a number had editorial experience. Those who had worked in PR had worked under various job titles, but all are subsumed under the title press officer for simplicity. Press officers worked for a range of public health organisations, local authorities and charities.

Table 9: Career experience of interviewees (n=14)

Job role	
Reporter	13
PR	7
Subeditor	3
Editor	2
Job experience (newspapers)	
National heavyweight	6
National midmarket	3
National redtop	5
Local/regional newspaper	3
Unspecified	1

6.3: Themes identified

The 'following a thread' approach to analysis resulted in a number of themes, namely, newsworthiness, PR, and story content. Each theme comprised a number of subthemes.

Newsworthiness consisted of two sub-themes, which were:

- 1) what newspapers want in a story, and
- 2) what stories were actually picked up.

The second theme, PR, also consisted of two subthemes, namely:

- 1) the importance of PR as regards newspaper articles and
- 2) the content of PR press releases.

The third theme was the larger and more complex and was about story content. This comprised six subthemes, which were:

- 1) case studies,
- 2) educational content,
- 3) press release quotes,
- 4) the purpose of the newspaper (which was again divided into purpose for a) the reader, b) for PR, and c) for the journalist),
- 5) reasons pertaining to the a) inclusion and b) presentation of story content, and
- 6) language use.

These themes are represented graphically in Figure 10 below and are addressed in turn throughout the results chapter.

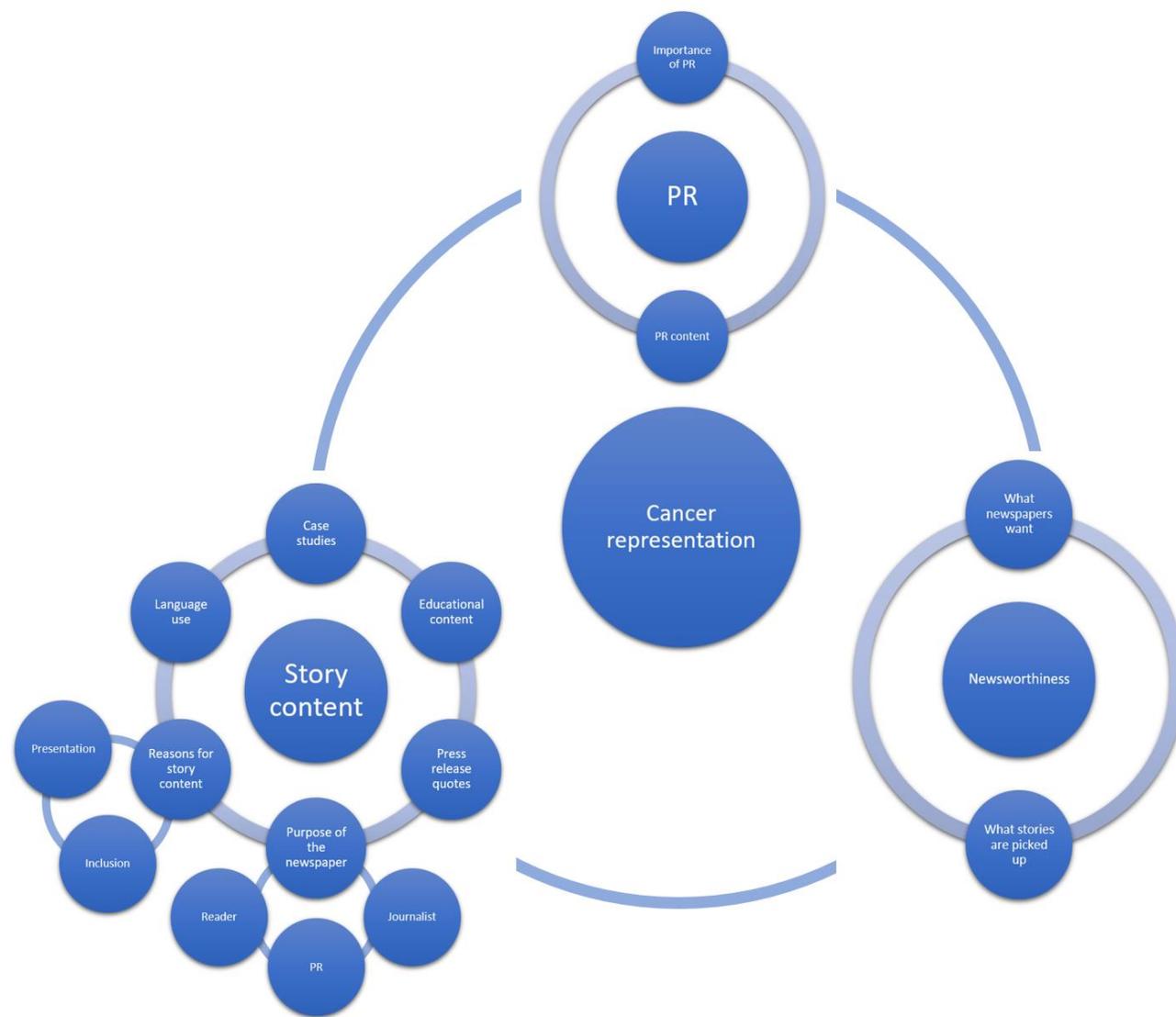


Figure 10: Diagrammatic representation of themes identified through the 'following a thread' approach

These themes are now discussed in turn to allow a chronological explanation of how newspaper stories pertaining to cancer in the UK are written, and the reasons for that.

The first aspect to be discussed is newsworthiness.

6.4 Newsworthiness: What stories are picked up?

Before looking at what stories are picked up by newspapers, it is important to understand what journalists want from a news story, i.e., what is newsworthy from their perspective. To do this, this section will present the comments of journalists, obtained from the interviews, explaining what constitutes a story. It will then examine the number of newspaper articles picked up for the cancer sites covered by the three campaigns, obtained from content analysis of the newspaper articles, before briefly using the qualitative data once again to consider why these results were found. The corpus linguistic analysis is used here to interrogate the data based upon comments made by the journalists to see whether the data supports their assertions. Figure 11 provides a visual representation of the theme of newsworthiness and the two subthemes of 'what newspapers want' and 'what stories are picked up'.

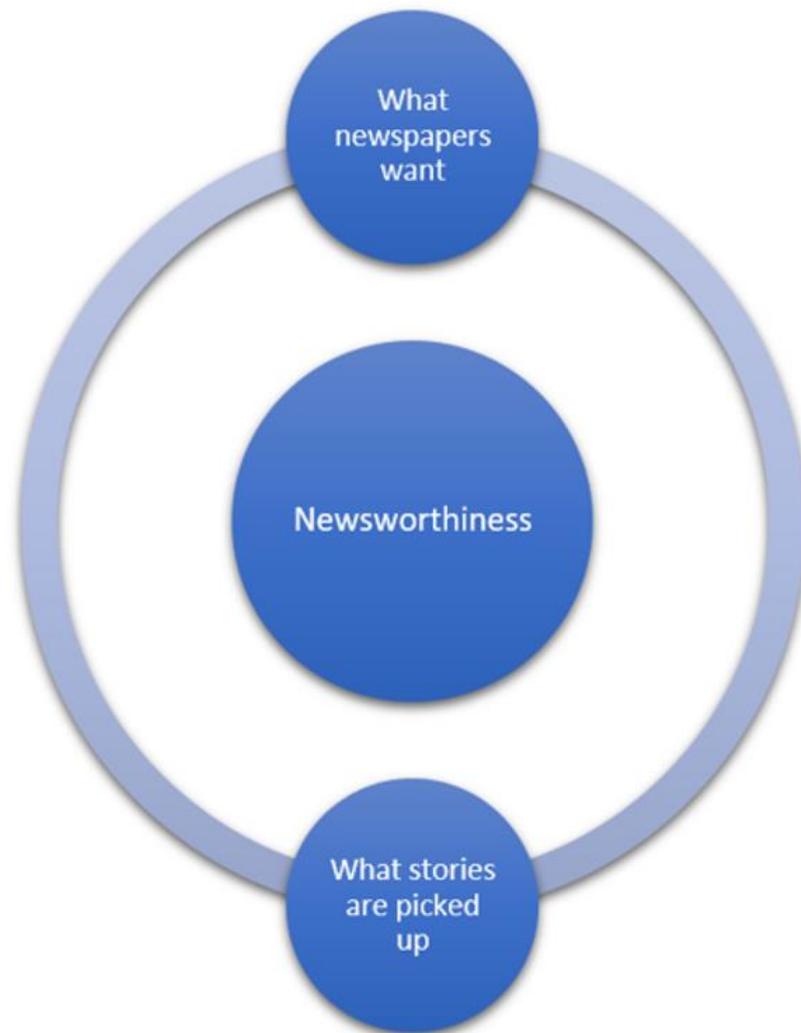


Figure 11: Newsworthiness and associated subthemes

6.4.1: What do newspapers want?

Different newspapers require different stories depending on their target audience and the general 'type' of newspaper. One participant, who works for both a national and a regional newspaper, commented in their interview that:

“...if the Government releases some statistics about the number of people diagnosed with breast cancer that year, [...] I would do one version for [national newspaper] which would, kind of, look at the national picture and discuss some of the critical issues around it, while in [regional newspaper] I would just look at

the figures for [local area] and I would probably get a case study and make it a bit more personal..." (P5 J).

In all cases, however, a "top line", or a "news hook" (P14 J) is key. Cancer was generally seen as a topic of interest, although some felt it was:

"...being given too much prominence. Certainly in terms of the kind of stories which suggest that certain things give you cancer and don't give you cancer" (P3 JE).

This prominence appears to have led to a perceived bombardment of cancer stories, such that it creates an element of "cancer fatigue" (P7 JPRE). One result of this was that, for a cancer story to be published, there needed to be something unique, something sensational, a breakthrough, or a captivating personal story relevant to the target audience. As one journalist put it:

"it takes a lot to hear a cancer story for people's ears to actually prick up." (P14 J).

While raising public awareness of cancer was certainly recognised as being important, it was felt that such campaigns are "worthy, but not newsworthy" and that if press officers want coverage they need to "think in terms of 'what's the headline?'" (P7 JPRE). That headline is likely to be related to human interest, that is, stories about people.

“...stats to the lay person can be really boring, heavy, intense; they want to read about a case study, really, the human interest side.” (P1 J).

There is some evidence from the corpus linguistic analysis to support the necessity of human interest and people. A keyness analysis of the parts-of-speech highlights that the most statistically significant parts of speech (henceforth POS) tags relating to the content of the articles were all related to pronouns (see Appendix 9.1). This included the first person singular subjective personal pronoun *I* (tag PPIS1; LL=+1369.10, n=3525, LR=1.17), possessive pronouns e.g. *my, your, our* (tag APPGE; LL=+815.04, n=5443, LR=0.68), and third person singular subjective personal pronouns *he, she* (tag PPHS1; LL=+762.51, n=3257, LR=0.87). The first person singular objective person pronoun *me* (tag PPIO1; LL=+178.04, n=614, LR=0.98) and third person plural subjective personal pronoun *they* (tag PPHS2; LL=+42.84, n=1062, LR=0.34) were also statistically significant POS tags. While the log ratio scores are relatively low, they do still demonstrate overuse in this corpus when compared with the reference corpus. For example, the LR (i.e., effect size; see section 5.2.3) for *he, she, and me*, are approaching one, which would signify they were used nearly twice as frequently in the newspaper articles than in the BNC written sampler corpus. The use of these pronouns points to the experiences of real people being featured as key elements of the newspaper stories, or family and friends talking about the experiences of others such as in the following examples taken from the PPHS1 (*he, she*) POS tag:

tumour in March and was given weeks to live .	she	died on Tuesday afternoon . Since the diagnosis ,
were devastated . However , Paul was adamant	he	wanted to try the chemo again , so the oncologist
as first diagnosed with breast cancer last year .	She	underwent a mastectomy , chemotherapy and
-of-two Rachel Drago finished her treatment ,	she	went back to university to complete a
she was diagnosed in 2011 , it broke my heart .	She	was so brave . She 'd planned her own funeral
surprise , it hurt . " When he examined himself ,	he	found his left nipple was inverted and he could
s family had urged him to take a job that meant	he	spent less time away from them . That is likely to
iotherapy sessions . Dr Siva was my consultant .	He	was a very caring and gentle man . It was very

Returning to the interview data, this concept of needing fresh, audience-appropriate content and a compelling personal story extends to the press releases journalists receive. A newspaper may pick up a story that has been sent to them in a press release, but change the focus to something that is more newsworthy. For instance, the availability of a cancer drug, rather than the benefits of the drug.

“...a press release might come though about miracle drug, for want of a better description, x, it's great, it does all of this, but patients aren't gonna get it. So, the story is not necessarily the announcement of the miracle drug, but the fact that the patients aren't going to get it.” (P7 JPRE).

This demonstrates that newsworthiness is a complex issue and one cannot say that certain stories (or aspects of them) will always be newsworthy. One reason for this might be that stories are weighted against each other:

“...stories change in prominence from the morning to the evening, like, I've had phenomenal stories not go in the paper because that was the day that Margaret Thatcher died [...] it doesn't matter how good it is if something else is bigger...” (P5 J).

Alternatively, the perception of what others are doing may influence whether it is felt necessary to publish a story. Participant 3 described how there are multiple charities producing PR for various awareness campaigns, which has led them to “steer clear of that as a peg because it's a bit tired and everybody else is doing it.” (P3 JE).

It is also worth including at this point a quote that highlights more explicitly the revenue-related influences on whether a story is included: in this case, the tone of a story, and how it fits with other stories being published that day.

“...if a murder's happened, you've got to put it on the front page. You have no choice because [radio station] will do it or the [other regional newspaper] or whatever. You still need to be competitive, but you find that if you've got too much bad news going through the whole week, your sales drop.” (P14 J).

Having presented the opinions of journalists as to what constitutes a story, the next section now looks at what types of stories were actually featured in the corpus.

6.4.2: What stories have been picked up?

Closer scrutiny of the data presented in Tables 5-8 demonstrates that there were some differences between cancer sites in terms of the number of stories published.

The ratio of stories picked up in the regional press was lower for breast cancer, where the balance was nearly 25:75 in the national:regional press respectively, as opposed to the closer to the 10:90 for oesophago-gastric and bladder and kidney cancers. The other

key difference with breast cancer is that the highest proportion of articles were human interest stories (69.4%, n=136), as opposed to oesophago-gastric and bladder and kidney cancers where the greatest proportion were related to the *BCOC* campaign; only 33.9% (n=37) of oesophago-gastric cancer articles and 39.4% (n=56) of bladder and kidney cancer articles were human interest stories. The much higher coverage of breast cancer in general, particularly in the national press, as well as the higher proportion of human interest stories, is likely related to newsworthiness; as breast cancer has a higher prevalence than the other cancer sites (ONS, 2018), a breast cancer story is potentially of interest to more readers. The quote below demonstrates the importance of a story with wide appeal.

“...no matter how big a story that is, or an issue that is, if you're on any sort of mainstream publication, tabloid, broadsheet, magazine, if you go to your editor, and say 'look we've got this really great story about this disease that only affects gay drug users, or predominately affects gays and drug users', it's not PC, but the reality is they're not interested in the story. They want something that their readers will think 'that could be me'.” (P7 JPPE).

It may also be that breast cancer is deemed more acceptable to write about. A quote from a press officer below demonstrates that there are some topics that newspapers are more willing to print:

“Some of the campaigns are more challenging than others with things like blood in pee, which is kidney and bladder cancer, was a very very difficult one to get

away with. Journalists, for obvious reasons, because the publications they write or write for are commercial and it's a fairly off-putting subject..." (P6 PR).

In all cases, the articles featured least frequently were a combination of information about the *BCOC* campaign coupled with a case study. This likely stems from a lack of case studies provided by the press office, and a lack of time on the side of the journalist to find an audience-appropriate case study to accompany the story. This will be explored further in section 6.5, which looks at the importance of PR and press release content.

6.4.3: Summary

To summarise the findings relating to newsworthiness, interviews with journalists have revealed that something with a news hook, aimed at a specific target audience and, at least in some cases, a human interest story or case study is newsworthy. The corpus linguistic analysis (undertaken by the research student) would support this notion, due to the significantly higher proportion of pronouns in these articles compared with the BNC written sampler. However, the current (perceived) news landscape and the focus of related press releases may also influence what stories are selected for inclusion.

The stories picked up in the corpus developed for this study appeared mostly in regional newspapers, but the ratio of national to regional publications was more disparate in the bladder and kidney and oesophago-gastric cancers than breast cancer. This may be due to certain cancers being deemed more newsworthy, or because they are more acceptable to write about, particularly when considering their symptoms.

The next section will now focus more on the press releases, specifically by describing the importance of PR to getting a story published, how press release messages are developed and disseminated, and the opinions of journalists on the material received. This will include some speculative results about the journey that a press release may take before it reaches the newspaper.

6.5: PR and press release content

This section will start by utilising qualitative data from the interviews to describe the importance of PR to newspapers. It will then move on to show how press officers decide on the content of their press releases, and then provide the journalists' opinions of what is presented to them. Figure 12 provides a visual representation of the theme of PR and press release content and the associated subthemes of the 'importance of PR' and 'PR content'.

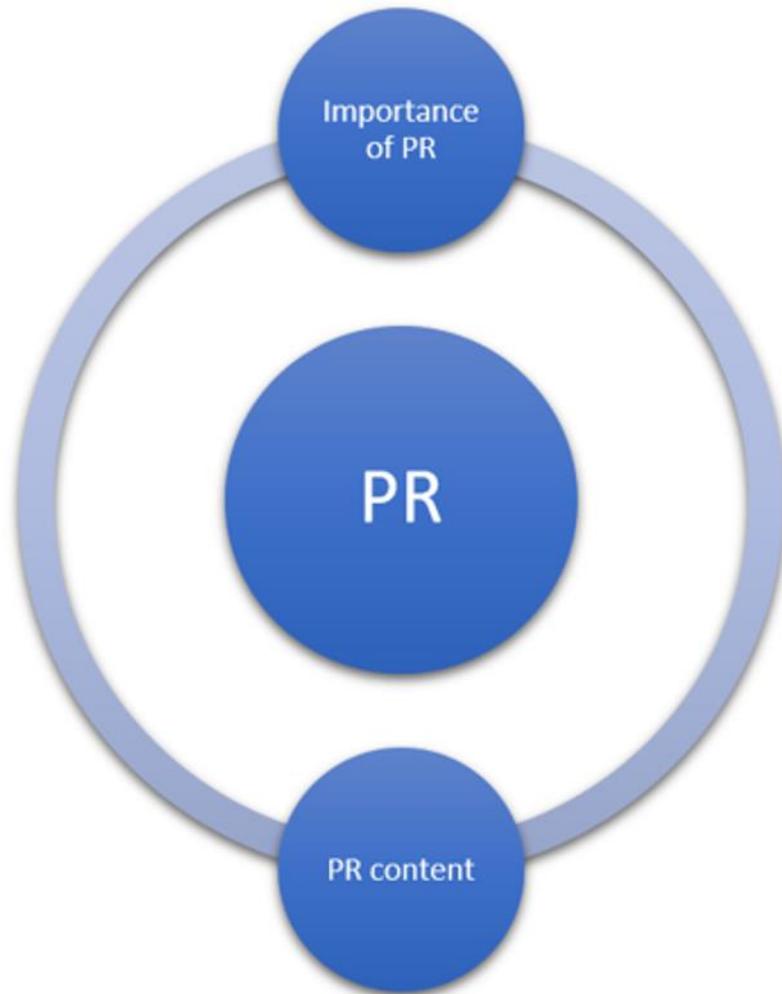


Figure 12: PR and press release content and associated subthemes

6.5.1: Importance of PR

PR is a large potential source of stories for journalists and they receive large numbers of press releases every day from a variety of organisations. PR can be the key difference between whether a story is published or not.

“Now, you might think that a clinic which was offering promising treatments which would cost £200 a year using old drugs was rather a good story, you know, huge benefit to patients and huge benefits to the NHS, you know, state bodies

which are paying for these drugs. Was this story widely followed up and run by all the other papers? Absolutely not. [...] Not because it wasn't interesting but because, one can only assume, well, partly because it didn't have the PR machinery behind it and partly because there wasn't that interest from key opinion leaders." (P2 J).

In terms of *BCOC* and public health campaigns in general though, the story is somewhat different. The journalists interviewed generally did not see public health campaign PR in a positive light. The source of the information (i.e. Government or charities) did not appear to have a bearing on this. Rather, the issue stemmed from the content.

"...if the Government put out something about raising awareness, I would always look at it, but sometimes they're not very strong in terms of what they're saying."
(P5 J).

6.5.2: PR content

The participants interviewed who worked in PR were aware of the importance of a relevant, newsworthy story and they described the strategies they use to make a press release more appealing to journalists. It is notable that many of these strategies, such as having a clear message and incorporating case studies, appear to match what the journalists said they want from a story in section 6.4.1, as demonstrated in the two quotes below:

“To engage a journalist there has to be an element of news and the fact that a campaign has been launched is an element of news but it's not a very strong one, so in the case of campaigns, if you're trying to prolong the coverage and the PR, often you will need to use other hooks, not just the fact that the campaign exists.” (P8 PR).

“So, it's being aware of what their, sort of, news angle is or their approach to news is and then also trying to back it up with good case studies and good local things of interest, I guess.” (P11 JPR).

The press releases produced as part of the *BCOC* campaign demonstrate that press officers do attempt to grab journalists' attention with a headline reflecting other aspects of news, rather than simply stating that the campaign exists. The national oesophago-gastric campaign press release led with the headline: 'New research reveals only 1 in 2 people (55%) would visit their doctor if they had heartburn most days for 3 weeks or more.' The national Blood in Pee campaign headline is: 'Successful Be Clear on Cancer campaign returns for a second time to highlight blood in pee as a key symptom for bladder and kidney cancers'. The breast cancer in women over 70 national campaign states: 'Low awareness of non-lump breast cancer symptoms is putting the health of women over 70 at risk.' In all cases, the emphasis is on something other than the campaign itself – either a potentially surprising result of a survey, the success of a previous campaign, or that women over 70 are at risk because they are unaware of key symptoms. However, what is striking here is that, despite both journalists and press officers seemingly agreeing on what made a good story for newspapers, the journalists

did not appear to think that the press releases they received contained all of the content that they would need to turn it into a story. Considering public health PR specifically, press releases were described as being “boring”, like “patient leaflets” (P7 JPRES) and lacking in key content such as case studies (see section 6.6.1).

One possible reason for press releases not being as strong as they could be on certain messages is the apparent disconnect between the expert, who has a message to disseminate, and the press officer, who may not be an expert in that field. Alternatively, the message may be provided by the expert in a way that does not engage the audience. In this way, the message of the expert may be altered to some extent before the press release leaves the organisation. This issue is described by participant 11, in the quotes below:

“...there's leads for different elements of public health that I liaise with on a daily basis in terms of the work that they want to promote [...] then its for us to determine whether we think that would work well in terms of promoting whatever it is that we'd promote really. [...] I don't have the expertise in whatever it is within public health...”

[And later]

“...it's them [the department or Public Health England] who're creating these campaigns and I suppose it's for us to promote them,[...] in terms of the actual language and stuff like that I suppose it's down to what you think is the most

pertinent points, what you think are the key messages [...] it's language that you think is going to engage people the best in the thing that you're writing or the thing that you're producing because at the end of the day that's all PR is, isn't it?" (P11 JPR).

There is also evidence to suggest that even when press officers produce a press release with a headline designed to grab attention by not directly mentioning the campaign (as described above), it is not necessarily replicated in this way in the newspapers. Using WMatrix to check word frequencies and examining concordance lines demonstrated that the figure quoted in the headline of the oesophago-gastric campaign press release (55%) was only picked up seven times out of the 72 articles (9.7%) that reported it. Reference to the success of the campaign carried out in 2013 was picked up in only six of the 86 (7.0%) articles about the Blood in Pee campaign. Conversely, 37 out of 60 articles about the breast cancer campaign (61.7%) picked up on the idea that there were other symptoms of breast cancer that consumers should be aware of and named these symptoms.

These results might suggest that, while statistics and campaign successes can be useful in telling a story, other frames may be a stronger story-telling mechanism. For example, the potential impact on the individual and surprising information (i.e. that people may believe they are aware of the symptoms of breast cancer but could still improve their awareness).

One particular example of a *BCOC* campaign article stood out as demonstrating use of

these frames. *Wigan Today* published a story on 9th February 2015 that led with the headline:

‘Thoat (sic) cancer figures revealed: Nearly 70 Wiganers die each year from throat and stomach cancers, new figures have revealed’.

The story foregrounds local data on mortality from these cancers, which demonstrates the importance of locally-relevant content. The next element of the story actively contrasts one of the campaign messages about people over 50 being at risk with the case of a 15-year old who had throat cancer. The article states:

‘Now as part of the four month campaign 'Be Clear On Cancer' health chiefs have urged people to visit their doctor at the first sign of anything unusual.

Many people believe these two types of cancer are found in elderly people but health chefs (sic) are keen to stress that is not always the case.’

This is a demonstration of the value of an unusual case study being an important element in a story. The story then provides more general health information about cancer screening, before the key messages of the *BCOC* campaign are featured at the end of the article.

Localised press releases

There is one other important aspect that needs to be picked up here, which is that this analysis has so far only considered a comparison to the national press release. The

majority of *BCOC* related articles were published in regional newspapers. Using similarity indices generated by Turnitin to investigate the amount of shared content between newspaper articles and other sources showed some regional publications published articles with very high similarity indices to locally-focussed websites, such as local NHS CCG or council websites. In fact, means for the oesophago-gastric and breast cancer in women over 70 campaigns were higher for local websites than they were for the national press release respectively (mean 19.5%, range 0-81% vs 24.5%, range 0-81% [bladder and kidney]; mean 44.5%, range 0-90% vs mean 39.5%, range 0-84% [breast cancer in women over 70] and mean 35.1%, range 0-95 vs 19.7%. range = 0-89% [oesophago-gastric]). It could be that the newspapers are identifying stories through these channels, rather than after receipt of a local press release that was explicitly targeted at them. Participant 11 provided the following comments, which support this interpretation:

“Be Clear on Cancer would be an example where we probably would aim it more at the general population and then obviously just link in the newspaper if they wanted to do, like, a news in brief on it or whatever [...] We now have this centralised website where we put everything on there and actually, the journalist'll come to that and pull stuff off and if they've got, sort of, follow-up questions, then obviously they'll contact us and ask those...” (P11 JPR).

This method of dissemination may introduce some further changes to the campaign messages. The corpus linguistic analysis identified a statistically significant finding regarding cancer being *attributable* to lifestyle choices (MI=5.51, T=2.19). Specifically,

being *overweight / obese* (both MI=12.58, T=2.24) and *smoking* (MI=11.51, T=2.23). While informative, use of the word *attributable* raises the possibility of blaming people for their cancer; the Oxford English Dictionary (OED, 2019) defines *attributable* as: 'Capable of being attributed or ascribed, *esp.* as owing to, produced by'. Conversely, the national press releases utilises the word *risk*, defined by the OED (2019) as '(Exposure to) the possibility of loss, injury, or other adverse or unwelcome circumstance; a chance or situation involving such a possibility'. The definition of *risk* leaves more room for doubt in the causes of cancer, rather than the more cause-effect relationship implied by use of the word *attributable*. The main point here, though, is that closer inspection of the results revealed that this was due to a single story which was replicated in ten different regional newspapers and originated on the website of Lincolnshire City Council. Hence, this is one example of a situation where a slightly different message, with a slightly different connotation, could be disseminated than initially intended by the press release.

One further difficulty facing public health practitioners in local areas regarding the national *BCOC* campaigns is that materials tend to be developed for a national audience. One participant involved in public health communications in a local authority described the changes in the ability of teams such as theirs to tailor materials and information for their target audience and their thoughts on the effect of this on reaching the local population:

"...my understanding is if we can do it once, we can save money and it's a cost cutting exercise [...] The messages are the same, they're very clear, they're very

standardised. That's good on one level, but what it's lost is the local nuances, the local flavour and the local population, so, it's almost...well, it's not our responsibility now locally. We can do a little bit and we'll send it out to pharmacies, go in GP surgeries and GPs will do that, but we don't harness it, I don't think, like we used to and, again, when I've looked back in to challenge the system and go 'this is a national campaign, how does that reflect our population', I'm told 'well, it does because we've tested it on different population groups', but [Midlands city] has a very different population to [North West town] has a very different population to [North West rural area] that has a very different population to [East Yorkshire city]. You know what I mean? So when you're wanting to get some of these hard-hitting messages, you have to really market your message really clearly and I'm just worried that we might have lost that.” (P13 PR).

Good relationships between journalists and PR, or having had experiences working in both fields, was seen as beneficial when trying to get stories picked up. For example, one participant gave an example of a local hospital that has a good relationship with the participants' newspaper. The “hyper-local” nature of the fundraising press release put out by the hospital contributes to the newspaper working with “around 95% of what they send us” (P14 J). Similarly, one of the participants who is currently a press officer, but has experience working on newspapers, explained how that helps them when constructing their press releases:

“You see I also have a background in journalism... so I think I, kind of, use that

experience of writing for different publications when I'm putting out press releases [...] our regional press work, proactive press work, is tailored very differently to what we'll be putting out nationally, which, again, tends to be more statistical and tends to link more to national cancer strategies and that type of stuff. Whereas, the regional always have a regional case study and probably toned down a bit." (P12 JPR).

6.5.3: Summary

To summarise this section, it has been shown that PR can be key in getting a story picked up and that the views of press officers about what makes a good press release would appear to match those of journalists. However, journalists were sometimes critical of the press releases they receive with a public health focus. The data suggests that journalists may access press releases through multiple sources, such as accessing PR that has been uploaded to local authority websites. The message of the press release may have been changed by this point, either intentionally or unintentionally, which may make it more, or less, appealing for publication in newspapers.

The next section will discuss the content of the cancer stories that were published. Results will be presented for both articles based on a press release and human interest articles.

6.6: Story content

Previous sections of the results chapter have highlighted the importance of case studies to a story; this section now looks at which people have been featured in articles containing a human interest case study. Following this, as per the approach of previous health research, the educational content of newspaper articles collected for this study will be described using data from the content analysis. The interview data will then be used to provide the journalists' voices to explain the possible reasons for these results. The final subsection will look most specifically at the language used. The research student's own interpretation of the results and discussion about potential changes to press releases in order to facilitate the use/publication of educational information will be presented in the discussion (section 7.3 in terms of educational content and section 7.4 in terms of characteristics of case studies) and implications for future research (section 8.9). Figure 13 below shows a diagrammatic representation of the story content theme and associated subthemes.



Figure 13: Story content and associated subthemes

6.6.1: Case studies

The issue of case studies is important for both newsworthiness and press release content. As it is not possible to identify whether the case studies featured in the newspaper articles have been provided by the press office, or have come from another source, case studies are discussed here, in their own section. This section will examine the need for case studies and what journalists think of the case studies that they are provided with, before moving on to look at the specific case studies featured in the articles examined.

While case studies are certainly important from a newsworthiness perspective as previously mentioned, they are also important when considering time pressures on journalists, as participant 2 states below in the context of drug company PR.

“...they [journalists] work under quite a lot of time pressure and if you've got a drug company saying here is a new drug and here is someone who's prepared to talk about it, why bother to do anything else?” (P2 J).

Different case studies are required for different publications. For example, one particular midmarket newspaper was described as needing “a celebrity and preferably a picture of someone young, preferably female” (P4 J). Yet, perhaps surprisingly, for other newspapers, a celebrity endorsement is not necessarily helpful, unless it is a major name, and/or it matches the target audience.

“I would need somebody like John Smith from [local area] said ‘I found blood in my urine’ or whatever, you know. [...] Celebrities aren't very useful. [...] If it was somebody like, maybe, Ewan Macgregor said 'I'm backing this campaign because secretly my mother has cancer', then that's really interesting. (P5 J).

As highlighted above, simply having a case study provided in a press release is not necessarily enough for a story to be published. The case study needs to be appropriate. Data from the content analysis, presented in Tables 6 and 7, shows the breakdown of case study appearances across different newspaper types. That is, every time a case study appeared in a newspaper regardless of how many case studies were in the story

or if that person had appeared before elsewhere.

Sex

It can be seen from Table 10 that, overall, the majority of case studies featured were female (76.6%, n=239). This was driven by the breast cancer articles. The proportion of male case studies was higher in both the bladder and kidney and oesophago-gastric articles. Overall, national midmarket and redtop newspapers featured a much higher proportion of female case studies. This, and the very high number of case study appearances in breast cancer articles, is due to a number of stories where the experiences of multiple women (up to 12) were provided in national midmarket and redtop newspapers.

Table 10: Case study appearances by newspaper type and sex

Type of newspaper	Total case study appearances n (%)	Sex		
		Male n (%)	Female n (%)	Unclear n (%)
Oesophago-gastric	48 (100.0)	33 (68.75)	14 (29.2)	1 (2.1)
National heavyweight	3 (6.3)	3 (100.0)	0 (0.0)	0 (0.0)
National midmarket	3 (6.3)	1 (33.3)	2 (66.7)	0 (0.0)
National redtop	2 (4.2)	1 (50.0)	1 (50.0)	0 (0.0)
Regional/local	40 (83.3)	28 (70.0)	11 (27.5)	1 (2.5)
Bladder and kidney	60 (100.0)	32 (53.3)	28 (46.7)	0 (0.0)
National heavyweight	2 (3.3)	0 (0.0)	2 (100.0)	0 (0.0)
National midmarket	6 (10.0)	1 (16.7)	5 (83.3)	0 (0.0)
National redtop	4 (6.7)	1 (25.0)	3 (75.0)	0 (0.0)
Regional/local	48 (80.0)	30 (62.5)	18 (37.5)	0 (0.0)
Breast random sample	204 (100.0)	7 (3.4)	197 (96.6)	0 (0.0)
National heavyweight	6 (2.9)	0 (0.0)	6 (100.0)	0 (0.0)
National midmarket	26 (12.7)	0 (0.0)	26 (100.0)	0 (0.0)
National redtop	30 (14.7)	1 (3.3)	29 (96.7)	0 (0.0)
Regional/local	142 (69.6)	6 (4.2)	136 (95.8)	0 (0.0)
All	312 (100.0)	72 (23.1)	239 (76.6)	1 (0.3)
National heavyweight	11 (3.5)	3 (27.3)	8 (72.7)	0 (0.0)
National midmarket	35 (11.2)	2 (5.7)	33 (94.3)	0 (0.0)
National redtop	36 (11.5)	3 (8.3)	33 (91.7)	0 (0.0)
Regional/local	230 (73.7)	64 (27.8)	165 (71.7)	1 (0.4)

Age

Table 11 shows that, across all articles, the majority of instances where a case study was used involved an individual under the age of 50 years (58.3%, n=182). Only 10.6% (n=33) were aged over 70 years. These results are driven by the breast and bladder and kidney articles; the picture was different in the oesophago-gastric articles, which had a much more even split of case study instances with the majority (37.5%, n=18) being aged between 50 and 69 years. It is potentially interesting to note (although numbers are small) that four of the nine (44.4%) women in the breast cancer campaign articles were aged under 50 years, despite the campaign explicitly targeting those aged over 70 years. These case studies are therefore not representative of the campaign's target audience. There is a possible suggestion of national heavyweight newspapers being more willing than national midmarket and redtops to feature case studies over the age of 50 (45.5%, n=5 compared to 34.3%, n=12 and 36.1%, n=13 respectively) although, again, numbers are small.

Table 11: Case study appearances by newspaper type and age

Type of newspaper	Total case study appearances n (%)	Age			
		0-49 n (%)	50-69 n (%)	70+ n (%)	Unclear n (%)
Oesophago-gastric	48 (100.0)	13 (27.1)	18 (37.5)	15 (31.3)	2 (4.2)
National heavyweight	3 (6.3)	0 (0.0)	3 (100.0)	0 (0.0)	0 (0.0)
National midmarket	3 (6.3)	0 (0.0)	0 (0.0)	3 (100.0)	0 (0.0)
National redtop	2 (4.2)	0 (0.0)	1 (50.0)	1 (50.0)	0 (0.0)
Regional/local	40 (83.3)	13 (3.3)	14 (35.0)	11 (27.5)	2 (5.0)
Bladder and kidney	60 (100.0)	43 (71.7)	12 (20.0)	3 (5.0)	2 (3.3)
National heavyweight	2 (3.3)	1 (50.0)	1 (50.0)	0 (0.0)	0 (0.0)
National midmarket	6 (10.0)	4 (66.7)	2 (33.3)	0 (0.0)	0 (0.0)
National redtop	4 (6.7)	3 (75.0)	1 (25.0)	0 (0.0)	0 (0.0)
Regional/local	48 (80.0)	35 (72.9)	8 (16.7)	3 (6.3)	2 (4.2)
Breast random sample	204 (100.0)	126 (61.8)	54 (26.5)	15 (7.4)	9 (4.4)
National heavyweight	6 (2.9)	5 (83.3)	0 (0.0)	1 (16.7)	0 (0.0)
National midmarket	26 (12.7)	18 (69.2)	5 (19.2)	2 (7.7)	1 (3.8)
National redtop	30 (14.7)	19 (63.3)	10 (33.3)	0 (0.0)	1 (3.3)
Regional/local	142 (69.6)	84 (59.2)	39 (27.5)	12 (8.5)	7 (4.9)
All	312 (100.0)	182 (58.3)	84 (26.9)	33 (10.6)	13 (4.2)
National heavyweight	11 (3.5)	6 (54.5)	4 (36.4)	1 (9.1)	0 (0.0)
National midmarket	35 (11.2)	22 (62.9)	7 (20.0)	5 (14.3)	1 (2.9)
National redtop	36 (11.5)	22 (61.1)	12 (33.3)	1 (2.8)	1 (2.8)
Regional/local	230 (73.7)	132 (57.4)	61 (26.5)	26 (11.3)	11 (4.8)

Stage of disease

Three quarters (n=232) of articles featured a case study who was living with or beyond cancer (Table 12). The proportion of case studies who had died were highest in the oesophago-gastric articles (33.3%, n=16), and lowest in those about breast cancer (8.8%, n=18). The proportion of case studies living with and beyond cancer is around 10%

higher in national midmarket newspapers (82.9%, n=29) than other types.

Table 12: Case study appearances by newspaper type and disease status

Type of newspaper	Total case study appearances n (%)	Disease status			
		Living with/ beyond	Terminal	Died	Unclear
		n (%)	n (%)	n (%)	n (%)
Oesophago-gastric	48 (100.0)	32 (66.7)	0 (0.0)	16 (33.3)	0 (0.0)
National heavyweight	3 (6.3)	3 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
National midmarket	3 (6.3)	2 (66.7)	0 (0.0)	1 (33.3)	0 (0.0)
National redtop	2 (4.2)	2 (100.0)	0 (0.0)	0 (0.0)	0 (0.0)
Regional/local	40 (83.3)	25 (62.5)	0 (0.0)	15 (37.5)	0 (0.0)
Bladder and kidney	60 (100.0)	34 (56.7)	9 (15.0)	17 (28.3)	0 (0.0)
National heavyweight	2 (3.3)	1 (50.0)	1 (50.0)	0 (0.0)	0 (0.0)
National midmarket	6 (10.0)	5 (83.3)	1 (16.7)	0 (0.0)	0 (0.0)
National redtop	4 (6.7)	0 (0.0)	2 (50.0)	2 (50.0)	0 (0.0)
Regional/local	48 (80.0)	28 (58.3)	5 (10.4)	15 (31.3)	0 (0.0)
Breast random sample	204 (100.0)	166 (56.9)	20 (9.8)	18 (8.8)	0 (0.0)
National heavyweight	6 (2.9)	4 (66.7)	2 (33.3)	0 (0.0)	0 (0.0)
National midmarket	26 (12.7)	22 (84.6)	1 (3.8)	3 (11.5)	0 (0.0)
National redtop	30 (14.7)	24 (80.0)	4 (13.3)	2 (6.7)	0 (0.0)
Regional/local	142 (69.6)	116 (81.7)	13 (9.2)	13 (9.2)	0 (0.0)
All	312 (100.0)	232 (74.4)	29 (9.3)	51 (16.3)	0 (0.0)
National heavyweight	11 (3.5)	8 (72.7)	3 (27.3)	0 (0.0)	0 (0.0)
National midmarket	35 (11.2)	29 (82.9)	2 (5.7)	4 (11.4)	0 (0.0)
National redtop	36 (11.5)	26 (72.2)	6 (16.7)	4 (11.1)	0 (0.0)
Regional/local	230 (73.7)	169 (73.5)	18 (7.8)	43 (18.7)	0 (0.0)

Socio-economic status

Of all the articles featuring a case study, 43.6% (n=136) featured a case study classified as being in the ABC1 socio-economic group (more affluent) based on their occupation using the Standard Occupational Classification (2010). Only 11.2% (n=35) were classed as belonging to the C2DE (more deprived) group. The trend for ABC1 individuals being featured more frequently remained, regardless of newspaper type or cancer type (Table 13).

Table 13: Case study appearances by newspaper type and socio-economic status

Type of newspaper	Total case study appearances n (%)	Socio-economic status		
		ABC1 n (%)	C2DE n (%)	Unclear n (%)
Oesophago-gastric	48 (100.0)	20 (41.7)	11 (22.9)	17 (35.4)
National heavyweight	3 (6.3)	3 (100.0)	0 (0.0)	0 (0.0)
National midmarket	3 (6.3)	2 (66.7)	0 (0.0)	1 (33.3)
National redtop	2 (4.2)	0 (0.0)	0 (0.0)	2 (100.0)
Regional/local	40 (83.3)	15 (37.5)	11 (27.5)	14 (35.0)
Bladder and kidney	60 (100.0)	16 (26.7)	5 (8.3)	39 (65.0)
National heavyweight	2 (3.3)	0 (0.0)	0 (0.0)	2 (100.0)
National midmarket	6 (10.0)	2 (33.3)	0 (0.0)	4 (66.7)
National redtop	4 (6.7)	2 (50.0)	0 (0.0)	2 (50.0)
Regional/local	48 (80.0)	12 (25.0)	5 (10.4)	31 (64.6)
Breast random sample	204 (100.0)	100 (49.0)	19 (9.3)	85 (41.7)
National heavyweight	6 (2.9)	4 (66.7)	0 (0.0)	2 (33.3)
National midmarket	26 (12.7)	17 (65.4)	1 (3.8)	8 (30.8)
National redtop	30 (14.7)	13 (43.3)	2 (6.7)	15 (50.0)
Regional/local	142 (69.6)	66 (46.5)	16 (11.3)	60 (42.3)
All	312 (100.0)	136 (43.6)	35 (11.2)	141 (45.2)
National heavyweight	11 (3.5)	7 (63.6)	0 (0.0)	4 (36.4)
National midmarket	35 (11.2)	21 (60.0)	1 (2.9)	13 (37.1)
National redtop	36 (11.5)	15 (41.7)	2 (5.6)	19 (52.8)
Regional/local	230 (73.7)	93 (40.4)	32 (13.9)	105 (45.7)

Names

It is also worth commenting on the names of the case studies featured. With few exceptions, names were generally those associated with a white, indigenous UK/Irish population. Given that newspaper articles may not always provide a photograph, this is

of interest, especially given evidence of the importance of tailoring messages to specific audiences demonstrated thus far in this chapter (also see section 2.4.1 on the potential for a case study more similar to the reader to further enhance newspaper influence). This will be picked up in the discussion chapter (section 7.4).

It would be remiss not to briefly include some comments about some of the difficulties that may be encountered in accessing case studies, at least on the PR side. These comments (one of which is provided below) clearly highlight that there may be other reasons why such case studies are used, rather than more ‘typical’ cancer patients other than those related to newsworthiness.

“...the best case studies are often outside of our department, often outside of our organisation in the third sector.[...] you can't identify people unless they're willing to be identified, so that individual was willing to go, have her picture taken, be in press releases and be out there within the public, you know what I mean, and be in the cinemas and so on, and really splash everything around as much as possible...” (P13 PR).

Summary

To summarise the findings on case studies, there was agreement amongst journalists and press officers that case studies are an essential element of a newspaper article. There was an acknowledged need for the case studies to be appropriate for the publication’s target audience; hence, the case studies provided as part of a press release may not be suitable. The types of people featured in the articles tended not be

6.6: Story content

representative of those most likely to get cancer, being predominantly under 50 years, even when campaigns specifically targeted older age groups. Case studies also tended to be from higher socio-economic groups, while names of case studies would suggest the potential for limited coverage of non-white indigenous populations. In terms of disease status, the majority of case studies were living with or beyond cancer.

The next aspect of the results to be considered is the educational content with regards to key cancer awareness messages.

6.6.2: Educational content

Table 14 below shows the amount of educational content featured in the newspaper articles overall and by story type.

Table 14: Educational content of newspaper articles split by story type

Article type	Educational content					
	Key symptoms	Symptoms experienced	Who is at risk	Link early detection with survival	Act on symptoms	Be persistent with doctor
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
All oesophago-gastric (n=109)	72 (66.1)	26 (23.9, 57.8*)	20 (18.3)	53 (48.6)	61 (56.0)	0 (0.0)
Human interest (n=37)	5 (13.5)	20 (54.1)	3 (8.1)	5 (13.5)	3 (8.1)	0 (0.0)
Campaign (n=64)	59 (92.2)	N/A	14 (21.9)	44 (68.8)	50 (78.1)	0 (0.0)
Campaign with HI (n=8)	8 (100.0)	6 (75.0)	3 (37.5)	4 (50.0)	8 (100.0)	0 (0.0)
All bladder and kidney (n=142)	87 (61.3)	32 (22.5, 55.2*)	41 (28.9)	63 (44.4)	80 (56.3)	5 (3.5)
Human interest (n=56)	3 (5.4)	30 (53.6)	0 (0.0)	0 (0.0)	3 (5.4)	0 (0.0)
Campaign (n=84)	82 (97.6)	N/A	41 (48.8)	61 (72.6)	75 (89.3)	5 (6.0)
Campaign with HI (n=2)	2 (100.0)	2 (100.0)	0 (0.0)	2 (100.0)	2 (100.0)	0 (0.0)
All breast random sample (n=196)	54 (27.6)	76 (38.8, 52.1*)	62 (31.6)	52 (26.5)	51 (26.0)	0 (0.0)
Human interest (n=136)	9 (6.6)	73 (53.7)	8 (5.9)	9 (6.6)	5 (3.7)	0 (0.0)
Campaign (n=50)	36 (72.0)	N/A	46 (92.0)	34 (68.0)	37 (74.0)	0 (0.0)
Campaign with HI (n=10)	9 (90.0)	3 (30.0)	8 (80.0)	9 (90.0)	9 (90.0)	0 (0.0)
All cancers (n=447)	213 (47.7)	134 (30.0, 53.8*)	123 (27.5)	168 (37.6)	192 (43.0)	5 (1.1)
Human interest (n=229)	17 (7.4)	123 (53.7)	11 (4.8)	14 (6.1)	11 (4.8)	0 (0.0)
Campaign (n=198)	177 (89.4)	N/A	101 (51.0)	139 (70.2)	162 (81.8)	5 (2.5)
Campaign with HI (n=20)	19 (95.0)	11 (55.0)	11 (55.0)	15 (75.0)	19 (95.0)	0 (0.0)

* denotes the proportion of applicable articles – BCOC articles without a case study would not feature this information

Table 14 shows that, overall, newspaper articles did not feature large amounts of educational content. Human interest stories were the least educational, with less than 10% of articles featuring any educational content other than the symptoms experienced by the case study. In those articles that featured a case study, the educational information most likely to be presented was the symptoms they experienced (n=134, 53.8%). A list of key symptoms was the second most likely piece of educational content to appear, being featured 47.7% of the time (n=213).

There were some interesting variations between cancer sites. Breast cancer articles were less likely to feature information about key symptoms. Only 27.6% (n=54) featured this information as opposed to 66.1% (n=72) and 61.3% (n=87) for oesophago-gastric and kidney and bladder cancers respectively. This applied even in articles specifically about the breast cancer campaign, with only 72% (n=36) of campaign articles featuring key symptoms as opposed to 92.2% (n=59) and 97.6% (n=82) for oesophago-gastric and bladder and kidney respectively. The relative lack of information about key symptoms and articles about the breast campaign may reflect the perceptions of journalists towards what the public already know. There may be a perception that, not only are other publications picking these items up, but also that awareness is successfully being raised elsewhere, and therefore providing such information is unnecessary.

“I just think because it's become just so widely spoken about, everyone knows about cancer and I think sometimes you make the assumption that actually there's so much information that everyone should know the symptoms for xyz cancer already...” (P14 Jr).

6.6: Story content

It should also be highlighted that information about who is at risk of cancer was, overall, only featured 27.5% (n=123) of the time; within articles about a specific campaign this rose to 51.0% (n=101). This was predominantly due to the breast cancer articles, because this campaign is specifically aimed at women over 70 years. 92.0% (n=46) of the articles highlighting the campaign featured this information, whereas for other cancer campaigns the figure was much lower at just under 50% for bladder and kidney, and as low as just over 20% for oesophago-gastric.

Table 15 considers whether there is any change over time in terms of how educational the human interest stories are; specifically in the six weeks before the relevant *BCOC* campaign, during the campaign period, and six weeks afterwards.

Table 15: Educational content of human interest newspaper articles split by cancer type and time period

Time period	Educational content					
	Key symptoms	Symptoms experienced	Who is at risk	Link early detection with survival	Act on symptoms	Be persistent with doctor
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Oesophago-gastric HI (n=37)	5 (13.5)	20 (54.1)	3 (8.1)	5 (13.5)	3 (8.1)	0 (0.0)
Before campaign (n=14)	1 (7.1)	4 (28.6)	2 (14.3)	0 (0.0)	1 (7.1)	0 (0.0)
During campaign (n=15)	3 (20.0)	10 (66.7)	0 (0.0)	3 (1.5)	1 (6.7)	0 (0.0)
After campaign (n=8)	1 (12.5)	6 (75.0)	1 (12.5)	2 (25.0)	1 (12.5)	0 (0.0)
Bladder and kidney HI (n=56)	3 (5.4)	30 (53.6)	0 (0.0)	0 (0.0)	3 (5.4)	0 (0.0)
Before campaign (n=18)	0 (0.0)	8 (44.4)	0 (0.0)	0 (0.0)	1 (5.6)	0 (0.0)
During campaign (n=26)	2 (7.7)	15 (57.7)	0 (0.0)	0 (0.0)	1 (3.8)	0 (0.0)
After campaign (n=12)	1 (8.3)	7 (58.3)	0 (0.0)	0 (0.0)	1 (8.3)	0 (0.0)
Breast random sample HI (n=136)	9 (6.6)	73 (53.7)	8 (5.9)	9 (6.6)	5 (3.7)	0 (0.0)
Before campaign (n=29)	0 (0.0)	14 (48.3)	0 (0.0)	1 (3.4)	0 (0.0)	0 (0.0)
During campaign (n=51)	4 (7.8)	26 (51.0)	3 (5.9)	2 (3.9)	1 (2.0)	0 (0.0)
After campaign (n=56)	5 (8.9)	32 (57.1)	5 (8.9)	6 (10.7)	4 (7.1)	0 (0.0)
All HI (n=229)	17 (7.4)	123 (53.7)	11 (4.8)	14 (6.1)	11 (4.8)	0 (0.0)
Before campaign (n=61)	1 (1.6)	26 (42.6)	2 (3.3)	1 (1.6)	2 (3.3)	0 (0.0)
During campaign (n=92)	9 (9.7)	51 (55.4)	3 (3.2)	5 (5.4)	3 (3.2)	0 (0.0)
After campaign (n=76)	7 (9.2)	45 (59.2)	6 (7.9)	8 (10.5)	6 (7.9)	0 (0.0)

There would appear to be a trend towards greater amounts of educational content being featured in human interest stories after the *BCOC* campaigns. Overall, there was an increase in the proportion of articles providing information about key symptoms, who is at risk, the link between early diagnosis and better survival, and the importance of acting quickly upon spotting any symptoms (Table 15). The same trend was found at the time the campaign was running for key symptoms and linking early detection with survival. There was also an increase both during and after the campaign in the provision of the presenting symptoms of the individual featured. Examining the data by cancer type is problematic because numbers are small and there is variation in the trend, particularly around the time of the campaign. However, with a couple of exceptions, the proportion of articles providing educational content after the campaign is generally higher than the proportion before the campaign across all cancer sites.

Table 16 presents the data for the amount of educational content in human interest stories split by regional and national newspapers, while Table 17 presents the same data for the campaign-specific articles.

Table 16: Educational content of human interest newspaper articles split by publication type

Time period	Educational content					
	Key symptoms	Symptoms experienced	Who is at risk	Link early detection with survival	Act on symptoms	Be persistent with doctor
	n (%)	n (%)	n (%)	n (%)	n (%)	n (%)
Oesophago-gastric HI (n=37)	5 (13.5)	20 (54.1)	3 (8.1)	5 (13.5)	3 (8.1)	0 (0.0)
National (n=5)	2 (40.0)	5 (100.0)	1 (20.0)	3 (60.0)	0 (0.0)	0 (0.0)
Regional (n=32)	3 (9.4)	15 (46.9)	2 (6.3)	2 (6.3)	3 (9.4)	0 (0.0)
Bladder and kidney HI (n=56)	3 (5.4)	30 (53.6)	0 (0.0)	0 (0.0)	3 (5.4)	0 (0.0)
National (n=11)	1 (9.1)	7 (63.6)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
Regional (n=45)	2 (4.4)	23 (51.1)	0 (0.0)	0 (0.0)	3 (6.7)	0 (0.0)
Breast random sample HI (n=136)	9 (6.6)	73 (53.7)	8 (5.9)	9 (6.6)	5 (3.7)	0 (0.0)
National (n=41)	2 (4.9)	22 (53.7)	3 (7.3)	5 (12.2)	0 (0.0)	0 (0.0)
Regional (n=95)	7 (7.4)	51 (53.7)	5 (5.3)	4 (4.2)	5 (5.3)	0 (0.0)
All HI (n=229)	17 (7.4)	123 (53.7)	11 (4.8)	14 (6.1)	11 (4.8)	0 (0.0)
National (n=57)	5 (8.8)	32 (56.1)	4 (7.0)	8 (14.0)	0 (0.0)	0 (0.0)
Regional (n=172)	12 (2.5)	89 (51.7)	7 (4.1)	6 (3.5)	11 (6.4)	0 (0.0)

Table 17: Educational content of all *BCOC* campaign-related articles by publication type

Time period	Educational content				
	Key symptoms	Who is at risk	Link early detection with survival	Act on symptoms	Be persistent with doctor
	n (%)	n (%)	n (%)	n (%)	n (%)
All campaign-related articles: oesophago-gastric (n=72)	67 (93.1)	17 (23.6)	48 (66.7)	58 (80.6)	0 (0.0)
National (n=10)	10 (100.0)	4 (40.0)	6 (60.0)	7 (70.0)	0 (0.0)
Regional (n=62)	57 (91.9)	13 (21.0)	42 (67.8)	51 (82.3)	0 (0.0)
All campaign-related articles: bladder and kidney (n=86)	84 (97.7)	41 (47.7)	63 (73.3)	77 (89.5)	5 (5.8)
National (n=3)	3 (100.0)	1 (33.3)	2 (66.7)	2 (66.7)	0 (0.0)
Regional (n=83)	81 (97.6)	40 (48.2)	61 (73.5)	75 (90.4)	5 (6.0)
All campaign-related articles: breast (n=60)	42 (70.0)	54 (90.0)	43 (71.7)	46 (76.7)	0 (0.0)
National (n=9)	6 (66.7)	8 (88.9)	9 (100.0)	9 (100.0)	0 (0.0)
Regional (n=51)	36 (70.6)	46 (90.2)	34 (66.7)	37 (72.5)	0 (0.0)
All campaign-related (n=218)	193 (88.5)	112 (51.4)	154 (70.6)	181 (83.0)	5 (2.3)
National (n=22)	19 (86.4)	13 (59.1)	17 (77.3)	18 (81.8)	0 (0.0)
Regional (n=196)	174 (88.8)	99 (50.5)	137 (69.9)	163 (83.2)	5 (2.6)

A comparison between national and regional publications is difficult because of the relatively small number of articles in national publications. Regional publications were included in this study partly to examine whether results in the published literature about low levels of educational content also applied to regional newspapers. Looking at all human interest articles together, Table 13 provides a suggestion that regional articles may be less educational than national ones, although the trend was less pronounced for campaign-related articles (Table 14). This could be down to space constraints being particularly an issue in regional publications; as one journalist described: “it's very much cut and dry, 400 words, keep it tight, and I think maybe that might contribute to [the lack of symptoms reported]” (P14 J). The issue of reporter decision making regarding what content to include will be returned to in section 6.6.9.

The main message of the *BCOC* campaign is that if you experience a potential cancer symptom, tell your doctor because being diagnosed earlier is linked with better survival. It is perhaps concerning that in the campaign-specific articles across cancer sites, information about the importance of an early diagnosis was only featured approximately 70% of the time. This was lower than the message that it is important to visit your doctor, which was featured 89% (n=181) of the time overall, and most frequently in the articles about the blood in pee campaign (89.5%, n=77).

In terms of how this educational content within campaign articles is delivered, it is useful to consider the corpus linguistic analysis. The reader will remember that WMatrix assigns semantic tags to semantically similar words in running text (see section 5.2.3). One such semantic tag identified in this corpus was that of *knowledgeable* (LL=+1093.61,

n=799, LR=2.27). In this instance, it predominantly picked up instances of the words *awareness*, *information* and *experts* (see Appendix 9.2). These words were all key words in their own right in the campaigns sub-corpus with log likelihoods and log ratio scores of LL=+980.36, n= 208, LR = 7.03 (for *awareness*), LL=+73.78, 78, LR = 1.79 (for *information*), and LL=+155.75, n=52, LR = 4.07 (for *experts*). Concordance lines (see Appendices 9.3-9.5) demonstrate that these instances are around the BCOC campaign's purpose of raising awareness, delivering key aspects of the public awareness campaign message, signposting readers to further information and framing the argument in terms of the message being delivered by experts. A selection of examples are provided below.

<p>, to go to their doctor straight away . on . Do n't flush danger signs . HEALTH forts get under way today to raise more act their GP straight away . " For more e and it 's much better to be sure . We a sign of cancer . A health campaign is hopping Centre in Nuneaton where health</p>	<p>Awareness experts awareness information know warning experts</p>	<p>is crucial , because the earlier cancer are warning that we should all take a m in a bid to reduce the 937 people in the on the signs and symptoms of breast canc that if cancer is detected early there i people that if they have persistent hear will set up a stall on Monday and Tuesda</p>
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As might be expected, given this, and that the most often reported aspect of these articles was around cancer symptoms, the two most significant key words were the words *cancer* (LL=+7331.27, n=1389, LR=10.32) and *symptoms* (LL=+3047.53, n=577, LR=10.38).

6.6.3: Quotes from press releases

As stated earlier in section 6.5.2, use of Turnitin demonstrated that similarity indices with the national press release were, on average, quite low (oesophago-gastric: mean 19.7%, range 0-89%; blood in pee: mean 24.5%, range 0-81%; breast cancer in women over 70 years: mean 39.5%, range 0-84%). Closer inspection demonstrated that most of

the shared content identified between the national press release and the newspaper reporting of the campaigns comes from quotes provided in the press release. The most frequently used quotes that were provided in the press release would appear to be those that summarise the symptom and call to action. In the bladder and kidney campaign, a quote from celebrity Ian Lavender, described as a “bladder cancer survivor”, was used in 19.8% (n=17) of articles about the blood in pee campaign, and reads:

“I’m supporting this year’s ‘blood in pee’ campaign as a survivor of bladder cancer. It’s a simple message ‘look before you flush’ and make sure you go and see your GP if you notice blood in your pee. Spread the word, someone you know might have this symptom and reminding them to get it checked could save their life - it saved mine, and I’m 70 and still happy to be working.”

In the breast cancer campaign, the most frequently used quote (18%, n=30) came from Professor Dame Sally Davis, Chief Medical Officer, and reads:

“You are never too old to get breast cancer. It is not always a lump and women should look out for any changes in the shape of the breast, a change to a nipple or to the skin.

Spotting the signs of cancer early is very important so if women are concerned about any breast cancer symptoms they should contact their GP straight away.”

Noteworthy is that neither of these quotes explicitly state that early detection of cancer is linked to better survival, yet there are other quotes that do state this included in the press release (see Appendix 10; 10.1 and 10.3).

In the oesophago-gastric cancer campaign articles, the most frequently used quote came from Professor Kevin Fenton, National Director of Health and Wellbeing at Public Health England and was used in 12 (17.4%) articles. It states:

“People may be reluctant to visit their doctor about persistent heartburn, thinking that it’s something they just have to live with. But heartburn most days for 3 weeks or more could be a sign of cancer. The earlier cancer is diagnosed, the higher the chance of survival. If we’re to improve early diagnosis rates, we need to encourage people with symptoms to go to their doctor, which is what this latest Be Clear on Cancer campaign aims to do.”

While this quote does include the importance of early diagnosis, a truncated version of the quote that omits that message was used in three of the articles.

As previously established, it is important for local publications to target their local population and provide information of relevance to them. To this end, it is notable that the most frequently used quotes were not provided in the national press release. Indeed, quotes from local health professionals, rather than those provided in the national press release, tended to be used in regional publications. Within the regional publications, 35/83 (42.2%) in the bladder and kidney campaign articles, 24/51 (47.1%)

in the breast cancer in women over 70 years campaign articles, and 29/62 (46.8%) in the oesophago-gastric campaign articles utilised quotes from local professionals. Additionally, when such quotes are used, there is a consistent use of honorifics, that is, naming the individual by name and job title, a strategy that can be used to add weight to the person's words by making them seem more authoritative (Machin and Mayr, 2012, p.82). These findings are supported by comments from press officers in the qualitative interviews, who stated that tailoring can be achieved, in part, through the addition of:

“...a couple of quotes from our own local leads for public health, sort of thing, so the executive council member who's in charge of public health and probably the director of public health as well.” (P11 JPR)

6.6.4: Interim summary: case studies, educational content and quotes

This section has thus far identified that newspaper articles about cancer tend to lack educational content, particularly those articles that feature a human interest story and those in regional newspapers. Breast cancer articles featured less educational content than the bladder and kidney or oesophago-gastric articles. There was a suggestion that campaigns may be related to increased amounts of educational content, and that quotes are the most often-replicated content in press releases. However, regional newspapers would appear to use quotes obtained from elsewhere. The quotes used do not necessarily include all aspects of the cancer awareness message, in particular, the link between earlier diagnosis and better survival.

The reasons for these findings can be understood by considering the purpose of the newspapers from the point of view of consumers, journalists and press officers, as well as how journalistic decisions are made about the content of a newspaper article. The next section starts to consider this by considering the purpose of the newspapers from the perspective of the reader, as perceived by journalists.

6.6.5: Purpose of a newspaper for the reader

The first step to understanding how newspaper content is presented is to understand what the purpose of a newspaper is from different perspectives. This will provide insights into why various PR and journalistic decisions are made. This section has been informed by data from the qualitative interviews. It will be seen that, while the public and PR may see a role for the newspaper in disseminating public health messages or raising awareness of issues, newspapers do not appear to share this view. Instead, they believe that the purpose of newspapers is to entertain and inform, not to educate.

Participants described newspapers as being important to their (particularly local) consumers. Newspapers see their readers as a “community” (P7 JPPE) with certain expectations about what sort of stories will be featured. Discussions suggest that readers expect that newspapers will highlight information such as local events and fundraisers or raise awareness of particular illnesses by using personal stories. Indeed, some published stories originate from personal correspondence with readers wishing to publicise such information. This viewpoint was sanctioned by those journalists who described newspapers as having “an enormous amount of power to do good” (P7 JPPE) and provided examples where readers went to their GP after reading about the

symptoms of a particular condition in the newspaper.

“There's a lot of people coming forward and saying 'can you cover this, I'm trying to raise money for such and such they have cancer'...” (P1 J).

“So many times I've had letters where you report something, and it's often a case study where it might be like noticing an odd symptom [...] It'll be just some weird little thing. And you include that in a story and you get a letter or a phone call from somebody that, sort of, says 'thank you so much for that, that rang a bell, I went and had a check and I was diagnosed.’” (P7 JPRE).

The corpus linguistic analysis also provides evidence to suggest that readers view newspapers as important for raising awareness of cancer. Issues of cancer awareness, information and knowledge, patient expert opinion, as well as warnings for readers and warning signs are highlighted by the semantic field *knowledgeable* (LL=+1248.37, n=1720, LR=1.71). Such information is not necessarily explicit; as already discussed, there is a lack of educational content in the articles, and the meaning of this semantic field varies greatly between article type. Within human interest stories (LL+604.02, n=1033, LR=1.43; see Appendix 9.6), the focus is less on providing cancer awareness information but more about the purpose of the article, or the wishes of the case study to raise awareness through a fundraiser or by having their story told, which supports the assertions of the journalists.

Knowledgeable also picked up the word *news*, which was sometimes good news, and other times bad news. As would be expected based on the content analysis, there was,

albeit rarely, reference to warning signs of cancer in the human interest stories that were unrelated to the *BCOC* campaigns. Some examples of the above-mentioned findings are provided below.

<p>We have been sharing her story to raise ugh what I have . I want to make people one implant . " She is hoping to raise . The heartbroken mum had to break the nderstand . It was a relief to have the dilated veins . Fiona Lewis thought she</p>	<p>awareness aware awareness news news knew</p>	<p>to save other lives and to raise funds t of the importance of getting help soon a about how cancer affects younger women . to her husband over the phone and bosses she had made it through . Three days aft the warning signs of breast cancer : lum</p>
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6.6.6: Purpose of the newspaper – for PR

It could be argued that in cases such as those above, the public are utilising the newspaper in a way not unlike that of a PR organisation. The goal of the press release was described by one proactive PR organisation as “maximis[ing] the coverage” (P8 PR) of a campaign. These individuals appeared not to mind whether all of the content of the press release was included in the newspaper article. Rather, they seemed to be happy as long as the campaign is mentioned. It did not seem to matter if the newspaper put their own ‘spin’ on a story, as long as factual information had been represented appropriately.

“I wouldn't say that the stories are necessarily changed but headlines can be misleading. Or inaccurate. That is sometimes the nature of the beast. You have to accept that once it has been sent you have no control over where the story then goes. You can manage responses, you can speak to people, you can, you know, you spend time developing relationships and trust so these things generally land as well as they can, but, you know. If there's an angle that can be

pulled out by talking to other people within the sector or other stakeholders then that's within their gift to go ahead and do that." (P8 PR).

"...the golden rule is to get the three points, three key messages and sometimes, if you can get one in the final article, then great." (P9 JPR).

On the other hand, some organisations did use the PR campaign as a way of raising awareness of cancer symptoms, rather than just highlighting awareness of the campaign itself. This is a slightly different approach that, to be successful, would require the newspaper to reproduce educational content rather than just signposting people to another source. In these cases, press officers seemed happy for journalists to simply copy the press release into the paper.

"So, sometimes, especially regional stuff, half the time...I hope and I know that they'll probably just print it word for word and they might just re-nose it. And that's fine because then you know that all the information you want is going in there." (P12 JPR).

Despite the lack of control PR have over a message once it is released and evidence of declining newspaper sales, newspapers are still seen as key targets for PR organisations (although other forms of media may be targeted more).

"...the Press Association is a big target for us..." (P6 PR).

“The papers are still very significant in terms of opinion formation, reaching your stakeholders and others and Government and others but if you want to reach the maximum numbers possible, then broadcast is always going to be more important.” (P8 PR).

6.6.7: Purpose of a newspaper for the journalist

While the public (in particular) and PR organisations may view newspapers as having a role in publicising public health messages or PR, a significant finding was that journalists as professionals do not share this view. For them, newspapers were seen as a form of entertainment with a business model aimed at making revenue. Newspapers and PR were described as “not really singing from the same hymn sheet as entities, as organisations” (P14 J). This is not to say that journalists as individuals do not see a role for themselves in disseminating public health information, and, for some, their own experiences with various illnesses may influence their decisions about what information to include.

“I think people misunderstand what newspapers are about. Newspapers are not there to educate. They're there to entertain and hopefully inform, but basically, they are a means of entertainment. You know, you have to persuade somebody to part with money to buy your newspaper, well, in most cases. So, you can't preach at them. It doesn't work.” (P7 JPRE).

“I think my personal experience means that I feel quite strongly about not giving people false hope.” (P5 J).

“I'd say empowerment would be my principal aim. So, you obviously empower people by educating them, but you need to give them some knowledge to take away that will influence their behaviour or how they deal with their doctor or whatever.” (P4 J).

As demonstrated in participant 7's quote above, journalists identify a clear distinction between educating and informing their readers, which may contribute to journalistic decisions about how much information and context to provide in any given article. These decisions will be explored in the next section.

6.6.8: Interim summary: newspaper purpose

In terms of the purpose of newspapers, results suggested divergent views between consumers and press officers on the one hand and journalists on the other. While there was a perception that newspapers are key sources for disseminating cancer awareness-related content for consumers, a view that was shared by PR professionals, journalists viewed newspapers as a form of entertainment, not education.

As the results section has so far demonstrated what content is included in newspaper articles and how perceptions of the purpose of the publication may influence this, the next section now looks at how journalistic decisions are made about what content to include in a newspaper article.

6.6.9: Decisions about story content - inclusion

The interviews revealed that story content must be considered in the context of telling

a story. Hence, the factual information such as symptoms which, from a public health point of view is so important, is seen simply as part of a story in that it provides context. Therefore, the sort of content that is seen as important by a journalist might be different from that of a public health expert. Educational content is more likely to be included in features, rather than news stories, as highlighted by participant 3 below. There are also space limitations imposed on journalists. The amount of space a story gets is pre-determined: "...chief editors decide what's going in on which page and how much space it's gonna get" (P10 E). In a general news story, when space is tight, these facts would be the first thing to go "unless it was key to the story" (P10 E).

"When I put in stuff like the symptoms [...] it's not to spread awareness where necessary it's more to give them a context of what that person is going through. (P14 J).

"I think it's an essential part of any piece. You know, if I filed a piece about kidney cancer and I didn't tell the readers what to look for and how it's diagnosed and common mistakes that are made by both...you know, why it's missed, my editor would ask me." (P3 JE).

"It's difficult because I feel like if I was writing about [...] some condition that was quite unusual I would probably write about the symptoms and what happens to you because it's rare. [But not for a more common disease like breast cancer]. [...] I'd always put in something about how many people get diagnosed and how common a cancer is and what mortality rates might be and that sort of thing."

(P5 J).

A possible solution to the space issue is the use of fact file boxes or panels that sit alongside, or are placed after, the story. Their use is more often associated with features than with general news, but there is one area where this is changing and that is with the rise of online journalism.

Many newspapers now publish 'online first'. There are three key issues here with regard to articles that could be used to raise awareness. The first is that online articles can be longer, as there are no space restrictions online. Second, signposting is easier as links can be added to articles to direct the reader to more information as opposed to listing sources of information in a print article. Not only this, but the online nature of articles means that it is possible for journalists to, essentially, re-use these links, or even symptoms boxes that they have previously used, by providing hyperlinks back to earlier articles. Third, there may be articles that are published online that would never make it into the print edition of the newspaper.

"Well we're still trying to get the same message out but we've got a lot more space, so in that the reporter's original story, which is a lot longer, you could just run that as a whole which is, you know, that would mean that you would get your list of symptoms in and stuff like that." (P10 E).

"...someone else had done a story on meningitis [...] when I came to do this story again, we'd already got that list of symptoms, so what did we do? We actually

re-used that checklist again and put a link on at the bottom of my newer story, so that people will then re-see that link.” (P1 J).

“I remember when I did an asthma story [...] [a] raising awareness piece of what people can do to protect themselves if they're got asthma around the fireworks season, and it's not necessarily something that my paper would have picked up on, they would have probably spiked it, which just means bin it, but on the web it's obvious you'll reach a wider audience and people are going to be looking for fireworks. People might be searching the terms 'asthma keeping safe', you know?” (P14 J).

There was disagreement between participants about how important online journalism is as a source of information compared to print editions. This cannot be answered here, but the point is that print and online publishing are slightly different, and while there is debate over which is used more as a source of information, the participant quotes suggest that online journalism may be better suited to articles with lists of educational content. Interviews with press officers appeared to indicate that they do not have a preference whether the press releases that they send end up being published in stories in print or online. Getting the story picked up is what was deemed to be important.

“...it is about that acknowledging that we do, as a society, respond differently now and read things differently and we're changing our lifestyle as it were. So, if it goes digital, that's absolutely fine, I don't have a problem with that at all.” (P13 PR).

One final point that should be mentioned here relates to how some stories can make it difficult for a particular angle to be taken. During the interviews, it was explained to a number of participants that one of the reasons for this piece of research being undertaken was the results from the Hilton and Hunt (2010) study about the educational content of newspaper stories about Jade Goody. It was explained to the research student that it could be deemed 'unfair' to use this story as an example of a case where newspaper reports did not provide educational content relating to the early diagnosis of cancer.

"She had symptoms and hadn't had them investigated. She'd been told to go back for checks and hadn't gone back. And that was pretty well known, I think, in the health media fraternity. So, she wasn't an ideal, sympathetic case study in that sense, and it made it difficult to tell that story." (P7 JPRE).

The same participant went on to explain that, in fact, the newspaper they were working for at the time had developed a page on their website about cervical cancer that was full of educational content. No more detail can be given for confidentiality reasons. However, this is an example of a situation where a newspaper may consider the need for educating the public as a totally separate issue to telling a story for publication.

So far, this section has been concerned with whether particular pieces of information are included in newspaper articles or not. It is also important to consider *how* the information is presented. The next section (6.6.10) will first consider the issue of presenting cancer stories. Section 6.6.12 will then explore the language used in those

stories.

6.6.10: Decisions about content - presentation

Journalists explained that, in order to present a cancer-related story to their target audience, they may need to simplify some of the content. Some participants expressed concerns about cancer being described as a single disease, which was felt to be too simplistic. The simplification of stories was particularly an issue in tabloid newspapers. Explaining complicated issues to a target audience who may be at higher risk of cancer themselves and are may be less likely to be highly educated presents additional challenges. Cancer-related statistics are particularly problematic, with one participant stating that: “some of the worst examples of statistical abuse I've come across come from reporting on cancer” (P3 JE). It was explained that this was sometimes necessary due to the target readers and expectations of the style of the newspaper. Relative risk is used by the newspapers because it is a “bigger, more dramatic number” and, even though they “...know it's not the most accurate way to present something, [...] it's the eye-catching way to present something.” (P7 JPRE).

“I talk about cancers or specific types of cancer. So, I don't like people thinking this is a disease - one disease, because it's not, as you know. It's incredibly varied from trivial to deadly serious, and it's different in each person, let alone in each type of tumour. So I always talk about cancers...” (P4 J).

“It's the tabloid readers who maybe are not so well-informed in terms of health [...] They're the ones that to some extent need the health information, but [...] trying to keep it in simple language but still accurate is actually bloody difficult.”

(P7 JPRE).

“...it's not always the journalist, the actual writer, sometimes it's the sub editors and editors who, err, are unlikely to get things wrong but they may well simplify beyond what's sensible.” (P3 JE).

6.6.11: Interim summary: journalistic decisions

Journalistic decisions around what content to include and how to do it were mostly driven by factors outside their control, such as space limitations, or through the need to simplify stories for the target audience. This was the case regardless of an individual's own perceptions about what could or should be included. The content also has to be considered in terms of the necessity of presenting a story, within which factual information about cancer may be deemed irrelevant, or simply needed for context. Where newspapers decided that it was important to educate the public about particular conditions, they tended to dedicate space for the purpose either in feature articles or by creating dedicated pages on their website, rather than putting this information in more general articles.

The final section of the results now turns to how the newspaper content is presented in terms of language and the journalists' views about the language that they use. This is a substantially longer section than the preceding sections and considers outcomes and evaluations of cancer, family and relationships, battle metaphor, adjective use, guidelines and scope for change.

6.6.12: Language use

Having described in previous sections the journalistic decisions behind what to include and highlighting that there are issues about how to present information, this section now looks more explicitly at the language used in the newspaper articles analysed. The findings from the corpus linguistic analysis will be presented, and, throughout, the voices of the journalists are presented to explain why such language is used.

Analysis of the corpus linguistics data helps to reveal what threads run through the newspaper articles and where variation exists between different story types. Statistical data, including word collocations, key words and key semantic fields, are presented with example concordance lines below each point to illustrate the language use. Findings are grouped into themes of language use, namely, outcomes and evaluations, family and relationships, battle metaphors, use of adjectives, guidelines, and scope for change.

Outcomes and evaluations

As might be expected, *cancer* collocates with different words in the human interest articles and those about the *BCOC* campaigns. In the human interest stories, cancer is often portrayed negatively. It collocates with words associated with poorer outcomes, such as *spread*, *died*, *terminal*, *secondary*, *returned*, *incurable*, *inoperable*, *dying*, *returning*, and *die* (see Table 18 below for statistical data). It is also related to negative evaluations, with people who have received a cancer diagnosis being described as someone who is *suffering* or is a cancer *sufferer*, or their cancer being described as *devastating*. Some reference to cancer being feared is also made, evidenced via the collocation of the words *cancer* and *fear*. There were far fewer collocations related to more positive outcomes; they also tended to be slightly less statistically significant than

the more negative collocations. These more positive collocations were *survivor*, *survived*, *beat* (which will also be discussed later in relation to battle metaphors), *treat*, *save*, *cure*, *treatable* and *alive*. All of the words that *cancer* collocated with are statistically key words in and of themselves, with the exception of *fear*. *Fear* was underused overall, when compared to the BNC written sampler, suggesting that it was primarily used only in relation to cancer.

Table 18: Statistically significant collocations of cancer and words relating to outcomes in human interest stories and keyness of collocating word with the BNC written sampler

Target word and collocation	MI	t-score	Keyness of collocating word compared to BNC written sampler
cancer and spread	4.58	6.57	LL=+164.11, n=99, LR=2.90
died and cancer	4.02	5.63	LL=+129.68, n=112, LR=2.23
terminal and cancer	4.34	4.46	LL=+116.73, n=55, LR=3.56
secondary and cancer	5.34	4.78	LL=+42.27, n=29, LR=2.64
cancer and returned	3.89	3.61	LL=+26.78, n=51, LR=1.34
incurable and cancer	4.92	2.90	LL=+43.13, n=15, LR=4.91
inoperable and cancer	4.66	2.88	LL=+70.11, n=18, LR=7.76
dying and cancer	4.30	2.85	LL=+21.84, n=26, LR=1.80
cancer and returning	4.49	2.70	LL=+9.73, n=18, LR=1.37
die and cancer	3.17	2.51	LL=+39.58, n=45, LR=1.85
suffering and cancer	3.66	2.91	LL=+66.73, n=40, LR=2.91
cancer and sufferer	5.49	2.77	LL=+28.75, n=10, LR=4.91
devastating and cancer	3.27	2.53	LL=+118.83, n=42, LR=4.81
fear and cancer	3.81	2.08	LL=-0.04, n=18, LR=-5.08
cancer and survivor	5.23	4.96	LL=+134.96, n=40, LR=6.32
beat and cancers	4.44	4.77	LL=+58.69, n=51, LR=2.22
treat and cancer	3.94	2.96	LL=+47.20, n=33, LR=2.59
cancer and save	3.15	2.66	LL=+64.08, n=53, LR=2.29
cure and cancer	3.70	2.61	LL=+76.77, n=32, LR=4.00
cancer and treatable	3.66	2.06	LL=+77.90, n=20, LR=7.91
cancer and alive	3.34	2.02	LL=+21.16, n=25, LR=1.81

As will be seen later in this section, these findings may be explained by the need to use emotion and drama as a way to tell a story.

What is perhaps less expected is that the collocations with negative outcomes persist (although to a much lower degree) in articles about the *BCOC* campaigns (Table 19). For example, while cancer collocates with more positive outcomes, such as *improving*, *reassurance*, and *survivor*, it also collocates with negative outcomes such as *die*, *died*, *dying*, *death* and *suffered*. These words are, again, often statistically significant key words themselves, with two exceptions. *Died* is not statistically significant, and *death* is significantly underused. This suggests, once again, that they are used primarily when referring to cancer specifically.

Inspection of concordance lines reveals that *die*, *died* and *dying* refer to data, such as survival rates, and describing how someone should go to the GP if they have *suffered* from a particular symptom (Appendices 9.7-9.10). It is interesting that the more positive terms are not more explicitly around treatment or prolonging life (the term *survivor* is ascribed to a particular case study who appears in a number of different campaign articles). Given the journalists' earlier comments about the use of survival rates being important it makes sense that such figures would be discussed. However, there seems to be a tendency to frame them in the negative; i.e., how many people die as opposed to how many people survive. Interestingly, this reflects the way that the statistics are presented in the national *BCOC* press releases (see Appendix 10).

Table 19: Significant collocations with cancer in the campaign articles and keyness of collocating word

Target word and collocation	MI	t-score	Keyness of collocating word compared to BNC written sampler
Dying and cancer	3.90	3.10	LL=+30.95, n=19, LR=2.55
Cancer and death	4.18	2.50	LL=-4.23, n=10, LR=-0.87
Suffered and cancer	3.82	2.28	LL=+14.92, n=11, LR=2.25
Died and cancer	3.11	2.17	LL=+4.19, n=18, LR=0.79
Cancer and improving	3.43	2.03	LL=+21.63, n=13, LR=2.59
Reassurance and cancer	4.69	2.54	LL=+28.52, n=7, LR=5.60
Cancer and survivor	4.31	4.84	LL=+163.06, n=34, LR=7.29

A comment from a participant working in public health in a local authority is of interest here, as they feel it is their job to find a positive message within something negative. However, as the default position for cancer is more negative it can be difficult for positive messages to get through:

“...our comms team - who are brilliant - I have to say, they're really good - but they often, again, will put cancer, in particular, in the negative rather than the positive [...] Why is cancer different than another long-term condition? Because actually, often, people, you know, fortunately, now, with a number of reasons, survive five years, so actually they live *with* cancer or having had a diagnosis of cancer [...] but you're up against adverts, whether it's through Facebook, whether it's on the TV, whether it's through the radio or charities for cancer where it's very, very negative. It is that I've lost a loved one. My loved one's lost to cancer, and so on, to get the money in. And we're fighting against that message, actually.” (P13 PR).

These positive and negative representations of cancer are echoed to some extent in the results of the keyness analyses. In terms of semantic fields, one of the most significant findings identified across all article types was that of *alive* (LL=+1329.09, n=540, LR=4.67; see Appendix 9.11). This, similarly to the data previously presented from analysis of the collocations, had both positive and negative uses. Across all articles, it highlighted concepts of life and death, survival, treatments, celebrating people's lives or listing their achievements. It also picked up on survival and mortality rates, which makes sense given journalists' comments about the importance of a case study and providing statistical context for the reader. However, there were differences between the human interest and campaign-focussed stories.

The effects of cancer upon lives and celebrating people who have had cancer, as well as details about life-prolonging drugs, are much more prevalent in the human interest stories (LL=+1227.91, n=434, LR =4.81), for instance:

so grateful for the treatment that saved her	life	. Now looking at her I ca n't believe she was
I was scared of thought of him going through	life	with one kidney . It was the worst time of our
ancers were cleared or halted , extending the	lives	of some patients by more than two years . Pati
en " said Rebecca . " But we have to live our	lives	in three month blocks . " Lutterworth Mail . F
dad move into a new home , to scheduling her	life	around surgery and treatment . An operation at
an amazing grandad . We will keep his memory	alive	and make sure his life is talked about and cel
ter , she passed away . " The worst day of my	life	was the day she died , and nothing 's going to
imes . September 22 , 2015 Tuesday . 'More to	life	than cancer' says PA turned model . A woman wh
ace this spring to remember and celebrate the	life	of a Bolton police officer who died ten years

On the other hand, comments about early diagnosis saving lives (such as the examples below) are predominantly found in the campaign articles (LL=+398, n=127, LR =4.24).

ancer ' as finding out early could save your ing your doctor without delay could save your osed with early stage breast cancer are still	life life alive	. " If you 're over 70 , you can ask for a fre . " Stroud News and Journal January 29 , 2 12 months later . VIRGINIA errs on the side of
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As can be seen in Table 20 below, cancer treatments are presented as being successful, yet unpleasant. *Treatment* collocates with *successful* and *curative*, but also *gruelling*, while *chemotherapy* collocates with *intense*, *endured* and *hair* (which is a result of reporting people who lose their hair as a result of chemotherapy). There are no explicitly positive collocates of *chemotherapy*, and no explicitly positive or negative collocates of *radiotherapy* or *surgery*. Table 20 presents data from all articles combined; the positive collocations are found in both human interest and campaign articles, whereas there are no explicitly negative collocations in the campaign articles.

Table 20: Statistically significant collocates of treatment and chemotherapy across all articles that are explicitly positive or negative

Target word and collocation	MI	t-score
treatment and successful	7.10	5.06
successful and treatment	6.40	3.95
gruelling and treatment	6.86	3.13
curative and treatment	8.18	2.23
hair and chemotherapy	4.48	2.34
intense and chemotherapy	8.29	2.23
endured and chemotherapy	7.40	2.22

To summarise, human interest stories tend to have a stronger focus on negative cancer outcomes and evaluations than those reporting specifically on a campaign. Similar findings are reported for discussions of cancer treatments. Related to this, journalists report cancer mortality statistics with a focus on death, rather than survival, which may serve to associate cancer with death even in the campaign articles. This is important because the campaign overtly presents the message that cancer is treatable if diagnosed early, not that cancer is an automatic death sentence. This may all contribute to perceptions that cancer is a disease that requires unpleasant treatments that, ultimately, may not be successful. The next section will look at another key aspect of the articles based upon the findings of the corpus linguistic analysis; that of family and relationships.

Family and relationships

Across the articles as a whole, the semantic tag of *Kin* (LL=+681.98, n=1949, LR=1.10) picks up instances of family situation and, along with *personal relationship: general* (LL=+71.04, n=422, LR=0.72), which picks up relationships with friends, highlights how important the concept of emotional support is to a newspaper story. The use of terms such as *husband* or *sister* as shown in the concordance lines below are examples of naming strategies which may be used in order to 'humanise' the case studies (van Dijk, 1993). The *kin* and *personal relationship: general* tags show frequent description of friends and family as integral sources of support or of engaging in fundraising events for their loved ones. Appendices 9.12 and 9.13 contain more example concordance lines from the semantic tags of *personal relationship: general* and *kin*.

, 2016 Thursday . Tributes paid to 1.16 pm today . Mr Barnard said his ncer in children . The heartbroken died a few months later , leaving math . When the 57-year-old loving 16 Saturday . Whitnash cancer patient 's is ' . He took time off from work and my ch into breast cancer . Twelve of Sue 's ugust 16. Stacey added : " I have great	dad family mum wife husband friends pals friends friends	and bowler who held final get-toget was 'heartbroken' , but more determ had to break the news to her husban Sara and daughters Grace , now nine from Woodchurch was diagnosed with take on cycle to save his life . The clos helped with the school runs and dropped o have stripped off for the 2016 " Pink Lad and they all want to raise money . " Sist
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The importance of friends and family is also seen through the semantic field *helping* (LL=+479.12, n=1830, LR=0.93, see Appendix 9.14). When looking at these semantic fields together, there is a suggestion that there is another angle to the role of friends and family in the articles, which is around coming together to help. Firstly, there are instances of personal help given to the cancer patient from individuals, charitable organisations or health care staff. Secondly, it can be seen that people support and encourage each other to go to the GP if potential symptoms are identified. Thirdly, people support awareness campaigns and events. Therefore, there is a suggestion of individuals uniting together not only to support the individual, but as opponents to cancer as well.

d by the beetroot he was eating . I h the course . Everyone is being so months that people are desperate to and all the extended family gave me the friendship has grown and we can had watched the short video and was kie 's eyes , is to give people the sday . Hundreds of Jen 's Friends ' people die annually . The roadshow	encouraged supportive help backing support encouraged boost rally round encourages	him to make an appointment to see hi and people are signing up to join me - and this is how they want to do it , far beyond the call of family duty one another . There are so many of u to go to the doctor – only to be dia they need to beat cancer , and stres for breast cancer help . When mum-of anyone who notices blood in their ur
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As might be expected, the human interest stories feature examples of *helping*, *encouragement* and *support* to a much greater extent than the campaign stories. However, the word *encourage* (in the context of the campaign encourages people to go to their GP), does appear in campaign articles (as in the last example above).

On the other hand, there is another side to relationships and kin which centres on the negative effects that cancer has on those around the person with the diagnosis. Such instances are not only limited to when someone dies, but also while living with cancer, or manifest in terms of people not telling their family about their diagnosis.

<p>ordon said : " He did n't want our eed to live for my children and my he impossible decision she and her ible for me to manage all the care icial diagnosis before telling her iority was looking after her young aron Jhheent was telling her young 'Do you know what cancer is ? ' My " I 've had to deal with losing my told me how badly it affected the</p>	<p>parents wife family mum family son son son mother family</p>	<p>to have to arrange his funeral , no and everyone else . There must be s faced . In early 2012 , Rita 's biz would need at home , so she went st about the tests and the lump . Her , so she did not want to worry abou Arjun , 12 , about her diagnosis . burst into tears and said : 'That ' (to breast cancer) , my husband (when I had cancer when I was little</p>
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It is worth highlighting two longer portions of concordance lines that stood out. The first is a particularly good example of the above:

I wish I wasn't ill because we'd all still be happy. My **husband** would still be here. My **daughter** wouldn't feel so angry and sad and my **brother** wouldn't struggling with depression. I feel so guilty

The second example below is noteworthy because the use of words relating to family was somewhat different. It states:

You shouldn't think about yourself. Think about your **family**, **kids** and **grandchildren** and do something about it.

Unlike the previous examples, the family are used here by someone who had cancer in an attempt to persuade the reader to go to their GP if they notice a particular cancer warning sign. This frame was not used widely, which might be considered surprising given that it does make use of emotion and the idea that 'it could be me'; that is, aspects that have previously described as being important in terms of newsworthiness.

Battle metaphor

Across all newspaper articles, violence and battle metaphors were prominent. *Cancer* was a statistically significant collocate of words related to battle metaphor, such as *survivor(s)*, *beating*, *fighting*, *battle*, *battling*, *beat*, *battled*, *aggressive*, *fight* and *fought*. These are predominantly used in the human interest stories and the data for these is provided in Table 21 below. With the exception of *fighting*, all of these words are statistically significant key words in and of themselves. There was potentially some, (additional) battle metaphors evident in the language used to describe the *BCOC* campaign, too, such as when the campaign is described as one that the Government *launches* or has *launched* (the battle metaphor being to launch an attack against poor cancer survival).

Table 21: Statistically significant collocates of cancer relating to battle metaphor in human interest stories and keyness of collocating word

Target word and collocation	MI	t-score	Keyness of collocating word compared to BNC written sampler
battle and cancer	4.32	5.70	LL=+162.49, n=95, LR=2.97
cancer and survivor	5.23	4.96	LL=+134.96, n=40, LR=6.32
battling and cancer	4.78	4.82	LL=+147.99, n=46, LR=5.79
beat and cancer	4.44	4.77	LL=+58.69, n=51, LR=2.22
fight and cancer	3.81	3.94	LL=+87.34, n=64, LR=2.50
cancer and battle	3.40	3.94	LL=+162.49, n=95, LR=2.97
aggressive and cancer	4.38	3.30	LL=+69.29, n=29, LR=3.99
fought and cancer	4.26	3.14	LL=+26.38, n=28, LR=1.94
cancer and survivors	5.02	2.91	LL=+30.75, n=16, LR=3.27
fighting and cancer	4.83	2.89	LL=+2.31, n=20, LR=0.57
battled and cancer	4.43	2.86	LL=+64.63, n=21, LR=5.40
survived and cancer	4.29	2.51	LL=+11.48, n=18, LR=1.51

Owing to the issues voiced by patients over the use of battle metaphor described in section 2.3, this issue was raised with journalists in the interviews. There were differing views amongst participants as to whether such language should be used. There were a number of reasons given for its use, including the interviewee believing it to be an accurate description of what the patient is going through and that its use portrays the case study as being stronger, not least because:

“...battle shows that these people, they're brave, you know, they're fighting. It

makes them look a bit...it makes them look stronger, you know, that they want to get over this and actually, in a way, it is more positive as well? You know, it shows that they fought, even if they died it shows that they battled it until the end, you know, they were determined to win it because they were wanting to get over the cancer so I think, I think that's maybe another reason why it is used.”
(P1 J).

Looking at the semantic tags that were statistically significant across the human interest articles, it is clear that this use of the battle metaphor was frequent. The semantic tags of *bravery* (LL=+171, n=126, LR=2.50), *trying hard* (LL=+89.75, n=359, LR=0.87), and to a lesser extent, *tough/strong* (LL=+13.73, n=109, LR=0.60) identify descriptions of people with cancer fighting a brave, courageous battle against cancer, as the examples below demonstrate; further examples are provided in Appendices 9.15-9.17.

<p>n 1 ; National Edition . LITTLE STAR ! ; ey have suffered . Instead they show the r and daughter have revealed how they unlop . Feeling good : Laura Meyer is a Wilson has revealed she has won her e toughest fight of our lives but you 're al cancer in February this year . But the</p>	<p>Courageous bravery battled battling battle strong resilient</p>	<p>Ellie , 6 , wins award for fighting cance of seven women who have vowed not to let cancer five times between them over 15 back to health . Daily Echo (Newsques against breast cancer . Rita , 58 , ma and we 'll do this ' . He took time off fr 36-year-old has fought back against the di</p>
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On the other hand, there were also examples from these semantic fields that are not so positive, highlighting instances where someone has fought, but not survived, their battle, or where winning is not possible.

<p>mpact on children , forcing them to show irl , 8 . Parents have paid tribute to a his late mother , Jean , who lost her ill her and there was nothing else to Rugby on Boxing Day , aged 55 , after</p>	<p>bravery courageous battle try battling</p>	<p>beyond their years . Treatment can last f eight-year-old girl who has lost her batt with the disease in 2005 , aged 67 . " or to prolong her life . Emily had loo kidney cancer . In 2007 Colin was refu</p>
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In addition, statistical collocations reveal that battle metaphors most frequently relate to instances where the individual has lost their battle, i.e., they have died. Indeed, *lost* and *battle* are strong statistical collocates (MI=6.92, T=3.14). There were no positive collocates of battle, moreover (such as *won* or *successful*). This is interesting given an assertion from one participant that newspaper editors are interested in stories that:

“...are going to give the readers hope rather than bad news.” (P10 E).

Yet, it would appear that people with cancer are described as trying to fight a courageous and brave battle, which they will ultimately lose. This links back into the idea of whether a battle metaphor reflects an individual’s experience and the way they would prefer to frame their experience (see section 2.3). Evidence of the contentious nature of the battle metaphor was found within the human interest stories, as the quotes below illustrate:

“My beef is people associating having cancer with being inspirational and **brave**, and I don't think those two things should be linked,’ she says. [...] I don't mind being called inspirational if I have inspired someone to do something good. **Brave** I hate, as I have no choice but to do what I can to survive.” (*The Independent on Sunday*. October 18th, 2015)

“We didn't feel **brave**, we felt utterly broken.” (*mirror.co.uk*. March 25th, 2016)

“I don't fight and battle cancer, cancer lives along with me. I have a life to lead, cancer just tags along” (*Herts and Essex Observer*, September 17th, 2015)

“I never thought about it in those terms. Yes, it can become a **fight** if you think you might lose it, but for me it was always just about getting better,” (*Belfast Telegraph Online*, September 10th, 2015)

“I don't feel like I'm **battling** cancer. I don't feel that I'm fighting cancer. I am simply being treated for cancer.” (*MailOnline*, October 12th, 2015)

Again, this was reflected in the personal view of some of the journalists. Some held views around battle language that included issues of “morality” (P3 JE), being “reductive” (P5 J) in terms of describing everyone's experience with cancer in the same way, and, in contrast to a previous quote, that a battle does not accurately reflect the patient's experience of cancer treatment.

“...although the model is of someone bravely fighting cancer, actually they're not fighting cancer, they're simply submitting to a process which is designed to fight cancer.” (P2 J).

“I think the problem that exists about it, is it suggests, you know, if you die of cancer it's some sort of moral failing. You've failed in your battle, or you've lost your battle, or, you know, which I think is a tiny bit unfair really.” (P3 JE).

“...it simplifies things [...] so people who have these diseases are not necessarily

brave and they're not necessarily...you know, they're many things other than that." (P5 J).

When asked directly about the use of battle metaphors in newspaper articles, journalists described how the battle metaphor reflects the "style of the paper" (P10 E), "journalistic cliché" (P3 JE) and being "a story-telling mechanism" as well as being a way to keep the story "simple" (P7 JPRE). Aside from constraints of the newspaper, there were perceived limits with regard to the English language itself; it was stated that there comes a point where, even if a journalist is trying to be careful about phrasing, that "there's only so much words you can use, aren't there?" (P14 J).

A further argument to support the use of battle metaphors was that, often, the press releases from some charities actually contain battle metaphor themselves, and the use of these words was seen as being, to some extent, sanctioned by them. Unlike the previous finding of the negative framing of statistics being identified in the press releases, however, there was no evidence of battle metaphor use, other than the word *launch* as mentioned previously, in the press releases associated with the *BCOC* campaigns investigated in this work.

"It is that epic struggle against this disease and that's...there's an element of laziness to it, but then how else do you tell the story? It needs drama for it to have interest." (P7 JPRE).

"The PR people for all of the cancer charities will normally send me things using that kind of battle language. Like, Cancer Research do it all the time, so that leads

me to believe...that would make me think that they don't object to it as much. They don't object to it because they're using it." (P5 J).

There was some evidence of the use of an alternative metaphors being used, although this was rare. In the human interest stories, the word *cancer* collocated with the word *journey* (MI=3.74, T=2.77) for example, and *journey* was also identified as a key word in the human interest stories (LL=+35.80, n=35, LR=2.04). However, the journey metaphor scored much lower than the battle metaphor, statistically speaking (see Table 21).

During the interviews, the research student suggested the use of the word *journey* as an alternative metaphor to participants. The journalists perceived this to be less favourable than *battle*, both on journalistic and moral grounds, which might explain the relative lower significance of the word *journey* (see Appendix 9.18 for full list of *journey* concordance lines).

"...even if you're going to be talking about cancer, you're again looking for the simplest words that encompass what you need to say. The journey is a bit metaphorical." (P14 J).

"Oh, I hate bloody journeys. I mean, seriously, everybody's on a journey. Every reality show, it's a flipping journey. No. Boring." (P7 JPRE).

"I mean, you know, it could be a journey into the grave, I mean, it's not always, but it just seems like a bland word for something which is an extremely serious event in someone's life and possibly represents the end of it." (P3 JE).

Of note in the quotes above is that while journeys were perceived to be metaphorical,

battles were not. This could perhaps be explained by the extensive use of the battle metaphor in the newspapers when discussing cancer, to the point where the language has become the norm (see section 7.6.2 in the discussion). As one participant stated, “that is the language” (P7 JPRE). In addition, a battle may not be perceived as a metaphor because of the journalists’ own views about what living with or being treated for cancer is like. For example, participant one stated that:

“I mean it is a battle, really, isn't it? When they're battling against cancer, fighting it, fighting cancer, so I think...no I think we just think that that's something that they are doing.” (P1 J).

There was some discussion around whether metaphors should be used at all, with one suggestion being that perhaps journalists should refer to case studies simply as being “treated for cancer [...] rather than it being a kind of a mark of either victimisation or pride” (P3 JE). The likelihood of changes being made to the language used is a separate issue and is discussed in the ‘scope for change’ section below.

Processes at the newspaper and headlines

To some extent, regardless of the individual journalist’s preference, the use of the battle metaphor may be mandated by the newspaper. Journalists described processes within the newsroom whereby their copy is looked at by “a second or third pair of eyes” (P1 J) in the form of news editors or subeditors, depending on the paper and the area of news that the journalist works in. The quote below explains the role of the subeditor.

“I'll be assigned a story to fit into a box and to make sure it's all legal, make sure it's all...there's no mistakes in it, it's, you know, usually we get something that's

far too long for the space that it's going to go in so I've got to, sort of, condense the story, keep the main thrust in there and, you know, comments from...comments that they've got from people, you know, we have to get a comment in, and then we have to write a headline, and then we have to do...we don't choose the pictures. That's done by the editors, but then we write the caption to go with the pictures.” (P10 E)

Journalists frequently commented that they knew that, if they tried to use a journey metaphor instead of battle metaphor, their subeditor would “change it” (P1 J), which also contributes to the explanation about the relative lack of use of the journey metaphor (see also above). Similarly, it was felt that, because the subeditor is not the final person who checks the story before print, an editor with a more senior position further up would make the same change if it got past the sub-editor. As described above, the headlines are written by the subeditor, and reporters felt that wording used here could frame the whole article differently than the reporter intended.

“So, yeah sometimes that can be an issue because sometimes they write a headline that, maybe, slightly doesn't convey the message of the story and then you get an angry phone call from somebody and you think 'oh, I didn't even write that'.” (P5).

“...none of us are experts in the field that the story's about. [...] we always do our utmost to make sure it's right, but yeah, I think...I do know that things have been lost in interpretation in the past. [...] anyone can get the wrong end of the stick, if you know what I mean.” (P10 E).

These comments are borne out to some extent by the corpus linguistic analysis. By removing the headlines from the articles and comparing them to the rest of the article text, it was revealed that, in the human interest stories, semantic fields of *Bravery* (LL=+40.52, n= 19, LR=2.87) and *Trying hard* (LL=+31.42, n=29, LR=1.86) were identified comparatively more frequently in the headlines than the rest of the text. It will be remembered that these semantic fields picked up on instances of case studies being described as *brave* and fighting a *battle* (both of which were key words in themselves in the headlines (LL=+29.03, n=11, LR=3.33 and LL=+50.82, n=19, LR=3.37 respectively). *Survivor* was also identified as a key word in the headlines (LL=+87.91, n=19, LR=5.22). This was also the case, albeit to a lesser extent for *kin* (LL=+26.46, n=83, LR=0.91), meaning that headlines frequently framed the article's case study in term of their status as a mother or father.

The implications of using battle metaphor

Journalists had differing views on whether a battle metaphor was specific to newspaper reporting or whether it actually reflected the way in which people with cancer speak. This is important to bear in mind when thinking about the potential effects of such language. Journalists described experiences of case studies being happy with how they are portrayed, as well as complaints about the language used. The main recurring point though was that the only views that should matter when thinking about what language to use is that of the reader and/or the public, and two sides of the argument are summed up by participant 4 in the extended quotes below.

“...when relatives of mine have had cancer, you know, I wouldn't say she's

battling cancer, I would just say 'oh she's got cancer'. So yeah, I think it is very particular to the newspapers that sort of language.” (P10 E).

“...if people with cancer really hated being called...being told that they're fighting a battle with it then I would want to know, but then I think people with cancer are such a wide and varied group, I'm sure they don't speak with one voice so it's kind of difficult to know.” (P5 J).

“I think we need to be careful we don't get too much into semantics. You know, cancer is a negative thing. We can pretend it's not and we can change our language, but we don't actually change our attitude very much. So, I steer clear of wars and battles, but I have used them, and I've used them recently, and patients use them all the time, so I think we have to be a bit careful it's not the journalist and the researchers talking about these things. I mean the other thing...a similar debate we have in health generally is suffer. Or diabetic. Or epileptic. You know, people will talk about 'you should be writing someone with diabetes', 'someone with epilepsy', 'someone who has asthma, it's not an asthma sufferer'. And I understand that, and I don't use the word suffer, but if you start writing that a lot of people start saying 'oh for heaven's sake, someone with diabetes is a diabetic', you know, we're getting bogged down in semantics here, it's becoming too PC, so a difficult one.” (P4 J).

This final quote is interesting and is somewhat of an anomaly given the implication, in this quote, that words do not shape attitudes. Not only does this contradict academic research as presented in the introduction, but it also stands out against comments of other participants who described why the language they use is important. It was acknowledged that journalists are “responsible for how language perpetuates through

the wider conversation” (P5 J). Others were aware of the emotional impact of language, stating that they do not want the reader to “get upset by the language that [they] use” (P4 J). One reporter went so far as to explain that they read their story back to their case studies to ensure that they are happy before it goes to print, although other participants did not believe this was necessary. There were also discussions about how language use varied between different newspapers, with tabloid nationals and regional papers having a separate style to the former broadsheet/quality newspapers, in general.

“I actually read back most of my stories that I write which are of a really sensitive nature. I read it back to the case study, which I know a lot of journalists don't do that, and they've got the attitude of 'why should we have to do that, it's our work', but I think that these people have sat down and bared their souls to us and their...we might be talking about someone so close to them who's died, their child has died, their wife, their husband or whatever, and I think that we need to be sensitive to that [...] the last thing I want is for them to open the paper and see something and be horrified by it when they're already going through a tough time.” (P1 J).

In [national newspaper] I would probably use...I would try to keep my language reasonably muted whereas if I'm doing [regional newspaper] I might use more adjectives and if I was writing about someone's experience try and make it more emotive and that sort of thing.” (P5 J).

The following section picks up on this point raised by participant 5 and explicitly tests whether there was a difference in adjective use between the regional and national

newspaper articles.

Adjective use in national and regional newspapers

Interestingly, given participant 5's comment, analysis of the part of speech of the newspaper articles collected would suggest no difference in the number of adjectives between national and regional publications. In the national articles (in which the total number of words was 62,231), there were a total of 3,544 general adjectives, which constitutes 5.7% of the words used, 179 (0.3%) comparative adjectives (e.g. *bigger, smaller*) and 79 (0.1%) superlatives (e.g. *biggest, smallest*). In the regional articles, which had a total number of 158,342 words, there were 8,187 general adjectives (5.2%), 440 comparative adjectives (0.3%) and 320 superlatives (0.2%).

Of the 30 most frequently used adjectives in each type of newspaper, around 50% were shared and these were related to *Be Clear on Cancer* messages, for example, *clear, early, public health* [in an adjectival position], or *important* (see Appendix 9.19). Amongst these shared adjectives, usage was very similar in both national and regional newspapers. The only observed difference was a slightly wider use of *new* in national papers, used to describe changes in someone's life. This was not observed in regional stories, which tended, instead, to describe *new* data or *new* campaigns. There were also a few differences in the usages of *likely*. Regional usage included descriptions of the likelihood of successful treatment and that women are more likely to flush the toilet without examining their urine for blood, while national papers commented on the likelihood of the cause of symptoms. Both talked about the likelihood of cancer and who is more likely to go to their GP. Whether these small differences are due to differences

between press releases or modifications to messages locally is beyond the scope of this work.

When looking at the top 30 adjectives appearing in both regional and national newspapers and comparing use between the two types of publications, it was found, once again, that usage was very similar. The biggest difference was in the word *encourage*, as this was related to the *BCOC* campaigns only in the regional press (for example “health officials are encouraging people to ‘look before they flush’”). There are only two uses in the national publications and these were unrelated to *BCOC*. This is potentially interesting given that the word *encourage* does appear in the national campaign press releases for kidney and bladder and oesophageal cancers (and to a lesser extent in the breast cancer in the women over 70 press release; see Appendix 10).

As the relative frequency of individual adjectives is so small, it is difficult to make any meaningful comments around whether individual adjectives are used more or less frequently in national or regional publications. Furthermore, some potentially interesting findings are explained by single articles repeatedly using the given word, thus inflating the frequency of that word. Investigation of these articles simply pointed to the increased likelihood of national newspapers featuring large, health-education-focussed pieces, which is not surprising. To conclude, the corpus linguistic analysis did not provide significant evidence for participant 5’s assertion that adjectives may be used differently in national and regional newspapers as it was only partially supported.

Guidelines

When asked about the existence of guidelines and training for writing about cancer,

journalists unanimously stated that they were not aware of any. The general rule seems to equate to them using their common sense as to what is acceptable, although they often seem to draw upon guidelines that exist for other conditions or symptoms where they are also applicable to cancer. When asked if they felt that a set of guidelines were warranted, the general consensus was that they were not, either because:

- “every cancer story you write is different” (P1 J)
- a story needs “your flavour” (P4 J)
- journalists are “swamped” with guidelines (P4 J)
- the newspaper has to sell and therefore “they will judge what they think will shift, ultimately” (P9 JPR) and
- cancer guidelines would relate to “an incredibly diverse range of different diseases” (P4 J).

In one participant’s opinion (P2), there is nothing special, nor particularly nuanced, about cancer as a news item and therefore guidelines would not be warranted. Some participants did see the benefit of examples of good practice, as opposed to formalised guidelines, as this would help to address the concerns of the readers who were the group whose concerns should be given greatest attention. It was also queried whether, if training did exist, managers would be prepared to let staff go because of “time constraints”.

“I have never had any training or been given any guidelines by anyone. I don't think. No. The only...I mean, what I use to shape my coverage is a mixture of

common sense, experience and advice, I suppose, from better, more educated people.” [this participant later gave examples of CRUK or oncologists] (P5 J).

“I am much more interested in what's regarded as...what's well-received and what's not. So, you know, good things and pitfalls. And then you're not telling anybody how to do anything. You're just saying, I mean for instance, going back to my example of diabetes, that one thing that really gets people's goats up, readers goats up, gets them upset, is confusion between Type 1 and Type 2 diabetes, so always be clear. Now you're not giving a guideline when you're saying that, you're just picking up on something that could save someone a bit of embarrassment.” (P4 J).

“It would be the kind of things that you would expect for any health coverage, that you would be expected to report accurately what is going on and ideally, I would think, do some background research into it, maybe question some of the claims and that sort of thing, although as I was saying, that's rarely done. It's not particularly difficult. You know, cancer stories aren't really any different to any other ones.” (P2 J).

Scope for change

The final aspect to cover relating to language use is the potential scope for change within the industry. The first thing to say is that participants did not necessarily always think about the language they use, and this was noted in terms of comments about journalists in general. On top of this, the perception was that the language used is “set in stone” (P10 E), particularly for tabloid newspapers and that changing that would be very

difficult. Having said this, it was commented that changes have occurred in the past, and participant 10 provides a good example of this in one of the quotes below.

“I think your questions are really good. It's made me think. You write about cancer all the time, but you don't consider what you're writing about.” (P14 J).

“...my sense is that the problem more is journalists don't really think about the words they've used, the language that's used enough, really, in this case, and that maybe there's been thought given to suicide and mental health and it would be useful for that to be extended to all serious medical conditions, frankly. And cancer with this whole battling thing, I think, might be, possibly, top of the list.” (P3 JE).

“...it would be like a big...changing the whole industry. I mean, there is a precedent of that, though, because the papers used to describe, you know [redacted] hospital, they used to describe it as a 'lunatic asylum' [...] but we actually now describe them as secure hospitals and we don't say that someone's been imprisoned there or locked up, we now say that someone's a patient there or is being treated there. So, there is a precedent.” (P10 E).

A slightly different view was posed by one of the press officers interviewed, who commented that they believed that concentrating on what the press do and do not pick up on is a “red herring” and that instead of trying to change things, “we have to deal with the media as they are” (P9 JPR), a point which will be returned to in the discussion (section 7.6.2).

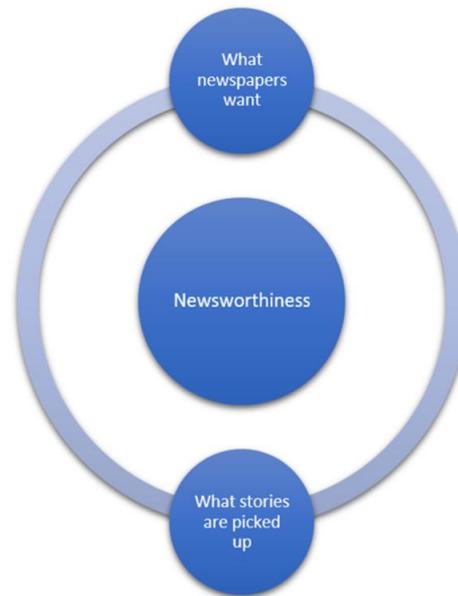
To summarise, this analysis identified consistent use of battle metaphor, particularly in terms of framing stories in this way through the headlines, and journalists' opinions on whether such language should be used was mixed. Regardless, it was generally felt that this represented the language of the newspapers, and that, at least for now, scope for change was limited.

6.6.13: Interim summary: language

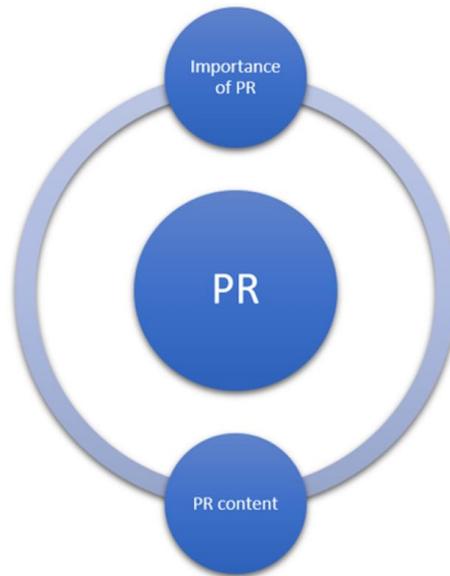
Analysis of the language of newspaper articles revealed that negative cancer outcomes and negative evaluations of treatments tend to be more pervasive than positive ones. This was particularly the case in the human interest stories, although cancer statistics are referred to in terms of deaths, rather than survival, across all article types. Family and relationships were a key part of the cancer stories analysed, frequently referring to individuals in terms of their family status. Friends and family were described as key for support, however, cancer was also framed as negatively influencing those people around the patient. Battle metaphors were found to be frequently used and, while opinions differed as to whether this was appropriate, processes and norms within journalism would appear to override the individual journalist's intentions in most cases. As such, scope for change is, at present, limited.

6.7: Chapter 6 summary

To summarise the results chapter as a whole, analyses revealed the following:



Newsworthiness is complex but there are some basic elements that will help a cancer story become newsworthy, such as relevance to the target audience and a news hook. Cancer awareness messages alone were not deemed sufficient to constitute a newsworthy story. Breast cancer stories were published more frequently than kidney, bladder and oesophago-gastric cancers and there appeared to be an increase in the number of articles published around the time of the campaigns.



It was acknowledged that **PR** can be key in getting news stories picked up. However, while the perceptions of press officers and journalists about what constitutes a story appeared to be similar, and there was indeed evidence of the *BCOC* press releases using frames that might be anticipated to increase newsworthiness, the journalists did not feel that the press releases they received were adequate.



The **story content** tended to lack key public health messages in both the human interest and campaign-specific articles, particularly in the breast cancer articles. Especially

noteworthy was the omission of the link between early diagnosis and survival. While press officers and public perception appear to be that newspapers are a key platform for dissemination of such messages, the perception of journalists was that newspapers are there to entertain, not educate. Online publishing may represent an opportunity for inclusion of more public health messages owing to more space. The case studies featured tended not to be representative of those most at risk of cancer, nor the target audience of the *BCOC* campaigns. Analysis of the **language** of the articles showed a tendency to focus on negative outcomes or evaluations of treatment, with frequent use of battle metaphors. In addition, family and kin were a major part of the stories analysed in terms of 1) family and kin as a source of support or 2) the negative effect of a cancer diagnosis on those around the patient. The results suggest that the intended campaign messages may change throughout the process of dissemination. Factors contributing to this, and newspaper representation of cancer in general, may include 1) the need to tell a story and simplify messages and 2) factors outside the individual journalist's control, such as norms and processes within journalism. The next chapter is the discussion, which will consider the findings in relation to the wider academic literature.

CHAPTER 7: DISCUSSION

7.1: Introduction

This public health PhD thesis aimed to examine the way in which cancer is represented in UK newspaper articles. It did this using an interdisciplinary, multiple methods approach that utilised corpus linguistic methods to further inform data collected using quantitative and qualitative methods that are commonly used within public health research. The representation of five types of cancer, chosen because they have been the focus of national cancer awareness campaigns, has been investigated in terms of the types of case studies featured, the presence of cancer awareness messages in the stories, and the language used. Potential reasons for this representation have been identified through the use of qualitative interviews with journalists and press officers. The findings will now be discussed and expanded on with reference to the literature, before the research student's reflections, strengths and limitations of the research, and implications of the work for public health experts and further research are presented in chapter 8.

Two of the main findings from the current study have been addressed by other researchers, and so are presented first in sections 7.2 to 7.4, before those findings that present an original contribution to knowledge are presented in sections 7.5-7.6. The original contribution to knowledge of the thesis as a whole is presented in later in section 8.7 after a consideration of how well the research question and individual objectives have been answered in chapter 8.

7.2: Frequency of reported cancers

Following the search of the Nexis database, breast cancer articles were the most commonly identified, which replicates the majority of findings in the literature review (MacDonald and Hoffman-Goetz, 2001; Hoffman-Goetz and Friedman, 2005; Stryker et al, 2007; Caburnay et al, 2008; Cohen et al, 2008; McDonnell et al, 2008; Slater et al, 2008; Cai et al, 2009; Jensen et al, 2010; Williamson et al, 2011; Konfortion et al, 2012; Henry et al, 2012; Konfortion et al, 2014). This finding is not surprising, given the consistency of this finding in the literature review across Western countries. However, this study also extends the finding to UK regional publications, which have been understudied. It is also true that breast cancer is the most common cancer in the UK (ONS, 2018), and that this is reflected in public perceptions (University College London, 2009) and therefore it might be expected that breast cancer be frequently reported on.

However, there are other potential influences that relate to newsworthiness. As identified in one of the interviews, an ideal health story – that is, one that is newsworthy - is one with wide-ranging appeal (see section 7.6.1 for a more general discussion of newsworthiness). In order to make a cancer story newsworthy, different aspects may be foregrounded (Turner, 2014). This was illustrated by one of journalists interviewed who described how the focus of a new cancer drug that is not available to patients may be framed in terms of its availability, as this is the surprising aspects of the story, rather than the promising effects of the drug. Kolker (2004) claims that breast cancer in particular has some unique attributes which allow it to be framed in multiple ways. These are: 1) gender equity, as it affects significantly more women than men, 2) disease seriousness, as it is the most common cancer, and 3) in terms of being damaging to the

family unit; a mother's cancer diagnosis may affect those around her, as well as the patient herself. The availability of such frames means that there are multiple potential stories that could be told with any one breast cancer story (cf. Bednarek and Caple, 2014), all of which have a strong human interest element – a factor which would be expected to make the story newsworthy, according to the journalists interviewed in the current study – and therefore potentially increasing the number of viable breast cancer stories.

The number of breast cancer articles published may also be influenced more directly by its prevalence. As was shown in the interviews, a local person with a story to tell is newsworthy; if the number of women diagnosed with breast cancer is higher than the number diagnosed with other cancers, there may simply be more women who wish to tell their breast cancer story. It is also the case that breast cancer is also in receipt of more research funding than other cancer types in the UK (NCRI, 2018; CRUK, 2018c). This could potentially lead to more published articles about potential breakthroughs or implications for cancer treatments. As identified in the literature review, stories about cancer research were frequently the focus of published newspaper articles (Jensen et al, 2010; Liu et al; 2010; Smith et al, 2010).

7.3: Cancer awareness-related content of newspaper articles

Similar to studies reported in the literature review (Canto et al, 1998; Donelle et al, 2005; Stryker et al, 2007; Moriarty and Stryker, 2008; McDonnell et al, 2008; Cohen et al, 2008; Caburnay et al, 2008; Atkin et al, 2008; Jensen et al, 2010; Al-Naggar et al, 2011; Jones et al, 2012; Kye et al, 2015; Kelly et al, 2016; Macdonald et al, 2018), the current study

found that the amount of content related to national cancer awareness messages in the non-campaign articles was low. These are the best articles to compare to the literature review as none of the studies cited in chapter 3 investigated campaign-specific articles.

The present study only looked at content that was relevant to the national *BCOC* campaign. This was a list of signs and symptoms, the population most at-risk, the benefits of an early diagnosis, and advice to go to the doctor if any suspicious symptoms are noticed (and to go repeatedly if necessary). These aspects were not widely investigated by authors cited in the literature review. Only three considered the presence of signs and symptoms (Canto et al, 1998; Hilton and Hunt, 2010; Kelly et al, 2016), however the cancer sites investigated were not the same as the current study. Canto et al (1998) and Kelly et al (2016) looked at oral cancer, whilst Hilton and Hunt (2010), examined stories about Jade Goody's cervical cancer. The proportion of articles in the current study featuring signs and symptoms was generally similar to the number reported by Kelly et al's (2016) UK-based study of national newspapers. They found that 8.4% of articles reported key signs and symptoms, compared with 8.8% in national articles in the current study (and 7.4% of non-campaign articles overall). Hilton and Hunt (2010) reported a lower figure of 2.8% presenting signs and symptoms information, however these stories were explicitly about Jade Goody and, as the authors highlight, these articles mainly focussed on Jade's life, unlike Kelly et al's study which contained less specialist articles and is therefore more similar to the current study. Canto et al (1998) reported a much higher figure of 44%, however their search strategy included words relating to specific risk factors which may have biased their findings towards more informative articles.

As the target audience for the *BCOC* campaigns are people aged over 50 years from lower socio-economic groups, the risk factors most relevant to the *BCOC* campaigns are socio-economic status and age. However, age has only been explicitly mentioned as a risk factor in the breast cancer in women over 70 campaign (CRUK, 2015). Only two studies cited in the literature review looked at either of these variables. Jensen et al (2010) looked at socio-economic status and found that just under 40% of articles mentioned this as a risk factor in a study of US newspaper articles. Macdonald et al (2018) looked at age in UK national newspapers and found that it was only mentioned in 10.1% of cases overall in articles published 2013-2014. The current study found a lower proportion of the national non-campaign articles described who was at risk of cancer (7.0% and 4.8% if regionals are also considered). The Macdonald et al (2018) study was the only study to break down the findings by cancer site, finding breast cancer stories reported on age in 8.4% of cases. The current study found a comparative figure of 7.3% in the national publications (and 5.9% if regionals are also considered).

In addition to the above findings, the current study has shown that key messages around going to the GP and the importance of an early cancer diagnosis were infrequently featured in UK newspaper articles. However, these were not evaluated by any of the authors cited in the literature review, so results cannot be compared.

Examination of the content of newspaper articles is important because existing health research has frequently linked higher symptom awareness with greater help-seeking behaviour (Sheikh and Ogden, 1998; Robb et al, 2009; Quaife et al, 2014; Morris et al, 2016). Interviewees felt that the public see newspapers as presenting an opportunity to raise awareness. This assertion is supported by others, who state that some consumers

believe that the mass media is the best source for raising awareness of cancer symptoms (Scanlon et al., 2006), cancer control (LiveSTRONG Foundation, 2007), and see the advantage of including educational content in coverage of celebrity cancer stories (Ashton and Feasey, 2014). It has also been shown that, while not always the most common, newspapers are still important information sources for the public for a variety of health issues, including cancer, especially amongst those who are not 'digital natives' (Carlsson et al, 2000; Beeken et al, 2016; Oh et al, 2016; Biddle et al, 2017; Haluza et al, 2017). Yet, the corpus linguistic analysis highlighted that there were multiple instances when an individual who was featured in a newspaper article was quoted as saying that they wished to raise awareness of cancer by telling their story, but the article did not then go on to include any specific cancer awareness information.

The interviews showed that newspapers are still seen as key targets for PR activity. While Taylor and Radford (2012) report that newspapers were targeted (in part) because they consist of long-form copy and it would be possible to retain key messages and the call to action in their original form, the results show that this was rare, which is a major issue for public health PR. Some key awareness messages were found to be missing, with a greater proportion of *BCOC* articles providing information about cancer symptoms than describing the benefits of early diagnosis (which was particularly the case for the rarer cancers investigated, namely oesophago-gastric and bladder and kidney cancers). A systematic review by Dubayova et al (2010) suggests that focussing on symptoms without accompanying information about the positive aspects of early diagnosis may increase levels of fear and, potentially, delay in presenting to the GP (Smith et al., 2005, Khakbazan et al., 2014, and Whitaker et al., 2015). There was evidence of some articles that mentioned the *BCOC* breast cancer in women over 70

campaign featuring case studies who were under the age of 50 years, which goes directly against one of the key components of that campaign.

The similarity index findings do not support the assertion that targeting newspapers will allow the campaign content to remain in its original form (Taylor and Radford 2012); the vast majority of content that was directly taken from the national press releases were quotes from either celebrity 'cancer survivors' or experts. This makes sense. A number of the journalists explained that they did not have relevant training to be knowledgeable about cancer and therefore would defer knowledge to an expert. Other researchers have also shown that experts are key informants for research-related articles (e.g. Wilson et al, 2010) and prevention-focussed articles (e.g. Atkin et al, 2008). The inclusion of quotes from experts may help to give weight to statements in the article by making them seem more authoritative (Machin and Mayr, 2012, p.82), or may contribute to the newsworthiness factor of eliteness as described by Bednarek and Caple (2014) through the inclusion of job titles.

The quotes most often used for the breast (from Professor Dame Sally Davis, Chief Medical Officer) and the bladder and kidney cancer campaigns (from 'celebrity survivor' Ian Lavender) did not include a statement about the importance of early diagnosis. While other quotes were provided in the press release that did include this message, they were used less frequently. Conversely, the most often-used quote in the oesophago-gastric campaign from Professor Kevin Fenton, National Director of Health and Wellbeing at Public Health England, did include a statement about early diagnosis (although this was omitted in some cases). It is not possible to say for sure why these

choices were made, but considering comments from journalists, it may be due to space limitations.

It is also important to note that most quotes included in regional publications were from local experts, rather than being taken from the national press release. The research student is unable to comment on how much influence Public Health England have over more local press releases as this was not explicitly investigated in the current study. There was some suggestion that regional newspapers may go to more local sources for press releases, both from conversations with press officers in local authorities and by tracking the sources of messages through Turnitin. Noteworthy was that a single local story on a local authority website that contained potentially blaming language was replicated in ten regional newspapers (see section 6.5.2).

7.4: Characteristics of featured case studies

To the best of the research student's knowledge, the only other study to have considered the characteristics of case studies in UK newspapers is Macdonald et al (2018). They found that 40% of non-celebrities featured in national UK newspapers were under the age of 40, while 44% were aged 41-60 and around 16% were 61 or older. While the age categories used in the current study differ slightly from those used by Macdonald et al (2018), the trend for reduced coverage in the oldest age category is consistent. It will be remembered that the pilot study on ovarian cancer also found similar results, with reduced coverage of case studies as age increased (section 4.6). Both the current study and Macdonald et al (2018) considered the characteristics of case studies across multiple cancer sites. However, the only cancer site that was consistent

across both studies was breast cancer. While the current study suggested that the ratio of younger to older case studies varied across different sites, the studies combined would suggest a consistent effect of older people, who are most at risk of cancer, not being featured as frequently as younger people.

The age of the case studies is important. The risk of a cancer diagnosis increases as we age (CRUK, 2016). Yet, studies looking at the risk perceptions of older women relating to breast cancer demonstrate that they do not believe themselves to be as at high risk as younger women (Mah and Bryant, 1992; Grunfeld et al, 2002; Moser et al, 2007; Fehniger et al, 2014), and this may have effects on symptom recognition amongst older people (Yong, 2008). Agenda-setting theory (originally McCombs and Shaw; 1972) would also suggest that persistent reports of younger women with cancer may skew public perceptions of who is at risk. If this is accepted, then the current study highlights that this is a potential concern; especially given that the overall proportion of case studies under the age of 50 years is around six times higher in the newspaper articles than national incidence rates (CRUK, 2018d).

The reason for younger people being featured more frequently likely links to newsworthiness. On the one hand, a cancer in a young person is statistically unusual, and therefore contains the elements of unexpectedness that would deem it newsworthy (Galtung and Ruge 1965; Harcup and O'Neill, 2017; Schultz, 2007; Hyde, 2018, CRUK, 2018d). It could also relate to younger individuals being deemed more attractive. Wignall (2008) suggests that in magazines particularly, but newspapers also, a case study being photogenic is a criterion for inclusion.

In terms of gender, case studies in the breast cancer articles were predominantly female, which is not surprising given prevalence rates amongst women, which are much higher than in men (ONS, 2018). There was a general trend for case studies to be male in the oesophago-gastric and bladder and kidney cancer articles. While it has been reported that men are more likely to be selected as sources or as actors in news stories (Zoch and Turk, 1998; Armstrong, 2004; Flaounas et al, 2013), the higher proportion of bladder, kidney, stomach and oesophageal cancer in men (ONS, 2018) may mean that journalists simply have a larger pool to choose from. This cannot be answered here, as this question was not explicitly asked during interviews, however it was suggested during the interviews that case study availability was a key factor in who gets selected.

The demographics of featured case studies may be related, in addition, to journalists selecting case studies who are more like them. For example, Armstrong (2004) found that, although the effect size was small, one significant predictor of a newspaper story featuring female case studies was a female author. Questions have been raised as to the socio-economic heterogeneity within UK journalism. For example, 55% are male and 96% are white and the number of university-educated journalists has greatly increased, with 98% of those recently coming into the profession having at least an undergraduate degree; this may suggest that they come from higher socio-economic groups, given the increasing cost of university education in the UK (Thurman et al, 2016). In line with this, the current study revealed that that the majority of case studies featured were from higher socio-economic groups, were males (with the exception of the breast cancer articles) and had names that are usually associated with an indigenous British population (although this is clearly a very crude measure of ethnicity). Armstrong (2004) suggests that the effect of case studies being similar to the journalist may reflect differing circles

of contacts, or, in relation to the finding that a significant predictor of a female case study being a female journalist, a conscious decision on the part of female journalists to redress the balance in male to female case studies.

Data from the National Readership Survey (2016) suggests that the representativeness of the case studies is also disproportionate to the newspaper reading population, whereby the split is approximately 55:45 in favour of ABC1 (higher socio-economic groups) individuals, compared with nearly 75:25 of case studies in the current study where socio-economic status could be estimated. The problem with this is not only the potential for skewing perspectives of who is at risk, but also that any quotes from the case study may be less likely to be persuasive or trusted if the case study is perceived to be unlike the consumer (see, e.g., Bochner, 1994; Kreuter and McClure, 2004; Del Marmol et al, 2009; Ashton and Feasey, 2014).

Social class may also be important when considering editorial reasons for a given story being published. Greenslade (2008) describes the case of two kidnapped schoolgirls in the UK and their respective coverage in the UK newspapers; Madeline McCann and Shannon Matthews. The McCann case received far greater coverage than the Matthews case. Greenslade posits that the lower socio-economic status of the Matthews family, along with a more 'unsympathetic domestic profile' of Shannon's mother, (in addition to being less photogenic), put them in an unsympathetic position as compared to the McCanns who were middle class doctors and therefore considered more 'respectable' (at least in the eyes of the middle class). As readers were thought to be less sympathetic to the Matthews case, the story received less coverage (but was nonetheless picked up by national and regional news outlets).

A similar consideration could be made for the preponderance of names in the data that are related to an indigenous, British population groups. A comment from an editor of a fashion magazine is potentially relevant here. With accusations of magazines being racist for featuring predominantly white models, they responded that, while Britain is a multicultural society, it is predominantly Caucasian. Therefore, the preponderance of white models is not surprising, even if not ideal (Gallagher, 2008). This logic could be extended to the ethnicity of case studies featured in newspapers. Indeed, a representative survey of journalists by Thurman et al (2016) found that identifying and producing news that will attract the largest possible audience was vital. This adds another layer of complexity for public health or charitable organisations wishing to provide appropriate case studies with their press releases. As described in the interviews, finding people who are willing to be photographed and given large amounts of exposure is not necessarily easy; socio-economic status and appearance may represent yet further conditions on someone being selected from an already small pool.

In contrast to the results detailing the language of cancer, which tends to be negative and relate to poorer outcomes, the proportion of case studies living with or beyond cancer was high overall, at nearly three quarters. However, it is unclear how this might interact with the language used in terms of its effect on reader perceptions of cancer, which may be an avenue for future research, (see section 8.9).

7.4.1: Use of celebrities

Evidence for the value of celebrities in telling a cancer story was somewhat mixed. In regional newspapers, in particular, the view was that a local person would sell a story (cf. section 6.6.1). Other newspapers, such as national redtop and midmarket

publications tended to be viewed as more celebrity-driven, and, for them, a young, female celebrity is an ideal case study. Yet, these are unlikely to be the same celebrities that are useful for the *BCOC* press releases, who would, ideally, represent the campaign's target audience. Indeed, the Breast Cancer in Women over 70 press release features quotes from former professional tennis player Virginia Wade and actress Barbara Windsor, while the Blood in Pee campaign press release features a quote from actor Ian Lavender, all of whom are of an older age group.

At the time of writing, it has been reported in the news that the Jade Goody effect (described in section 2.1.1) has disappeared, with fewer women attending cervical screening; (e.g., Burford, 2018; Coccozza, 2018) in fact, numbers of eligible women in all age groups being screened has shown a downward trend since 2011 (Screening & Immunisations Team, NHS Digital, 2017). Thomas Ind, a consultant gynaecological surgeon at the Royal Marsden in London quoted in a *Guardian* article (Coccozza, 2018), stated that in order to increase screening rates, there is a need for a celebrity ambassador for the screening programme who is 'high-profile'. A similar argument could be made for the *BCOC* campaign materials. However, the challenge for public health press officers is identifying a celebrity who wishes to be involved and is both a high-profile name and a representative of the target population (in terms of, e.g., age, gender, ethnicity, social status, etc.) This is both in order to target such messages at those most at risk and effect greater success (Rosenstock, 1966; Bandura, 1989; Bochner, 1994; deMarmol et al, 2009), and to ensure that public perspectives on those most at risk are not skewed by having atypical cases featured in the media/in public health messaging (Young et al, 2008).

7.5: The language of cancer-related newspaper articles

Moving on to findings that have not been presented in the literature review, the results showed that, in UK newspapers, cancer and associated statistics are often simplified and the language used is frequently negative as it relates to outcomes, evaluations, statistics, and treatment. This is despite the fact that most of the case studies featured in the articles were either living with or beyond cancer. Such negative collocations were found in both the human interest and campaign articles; in the campaign articles, this was often due to stories describing the number of people who die, rather than the number who survive. The results also showed that people are important in cancer stories, as evidenced by the frequent use of pronouns, and key words and semantic domains around kin, as well as their regularly featuring in headlines in order to frame the story. People may be referred to as sources of help or support, but sometimes the focus was on how problematic a cancer diagnosis can be for those around the individual diagnosed. These findings may also lend some support to the use of language to portray both personalisation and negativity as news values, as described by Bednarek and Caple (2014).

7.5.1: Negativity and potential links to fear

Findings that the language of cancer in UK newspapers has a tendency to be negative may have implications for consumer levels of cancer-related fear. It will be remembered that one of the reasons given for people not going to their GP with potential cancer symptoms is the fear of a cancer diagnosis (Smith et al. 2005; Dubayova et al, 2010; Khakbazan et al, 2014; Forbes et al, 2014; Whitaker et al, 2015; Paxman et al, 2017). Clarke and Everest (2006) concluded that the language of cancer in Canadian and

American magazines from 1991, 1996, and 2001 may exacerbate cancer fear at all stages of disease progression from prevention, through to treatment, and beyond. Some of the findings that accounted for this were very similar to the current study in that they found cancer was described in terms of fear and strong negative emotions at diagnosis, with frequent reporting of statistics (one category of which is the number of people who die), and the negative effects of cancer on friends and family (amongst other factors). For public health practitioners who wish to raise awareness of cancer, this represents the background language and framing with which any awareness campaign has to compete. While cancer is clearly a negative, life-changing event and nearly 164,000 people die from cancer every year in the UK (CRUK, n.d.b.), current medical evidence is that cancer is not necessarily associated with early death, particularly if an early diagnosis is made (WHO, 2018), and these messages did not come through strongly in the newspaper articles considered in this study. This thesis does not suggest that cancer should be portrayed as pleasant or seek to undermine the severity of a cancer diagnosis. However, the mismatch between the potentially fear-exacerbating language used to portray cancer and the key national cancer awareness messages is potentially problematic, and was, indeed, raised by some of the interviewees who work in PR (P13 in particular).

These negative messages may also contribute to fatalistic views about cancer at the cancer prevention stage, for example “everything causes cancer” (Niederdeppe and Levy, 2007) or in terms of survival, that is, “that death is inevitable following a diagnosis of cancer” (Miles et al, 2008, p.1872). As with fear, fatalistic views about cancer may contribute to later diagnosis, as they have been associated with lower attendance at screening (Miles et al, 2011), less engagement in preventative behaviours, such as not smoking, eating healthily and doing exercise (Niederdeppe and Levy, 2007), and a

perceived lower value of early diagnosis and greater fear of reporting suspicious symptoms (Beeken et al, 2011). They are also associated with avoidance of cancer-related information, possibly because of the expectation that it will contain information stating that cancer is dangerous and cannot be avoided or controlled. The challenge, therefore, is getting cancer information through to those with higher levels of fatalism (Miles et al, 2008).

While the most obvious solution here relates to changing the way in which newspapers write about cancer (as has been commented on in the past, e.g. Brody, 1999; Cooper et al, 2002; Rosenthal, 2017), this is not practical. As highlighted in the interviews, additional guidelines for journalists were not supported, either because of the view that journalists do not like being told what to do, or because of existing norms within journalism (which are discussed in section 7.6.2). It was also highlighted in the interviews that journalists may not reflect on their language use or the content of stories. As such, it cannot be assumed by anybody wishing to disseminate cancer awareness messages through the media that journalism will change. Instead, these are issues that have to be worked through or around, as, indeed, suggested by one of the press officers interviewed.

Not all negative connotations of cancer emerge from the background of news stories. As revealed by the journalists, press releases and cancer campaigns can influence their language choices. For example, one journalist (P5) stated that they had noticed the use of battle metaphor by CRUK in its fundraising campaigns, which reinforced the acceptability of this language in their cancer articles. It was seen that journalists wrote about cancer in terms of the number of deaths from the disease, rather than the number

of people who survive. This is a direct replication of the language used in national *BCOC* PR materials. This means that the PR activity associated with *BCOC* and similar campaigns may be inadvertently contributing to, and justifying, discussions of cancer in terms of negative outcomes owing to their re-use in newspaper articles.

The replication of PR content in newspaper articles is not surprising, as the interviews made clear that such contextual information is useful for, and liked by, journalists. The literature might be taken to suggest that this reflects more standard practice within the newsroom. For example, Lewis et al (2008) and Van Hout and Jacobs (2008), report that journalists' increased workload has led to an increased reliance on PR as a source for a story, with the potential for PR overriding traditional news values and affecting journalistic writing practices such that they are more likely to re-use content from the press release (see also section 2.4.2 regarding pressure on reporters to publish quickly and throughout the day). Lewis et al (2008) found that where the PR has come from a trusted source - which interviews with journalists in the current study would appear to suggest that Public Health England and CRUK would be - very few checks would be undertaken on the content. There were some comments to this effect in the interviews undertaken in the current study, although not all journalists agreed that they were always under extreme pressure to produce content and that public health PR may not be picked up at all as the press releases were not strong enough.

7.5.2: Battle metaphor

There was frequent use of battle and violence metaphors in the human interest stories, but evidence for other metaphors was rare, suggesting pervasive use. This interpretation was supported by the interviews with journalists. Analysis of headlines of

the human interest stories suggested that family and brave battles were frequently used to frame the story.

Use of battle metaphor when writing about cancer is contentious, owing to differing perceptions amongst patients as to whether they reflect how they would choose to frame their experience (Sontag, 1978; Katz, 2014; Granger, 2014; Demmen et al, 2015; Semino et al, 2015; Jardin, 2017; Falkingham, 2018). Some journalists were aware of the feelings of patients who prefer not to speak about cancer in these terms, while others thought battle metaphor to be either an accurate portrayal of what cancer patients are doing, or that it was a way of making them appear braver and more positive. Evidence from Semino et al (2018, p.100-125) and Media and PR at Macmillan (2019) states that using battle or violence metaphors per se is not necessarily negative. These works both indicate that different groups of people, and different individuals within such groups, use different metaphors to describe their cancer. These may vary over time and may represent empowerment or disempowerment depending on the context and topic under discussion. Semino et al (2018, p.147-152) also demonstrated that violence metaphors are not necessarily used by patients to the exclusion of others; they showed that patients may use violence and journey metaphors together, for example. However, there are other potential effects of such metaphors that are important for public health experts to be aware of, which is that the use of battle metaphor may be related to the public's engagement in cancer prevention, monitoring or treatment behaviours.

Hauser and Schwartz (2015), in a series of three experimental studies, found that framing cancer prevention messages in terms of battles might undermine the effectiveness of calls to action in campaign messages. In these studies, participants read

background cancer information, including scientific and statistical data about cancer development, who is at risk, and survival statistics. This information was either framed with cancer as an enemy or was presented neutrally, either with or without an 'imbalance' metaphor. Depending on the study, participants then either wrote down possible behaviours that they could engage in to either *fight against* or *reduce their risk of* cancer or responded to questions about their intended behaviours. Those who were exposed to the enemy frame were less likely to list, or state that they would engage in, restrictive behaviours, such as limiting alcohol or stopping smoking. There was no increase in the number of more active preventative behaviours, such as eating more healthily or being more active, that were listed or intended to be engaged in. The enemy metaphor also appeared to have no effect on intention to undergo screening or diagnostics, nor for treatment intentions. These effects were attenuated when the restrictive behaviours were themselves being presented using an enemy metaphor. However, there was no advantage noted. Together, the authors suggest that the results demonstrate that battle or enemy metaphors may be damaging to some awareness raising and prevention attempts and therefore harmful for use in public health.

The *BCOC* press releases avoid such battle metaphor, and campaign-specific articles do not appear to use them significantly, which is positive. Conversely, the linguistic analysis of the human interest stories shows that battle metaphor is prevalent, even in cases where the intention of the article, or the featured case study, may be to raise awareness. Hence, the use of such metaphors may undermine some attempts within the article to raise awareness or encourage certain preventative behaviours, regardless of its level of educational content. The Hauser and Schwartz (2015) studies would support this interpretation, as the information that participants read was factual but not presented

in the form of a campaign, so is similar to informative/contextual parts of the newspaper stories analysed in this thesis.

The prevalence of the battle metaphor may be explained by it being a conventional way to speak about cancer, as well as other life challenges in English (Semino et al, 2018, p.99). However, the extent to which a metaphor retains its metaphorical meaning may vary by population group. For example, Semino et al (2018, p.153) provide an example in the form of the word *pathway*. For patients and carers, *pathway* may have a metaphorical meaning (e.g., being related to a cancer *journey*). For healthcare professionals, the word *pathway* may refer to different routes through various agents or departments of care. The metaphorical meaning of *pathway* may therefore have been lost for healthcare professionals owing to norms within their field. In the present study, there was evidence that at least some journalists felt that journeys were metaphorical, whereas battles were not, because that is what they deemed patients to be doing. As with Semino et al's example, this might indicate that norms within the field of journalism influence what language is seen as normal and conventional. This normalisation of battle metaphor was reflected in journalist comments about not thinking about the language used, despite acknowledging the importance of being considerate towards cancer patients' opinions around language use.

One other, final, observation regarding the use of metaphors is that the pervasive use of battle and violence metaphors in newspapers may be indicative of what aspects of the cancer experience are featured at the expense of others. It has already been demonstrated that journey metaphors were not favoured by the journalists interviewed, and neither was there much evidence for their use in the newspaper

articles, despite their conventional use in the English language (Semino et al, 2018, p.128). However, there are other metaphors that patients may use when talking about their cancer. Semino et al (2018, p.83-97) report on findings from their corpus linguistic analysis of semi-structured interviews and online discussion fora comments from patients with advanced cancer, people caring for someone with cancer, and health professionals. They identified ten types of metaphors used by these three groups of people across their datasets, namely: animals, journey, machines, obstacles, openness, religion and the supernatural, restraint, sports and games, violence and wholeness. Violence and journey metaphors have already been discussed in this section. Regarding the eight remaining metaphors, the research student used the illustrative examples provided by Semino et al (2018) to see whether there was any evidence for their use in the newspaper articles analysed in this study. There was no indication of any of the remaining eight metaphors in the dataset.⁹ Therefore, the newspaper articles analysed would appear to not only use language that may be deemed contentious, i.e., battle/violence metaphors, but also present a very selective picture of the way in which cancer patients may choose to speak about their cancer, or a limited perspective on the cancer experience. For example, the metaphor of wholeness, described by Semino et al (2018), may involve evaluations of the self, and acknowledgements or descriptions of times when one is not in a state of normality or someone is 'not themselves'. If it is the case that such aspects of the cancer experience are less visible in the print media, this could theoretically contribute towards an individual who has had a cancer diagnosis

⁹ The only exception was the statistically significant word *beat* which Semino et al use as part of the sports and games metaphor. In this thesis, *beat* was included as part of the battle/violence metaphors. Semino et al (2018, p.90) and Seale (2001) both highlight that there is some overlap between sporting, struggling, and violence metaphors in terms of an antagonistic relationship between the disease and the patient that ultimately leads to the patient winning or losing. Hence, the aforementioned critique of such metaphor would stand regardless of whether *beat* is deemed an example of a battle, as violence, struggling, or sport-related.

feeling blame or stigma (cf. Sontag, 1978) if they perceive their cancer in this way but are not exposed to the similar experiences of others.

7.6: Understanding the representation of cancer

The final aim of the current study was to contribute to current public health knowledge by examining why newspaper articles about cancer are written in the way that they are. As detailed in chapter 3 (section 3.4.3), there has been considerable criticism of the way in which newspapers report cancer. Existing research in to news production (cf. section 2.4.2) has highlighted the complex network of influences on the development of a news story. However, the extent to which these findings can be applied to UK newspapers publishing cancer-related newspaper stories and articles originating from public health cancer campaign press releases specifically is unclear. The findings generated from the interviews undertaken in this thesis have provided some insights into the processes and decisions that go into creating such newspaper articles. This is of use to public health professionals trying to utilise newspapers to spread cancer awareness messages, as it highlights why certain messages are included or omitted, and why particular language is used. Such knowledge may help future campaigns to work more effectively with, or around, these processes in order to create better press releases, greater coverage, or more appropriate messages.

The main findings were around news values and processes and/or norms within journalism, which are now discussed in turn.

7.6.1: News values

The two most consistent findings in terms of what journalists are looking for in a news story are a “news hook”, such as being new or somehow spectacular, and suitability for the target audience. The lack of such a news hook was suggested as a reason why the *BCOC* campaign press releases were not frequently picked up. Case studies were deemed very important as a contributor to newsworthiness as they may be used in order to make a story more appealing, emotional, or relevant. This was reflected not only via discussions with journalists, but also through the corpus linguistic findings that highlighted extensive use of pronouns and descriptions of case studies in terms of their familial relationships. Similar results were found by Aggarwal et al (2014), who interviewed European cancer journalists, finding that cancer was a topic of public interest and that personal experiences of cancer was the aspect of a story of most interest to readers.

The findings in the current study mirror key newsworthiness factors described in the newsworthiness taxonomies of Galtung and Ruge (1965), Schultz (2007), and Harcup and O’Neill (2017), namely, currency (which was also picked up in the use of the word *new* in regional papers to denote new data or campaigns), relevance, conflict (e.g., a patient needs a cancer drug to which they do not have access) and being unusual. The three taxonomies referred to were all developed after consideration of different news topics, namely foreign news (Galtung and Ruge, 1965), newspaper lead stories (Harcup and O’Neill, 2017) and analysing a Danish newsroom (Schultz, 2007). They are not cancer, or even health, specific. This study has therefore highlighted that the common newsworthiness factors that apply to these news stories would also appear to be relevant for cancer-related ones.

7.6.2: Norms and/or processes within journalism

The second major finding relating to why newspaper articles are written in a particular way relates to norms and/or processes within the newsroom. While the literature suggested a very complex set of influences on newspaper production (cf. section 2.4.2), not all of these factors were evident in the discussions with journalists. One topic that was absent from the results section, for example, is politics. The participants interviewed did not feel that politics was relevant in their production of the articles of interest in this study; this line of questioning was dropped from the interviews because of the constant nature of this response. Social media was, similarly, barely mentioned and this was in the context of a source of stories, rather than the effect on the content of the article.

Other factors, such as the need for revenue were thought to be important, in this case, in the context of the purpose of the newspaper. A distinction was made by some of the journalists interviewed between the purpose of the newspaper being to inform, rather than to educate. Education was sometimes viewed as a form of preaching, a term which could be interpreted as giving “moral or religious advice in a self-righteous, condescending, or obtrusive way” (Oxford English Dictionary, 2019) and therefore potentially damaging to revenue streams (cf. Allern, 2017). Other, related topics included the daily ‘tone’ of a newspaper, as a balance between good and bad news is necessary for newspapers to keep their audience (see also Allern, 2017). This is potentially interesting given the findings relating to negative language (see sections 6.6.12 and 7.5.1). Such comments likely refer to more overt demonstrations of negativity, but this was not further investigated in the interviews. The importance of

online journalism was also a key aspect in the interviews, and it was revealed that there were differing publishing requirements for print and online journalism. Stories may be published online, but not in the print edition, or there may be information omitted from the print edition because of space restrictions.

This distinction is key within journalism, and in real terms it means that the role of the reporter is to provide the facts about a particular happening or story, but not to provide consumers with the knowledge to *understand* them (Dunwoody, 1992, p.83; italics added for emphasis). The distinction between informing and educating has been the basis of much discussion and debate between journalists and scientists within public-facing blogs (see, e.g., Zivkovic, 2007 for an overview), and may be the basis for some criticisms of journalists and the quality of newspaper reporting on health matters made within academic publications as described in section 3.4.3 (Houn et al, 1995; Nichols and Chase, 1995; Brody, 1999; Cooper et al, 2002; Senior, 2008; Rosenthal, 2017).

As described in section 7.5.2, battle or violence metaphor was recognised by some participants as potentially problematic and some reporters actively chose to avoid such terms. However, this was one example of language use that was influenced by journalistic processes. Reporters frequently felt that, if they were to use a different metaphor, such as a journey, this would be changed by the subeditors owing to the accepted reporting style of the newspaper. Similarly, the headline may be changed by a subeditor in such a way that oversimplifies the story or makes it (unintentionally) misleading. This is as close as participants got to reporting any attempts at controlling content by the publishers, perhaps because they did not see the stories of interest as

being political. In fact, only one participant reported anything approaching the existence of an editorial line, and this was related to a non-cancer story with a political angle.

While the language used to describe cancer has been debated (see, e.g., Sontag, 1978; Frank, 1997; Katz, 2014; Granger, 2014; Demmen et al, 2015; Semino et al, 2015; Jardin, 2017; Falkingham, 2018), discussions with journalists did not seem to suggest that norms within newspapers are likely to change any time soon. Journalists did not seem to be aware of any guidelines for writing about cancer, and they did not appear to favour the creation of the same. Indeed, the research student has been unable to find any guidance specifically for journalists working in the UK who are writing about cancer. This is not to say that there are no guidelines available internationally. Guidance from Wagstaff with the European School of Oncology Media Team (2014) is aimed at journalists working across the European Union. It aims to educate journalists about cancer and describes some pitfalls and suggestions around good practice. For example, the guidance suggests caution around reporting risk, and that there is a place for newspapers in promoting debate around cancer funding. It describes how the media can be a place for those with cancer to have their voices heard and be an information source for consumers. However, it does not go so far as to advocate for this and there is no discussion of the language of cancer. Conversely, guidance published in Australia by the Cancer Institute New South Wales (2019) does make recommendations surrounding language and picks up on some of the points raised during the interviews in the current study. It advises against the use of battle metaphor, makes clear the importance of avoiding umbrella terms of cancer and instead focussing on specifics, and avoiding terms such as *cancer patient*, instead suggesting *people with cancer*.

Despite the lack of explicit guidelines in the UK, there is evidence that UK publications have given some consideration to the language of cancer. News outlet style guides demonstrate that the concerns of readers can influence preferred language use in that publication, reflecting the comments from the journalists that the consumer's voice is most important when deciding on language use. For example, *The Guardian* style guide (Marsh and Hodsdon, 2015-2016) entry for sexuality simply contains the following quote from a reader:

“...your style guide should state that homosexual, gay, bisexual and heterosexual are primarily adjectives and that use of them as nouns should be avoided [...] I would like to read that someone is ‘homosexual’, not ‘a homosexual’, or about ‘gay people’, not ‘gays’. Lesbian is different as it is a noun which later began to be used adjectivally, not the other way round.”

Relating specifically to issues of health, *The Guardian* states that their aim is to: ‘...use positive language about disability, avoiding outdated terms that stereotype or stigmatise’, however there are no specific entries for *cancer*, nor terms such as *health*, *sickness*, *illness*, or *medicine*. The guide also presents a list of preferred terms, some of which are relevant to discussions with journalists about descriptions of people who have a cancer diagnosis. For instance, *The Guardian* style guide recommends avoiding the terms *suffering from*, *afflicted by*, *the handicapped* or *the blind*, instead preferring terms such as *person who has*, *person with*, or *disabled people*.

The research student has been unable to identify instances specifically related to cancer in the (few) style guides that are publicly available. However, three entries are of note. *The Telegraph* (2018), in their banned words list, includes the phrase *doctors fought to save*, that is, an example of a battle metaphor used in terms of the treatment of a

disease, although not specific to cancer. An experienced *Daily Mail* subeditor, Margaret Ashworth, has published an independent style guide, aimed at supporting new journalists. She states that terms related to *courage* and *bravery* should be used carefully, and only when someone has overcome their fear in order to actively do something. As such, surviving an operation or a car accident does not constitute bravery. This line of thinking can be extended to cancer and does indeed reflect the concerns of writers such as Katz (2014) and Granger (2014) in particular, in that having cancer is not a choice, and being brave does not influence how long the patient will live with cancer. The third style guide entry of note is featured in the *Press Gazette* (Ponsford, 2013), a trade magazine dedicated to the press that provides news, information and support to the journalism industry, with the aim of helping the industry to carry out its work more effectively. Their in-house style guide features a small 'banned' list of terms, which features the phrase *cancer battles*. There is perhaps, then, the beginnings of some of the issues highlighted by this work being at least considered by UK newspapers. One potential avenue for increasing awareness of the issues relating to how cancer is written about may be through cancer charities, such as CRUK or Macmillan. Such organisations are seen as trustworthy by participants and as able to sanction journalists' use of particular language (P5). However, these organisations' own guidelines do not currently extend to advice to journalists and their internal style guides do not mention issues such as metaphor or how to describe people with a cancer diagnosis. They instead focus more on keeping language clear, concise and free of jargon (Macmillan Cancer Support, 2012; CRUK, 2017d).

Following the comments from some journalists about precedent being set in other areas in terms of changing newspaper reporting, but also the lack of desire for further

guidelines, it is potentially useful to move beyond cancer and look at other areas where reporting is potentially contentious. Two such examples are the areas of suicide and mental health. Numerous studies have looked at the extent to which newspaper reporting of suicide (Nutt et al, 2015; Creed and Whitley, 2017; Utterson et al, 2017; McTernan et al, 2018) and mental health (Thornicroft et al, 2013) 'adheres' to published guidelines. The results indicate that there is generally relatively high adherence, although there is variation amongst publications and there is a tendency for at least one guideline not to be followed in any one article (Thornicroft et al, 2013; Nutt et al, 2015; Creed and Whitley, 2017; Utterson et al, 2017; McTernan et al, 2018). Naturally, the guidelines in place for suicide and mental health journalism differ substantially from what might be relevant for reporting on cancer, however there are two similarities of note: signposting and language.

The first relates to guidelines around inclusion of signposting material for anyone who is considering, or is at risk of, suicide or who would like help. This is perhaps the guideline most similar to those that could be suggested for cancer; i.e., providing details for further information or signposting readers to their GP. Interestingly, out of all the guidelines investigated in the studies of suicide and mental health, the inclusion of signposting information was consistently poorly adhered-to, generally being included in around 30-40% of articles (Nutt et al, 2015; Creed and Whitley, 2017; Utterson et al, 2017). This finding supports the content analysis of the current study, that health advice on what to do in a given situation is infrequently reported. It might be assumed that reasons for this are similar to reasons given by journalists in the current research when discussing cancer. For example, this information may be omitted due to space limitations or not being a key aspect of the story and that these conventions may

override guidelines. Therefore, signposting may not be a suitable candidate for inclusion in any potential future guidelines.

The second suicide and mental health guidelines of interest is around language use. In this case, as intimated by one of the participants (P10) who described changes in descriptions of psychiatric hospitals in newspaper reporting, preferred language use appears to be relatively well adhered-to. Suicide and mental health reporting guidelines include avoiding the use of sensationalised or dramatic language (Nutt et al, 2015; Creed and Whitley, 2017; Utterson et al, 2017; McTernan et al, 2018), or pejorative language (Creed and Whitley, 2017; Thornicroft et al, 2013). The proportion of articles that follow guidelines on language use for suicide and mental health was, generally, between approximately 75% (Creed and Whitley, 2017) and 88% (McTernan et al, 2018). In addition, Thornicroft et al (2013) noted a significant reduction in pejorative language in newspaper reports of mental health over a four-year period compared to the baseline period before the guidance was made available. However, Thornicroft et al (2013) suggest that the change is unlikely to have occurred as a result of the guidelines alone, instead suggesting that the change occurred via increased awareness amongst journalists of public demand for articles to represent mental health in a more positive way. This, again, is in line with comments from some of the journalists interviewed, who suggested that they wish to use language that the public – and people with cancer in particular – would support. Having said this, there was one exception to the mostly positive findings about language use, which relates to the terms used to describe people who have died via suicide and the act itself. Nutt et al (2015) found that around 50% of articles used terminology deemed to be outdated (such as *commit suicide*) or referred to people who had died as *victims*. Parallels may be drawn here with cancer *survivors*

and *victims*, which, as interviewees in the current study described, may be used as a story telling mechanism or to portray a case study as actively fighting and being brave.

Overall, findings from these studies and the content of newspaper style guides, coupled with the feelings of journalists interviewed, might suggest that future attempts to modify language use through examples of good practice and consumer preference have the potential to be successful, at least in some publications. However, this may be a long-term goal and be more successful in some areas than others owing to journalistic norms.

From the examples provided throughout this section, it is clear that newsroom norms and expectations may override the intentions of the individual journalist, and therefore public health has to, as one participant stated, "...deal with the media as they are" (P9 JPR).

CHAPTER 8: REFLECTIONS, IMPLICATIONS AND CONCLUSIONS

This chapter will outline how well the study met the posed research question and objectives, what has been achieved and what questions remain. The chapter will begin with a consideration of what has been achieved with regards to the research question, before considering each of the objectives in turn. The original contribution of the study will then be stated, before the implications for public health practice and future research are considered. The chapter will conclude with a consideration of some more personal achievements and an overarching conclusion of the thesis.

8.1: Answering the research question

The research question posed was: How do journalists/media professionals talk about the process that leads to the production of cancer-related articles and how does this relate to the representation of cancer in newspaper reports?

According to Nilsen (2015), the way in which potential barriers and facilitators to adopting an intervention (in this case the public health PR relating to the *BCOC* campaign) are examined is often problematic, with a general reliance on survey questionnaires and the inherent influence of the researcher's preconceptions. Conversely, this interdisciplinary study utilised multiple methods including qualitative interviews, corpus linguistic techniques and quantitative content analyses. Key to answering the question therefore was the successful integration of the findings from multiple methods (quantitative and qualitative), that are traditionally used in the fields of public health and corpus linguistics. This was done using the approach that Moran-

Ellis (2006) termed 'following a thread'. In section 4.4, a question posed by Bryman (2007) about the effective use of multiple methods was presented. Namely:

"Has my understanding of my quantitative/qualitative findings, been substantially enhanced by virtue of the fact that I also have qualitative/quantitative findings, and have I demonstrated that enrichment? If the answer is no, it is difficult to see how the researcher can have conducted an integrated analysis beyond the bare minimum."

Using this as a measure of the effectiveness of integration, the research student believes that this has been done successfully. Without the qualitative findings from the interviews, it would not be possible to explain the quantitative findings from the content analysis, nor to consider existing norms within journalism that are necessary when considering potential suggestions for improvements and their feasibility. That is, any suggestions put forward are more likely to reflect 'real world' problems, have 'real world' applications and be more feasible and practicable (Ledford, 2015; Rylance, 2015; also see section 4.2.1); as Anthes (2015) states, without some knowledge of the context in which a recommendation or suggested implementation is made, it is likely to be less successful.

The integration of findings has been aided through the use of the 'following a thread' approach to analysis and the process of structuring the results chapter into a single narrative. Moran-Ellis (2006, p.54) describe the benefits of 'following a thread' as:

“allowing an inductive lead to the analysis, preserving the value of the open, exploratory, qualitative inquiry but incorporating the focus and specificity of the quantitative data”.

In terms of the analytical approach, combining corpus linguistic approaches with more qualitative approaches is mutually informative, creating multiple entry-points and paths through the analysis, which may generate questions, test hypotheses, identify potential themes for further investigation, and identify references to other texts (Baker et al, 2008). While Baker et al were referring to a synergy between corpus linguistics and critical discourse analysis, the same benefits can be observed here. For example, examination of the adjectives used in the newspaper articles was investigated purely because of a comment by one of the participants (P5), which suggested that adjectives might be used more frequently in regional newspapers. The corpus linguistic analysis of adjectives in fact showed that, in this sample, this comment was not strongly supported. While corpus linguistic data suggested that symptoms and awareness were key factors in the articles, a content analysis revealed that these references to key public health information were not explicit, as the amount of educational content was seen to be low. The use of Turnitin and WMatrix highlighted that quotes are the most likely part of a press release to be picked up, and that, as the message spreads, some framing techniques used by the press officers may be lost before they reach the newspaper.

Regarding the approach to writing the results chapter, Braun and Clarke (2006) advise that writing is an integral part of thematic analysis, rather than just something that happens at the end of a project. The research student certainly found this to be true. This project generated a lot of data, and the process of trying to write a single narrative

helped to focus the research student's attention on data that could, firstly "*mutually inform*" or "*debate*" with each other (as suggested by Bryman, 2007), but also on the data that was more immediately relevant. There were many occasions during the writing of this thesis where a finding was thought to be 'interesting', particularly within the corpus linguistic data. However, as the research student has learnt (with regular reminders from the supervisory team), an interesting finding is not necessarily an important one. As such, the combination of 'following a thread' (cf. Moran-Ellis, 2006) and constructing a single narrative has contributed to the story but also served to guide analysis towards aspects most pertinent to the research question. This approach has therefore resulted in findings that are grounded in the data, driven by participant responses, and more extensive than would be possible using survey methods alone. It has also been possible to quantify (to some extent; cf. Baker et al, 2008) participant comments from the qualitative results through corpus linguistic and content analyses, triangulate findings in order to generate a single overarching narrative and utilise qualitative interview findings to explain more quantitative data (see Greene et al, 1989 and Collins et al, 2006), resulting in findings with real-world applicability.

8.2: Understanding the process of writing a cancer-related newspaper article.

The first objective of this work was to understand the process that results in the final newspaper articles through interviewing journalists and those producing press releases. The results of this study were able to demonstrate the reasons why journalists approach their work in the way that they do and the importance of news values, norms and news production factors within journalism as they relate to cancer-related newspaper articles.

Key to this objective is collecting sufficient data from key informants, that is, determining whether the study had sufficient information power (Malterud et al, 2015).

In determining this, the concept of information power asks the researcher to consider:

- the study aim
- how specific the characteristics of the participants under study are
- the existence of established theory
- quality of dialogue
- analysis strategy.

As these considerations cover a number of aspects relating to whether this objective has been achieved, they will now be considered in turn.

8.2.1: Study aim

The interviews undertaken were explanatory and aimed, initially, to identify why cancer is represented in a particular way in UK newspapers. They also aimed to illuminate the types of articles that newspapers are interested in, the dynamic between the newspapers and press releases, and why press releases are written in the way that they are. This is a relatively wide aim, in that it is not just focussed on one aspect of the production of a newspaper article, rather, it is the entire process. It also considers a wide range of newspaper types, from left-wing to right-wing, national to local publications, redtop to broadsheet newspapers and online and print journalism. From the information power perspective this suggests that a larger sample is needed to be able

to fully cover the aims of the study. On the other hand, the study is only interested in stories about one particular topic, i.e., cancer, and one specific public health campaign, which does mitigate this somewhat.

8.2.2: Specificity of study sample characteristics

Target participants for this study were, firstly, reporters who had experience of writing about cancer. Ideally, they would have experience of writing about the *BCOC* campaigns. It was necessary to obtain the views of journalists from both national and regional newspapers, and preferably, from broadsheet and redtop newspapers as well in order to gather insights from a range of publications, which might be expected to have different editorial policies. Likewise, the study was interested in press officers who worked for public health or charitable organisations who had experience of disseminating cancer-related press releases. If possible, this would include those relating to the *BCOC* brand. As the interviews continued, the importance of speaking directly to subeditors and editors was raised, making it necessary to attempt to recruit subeditors and editors with experience of working on cancer-related articles. Again, knowledge of the *BCOC* campaign was preferable.

In this regard, the participants recruited were, at first glance, moderately close to the specified ideal. Not all participants had written articles based on *BCOC* and the sample did not cover all types of newspaper. Specifically, there was a lack of contribution from current writers of national midmarket and redtop newspapers, and current editors and subeditors. From the concept of information power, this would mean that a somewhat larger sample size is required. However, the major strength of the sample is their experience. As demonstrated in Table 9 (see p.188), a number of participants had

experience of working in different roles, i.e., they had previously been editors, reporters or subeditors. Others had moved from journalism to PR or vice-versa. Many had worked for multiple newspapers of different types. This meant that they could provide information outside of their current role, and understand, and comment on, the perspectives of multiple parties within a single interview. A small number of journalists had explicitly written *BCOC* campaign articles. All had written about cancer in some other context. A small number had cancer-specific medical knowledge that they could use in their arguments. One had been involved in some very high-profile cancer stories. It was possible to recruit both participants who had been working in journalism for decades, as well as some who were just starting out in their careers. This brought experiential and recent academic knowledge to the interviews. In terms of PR, it was possible to recruit two participants who were explicitly involved in the *BCOC* campaign (no more information is given as it could be potentially revealing). In these cases, the knowledge provided could not be any more pertinent to the issues at hand. Others were involved in different public health or cancer charity organisations and put out their own proactive and reactive PR. Yet others were public health specialists in local authorities who both received national materials and had been involved in producing their own for a local audience. In the research student's opinion, the strength of the sample lies in their experience and work history. At this point, it is necessary to comment on some of the issues encountered during recruitment, as this has influenced the constitution of the sample.

8.2.3: Issues with recruitment

The make-up of the sample was heavily determined by a number of factors. The first was a lack of journalist contact details. While the original intention was to make use of

snowballing techniques, this did not offer any successful paths to recruitment. Leads offered by the supervisory team or people known to the research student dried up quite quickly. This meant that a lot of time was spent trying to track down potential interviewees. One approach used to try to identify journalists was to look at the authors of the articles included in the corpus. It was very rare that a direct email address was provided, meaning that the research student had to try to track down the journalist through other means.

Unfortunately, many local and regional newspaper websites do not provide contact details for the journalist who wrote the articles. Even where it was possible to obtain a list of current newspaper staff, the contact details were often out of date or simply not provided. This was similarly the case for health or charitable organisations, in which press officers were targeted. LinkedIn profiles also rarely contained any personal contact details to follow up. It was not possible, moreover, to approach the majority of potential participants using LinkedIn directly because of the user's privacy settings; it was not possible to send a direct email unless a connect request was accepted. Unsurprisingly, nobody accepted these requests. Basic Google searches were also used to try to identify potential participants, but the same barriers were encountered.

The next issue was non-response. This applied to all participant groups but editors more so (perhaps understandably due to their workload). The majority of emails sent were not replied to. Of those that were, many were declinations to take part, most often down to time constraints. Difficulties were also encountered even when informal agreement to participate was reached, either because it was impossible to schedule a

mutually convenient time, later correspondence was not replied to, or, in one case, the potential participant moved job before a time could be scheduled.

A final consideration is the type of person who did respond and demonstrate a willingness to take part. The research student noted that one national newspaper in particular was over-represented in the work history of participants. Furthermore, this particular newspaper was mentioned once or twice during interviews as being perhaps more open to some of the issues discussed, such as using journey metaphors in place of battle metaphors. Writers for some other major national newspapers with very high readership have not been represented in this study, despite concerted effort on behalf of the research student. It could also be assumed that those who consented to discuss their working lives in such a manner might have specific reasons for doing so, such as being generally more reflective or having an interest in cancer as a subject. The sample of press officers and communications people was more successful in that it was possible to identify and interview individuals with directly relevant experience.

To conclude, there are both strengths and weaknesses of the sample of individuals interviewed for this work. On balance, the research student feels that it would have been beneficial to have had more input from newspaper editors and journalists for some, specific, newspapers. However, this is mostly compensated for by the fact that those interviewed had a wealth of experience of writing for different newspapers, knowledge of newspapers they have not personally worked at through their contacts, and previous work history of different roles (including as press officers, journalists and editors). All participants had the relevant experience of the issue at hand to be able to answer the posed questions and inform the issue under study. Combined, this would

suggest that a sample size on the smaller side would be sufficient. The experience of the participants also contributes to the findings being transferrable to other journalists and publications in the UK.

8.2.4: The existence of established theory

According to the concept of information power, a smaller sample size is required if there is an existing theory upon which to build the findings. The purpose of these interviews was explanatory and based upon previous quantitative findings as well as an informal discussion with a journalist at a local newspaper. While these are not a theory per se, it does provide a background from which to work, and existing findings on which to build. Therefore, a smaller number of interviews could be expected to be needed in order to triangulate or build on the other results.

8.2.5: Quality of dialogue

The research student is mostly happy with the quality of the dialogue. The majority of participants spoke openly and for a considerable time about their work. The research student made sure to explain their background and what they were hoping to achieve from the interviews so that discussions could remain relatively focussed, yet the breadth of topics discussed demonstrates that there was enough 'space' for interviewees to bring up issues that they felt important and not be overly constrained. All participants were asked at the end of the interview if they felt that there was anything they wished to bring up that the research student had not asked. All participants were sent the questions in advance. This was based on two assumptions: that they were likely to have a busy schedule, and that they would like to prepare so that the interview took less time. It was not obvious that any of them had read the questions in advance.

There were two slightly weaker interviews. In one, the respondent (a journalist) admitted that they had their own agenda when discussing the issues at hand. That is not to say that the interview did not reveal useful information, but that there was less of it. As such, some portions of their data were not directly relevant. The second poorer interview was with a sub-editor. At the time, the interview appeared to go well. Certainly, a lot of useful information was obtained. However, upon closer inspection of the transcript, the interviewee did not appear to come up with many new ideas. They often agreed with the question or issue under discussion. This could simply be because the information given to the research student by previous interviewees resonated with their experiences, but the research student would perhaps feel more comfortable had they spoken a bit more independently. Conversely, one interview with a press officer appeared, at the time, to be very difficult, with the participant not really wanting to talk. This resulted in the shortest interview, with which the research student was quite disappointed at the time. However, upon re-listening, the research student has realised that this is likely to be due to this interviewee's ability to be very concise and to think carefully before answering, as they did, in fact, generate one of the most informative interviews.

8.2.6: Analysis strategy

Finally, the analysis strategy refers to whether the study is interested in experiences across cases (multiple participants) or within a single case (one interview analysed in great detail). Clearly, in this study, the analytical strategy was cross-case necessitating multiple participants. While not strictly part of the information power framework, it is also worth reiterating here that a second coder developed their own coding scheme

independently which was checked against the research student's own coding scheme and a reflexive diary was kept throughout the analysis process. As described in section 5.3.9, the reflexive diary enabled the research student to become aware of their own biases and preconceptions. This led to major changes in the coding framework which allowed the work of the journalists to become the primary focus of analysis, rather than the public health aspect of the study.

8.2.7: Summary of reflections on information power

To summarise the reflections of information power, the research student argues that the interviews have moderately high information power owing to:

- focussed study aim,
- high quality of the majority of interviews,
- wealth of knowledge and experience of the participants,
- existence of relevant prior information.

This would suggest that a moderate sample size is necessary to be confident that sufficient information power has been achieved. A sample size of 14 and over 10 hours of audio is therefore likely to have been sufficient to answer the aims of the qualitative study.

8.2.8: Objective 1 conclusion

The first objective of the study has been achieved, producing a rigorously analysed, in-depth understanding of how journalists approach the production of cancer-related newspaper articles at a variety of newspapers in the UK. The process of developing PR materials and the interplay between PR and journalism has also been addressed both

with reference to public health and cancer messages in general and to the *BCOC* campaign specifically. This informs the real-world application of the research and has highlighted which issues from the news production and newsworthiness literature are relevant to current study. This is necessary information for public health practitioners seeking to utilise the media to spread cancer awareness messages.

Future research could build on these findings. If resources allowed, more targeted recruitment of journalists from national newspapers not represented in this study, including editors, would allow the findings to be checked and would increase confidence in the transferability of these results. Further, as section 2.4.2 demonstrated, newsroom ethnographies are a valuable research methodology, and it would be helpful to see how a specific press release travels through various newsrooms and to discuss the various decisions made during this process with key actors. This may highlight whether there are any discrepancies between what journalists say they do and what they actually do (Mays and Pope, 1995).

8.3: Identifying the demographic characteristics of people featured in cancer-related newspaper articles in the UK.

The second objective was to identify the demographic characteristics of case studies featured in cancer-related newspaper articles in the UK. Findings suggested that people featured in newspaper reports tended not to be representative of those most at risk of cancer. The biggest threats to being able to answer this objective effectively are whether the pool of case studies was representative of those featured in all cancer-related news stories and whether coding has been done effectively.

8.3.1: Representativeness of case studies

Stories featuring case studies were chosen because news stories featuring the personal experiences of others tend to be more vividly recalled and/or tend to generate more discussion, thought and reflection among readers than other, more scientific, coverage (Entwistle et al, 2011). There is also evidence that the characteristics of the people featured may be important in terms of the extent of influence a story may have on a consumer (see, e.g., Kreuter and McClure, 2004; Marlow et al, 2012; Myrick et al, 2013). Owing to this, stories were only included where the individual had actually received a cancer diagnosis, as these were the most explicitly relevant articles.

A random sample of breast cancer articles was taken as there were approximately ten times as many articles about breast cancer than the other cancer sites and the research student was concerned that the higher number of breast articles may distort the overall findings. However, whether the final sample is representative of all breast cancer articles, and therefore case studies, is unknown. It is also true that other types of stories that feature case studies could be expected to influence reader perceptions. For example, stories about people who have undergone preventative mastectomies (as indeed the Angelina Jolie effect has demonstrated; Evans et al, 2014, 2015; Desai et al, 2016; Raphael et al, 2016; Evers et al, 2017; Freedman et al, 2017; Guo et al, 2017; Roberts and Dusetzina, 2017), false positive diagnoses, or stories where cancer is not the main focus but is mentioned in relation to a case study.

8.3.2: Effectiveness of the coding scheme for demographic data

Regarding the coding scheme, this was developed inductively, initially from the pilot study (see section 4.6) and was subsequently added to where necessary during the main study. The inductive nature of the coding means that it was developed directly from, and is therefore grounded in, the data, rather than being decided *a-priori* on the basis of existing theory (Elo and Kyngäs, 2008). Further, the coding scheme for demographic data was checked by one of the supervisory team during the development of the ovarian cancer pilot, and subsequently added to where necessary during the main study. However, it is also the case that not all newspaper articles provided clear demographic information in written form. As articles obtained from Nexis are text-only, any demographic information contained within photographs or other multimodal content has been lost unless it was also written in captions.

As a side note here, analysis of photographs may also help to illuminate whether the case studies featured were of an indigenous population, as their names might imply. This was not anticipated as an outcome of the thesis and as such was not operationalised during study planning. The observation of case study names only came near the end of the research process, however it is worthy of future investigation owing to evidence that messages in a newspaper story may be deemed more positive and more acceptable if the case study featured is similar to the consumer (Bochner, 1994; Kreuter and McClure, 2004). There is also some evidence of differential effects of media reporting and health campaign-specific messages on different population groups (Del Marmol et al, 2009; Lancucki et al, 2012). Such research may be able to generate richer findings regarding which population groups have the potential to be more greatly influenced by newspaper content.

8.3.3: Objective 2 conclusion

The second objective has been achieved in terms of demographic information reported regarding people featured in UK newspaper stories who have received a cancer diagnosis of breast, oesophago-gastric, bladder, kidney (and as evidenced from the pilot study (see section 4.6), ovarian) cancers. While this does not represent every cancer story that may inform reader perceptions, these stories are the most explicitly relevant to the aims of the PhD thesis. All cancer sites investigated have been featured in national awareness campaigns, making them key to national stakeholders. Based on an inductive content analysis that is grounded in the data, the study provides a picture of the kinds of people who are perhaps more likely to be featured in the UK print media and the types of demographic information presented about those people. From this it has been possible to determine that there would appear to be differences between the demographic characteristics of people most likely to get cancer in the UK and those most likely to appear in cancer-related stories in UK newspapers. This information is useful to public health practitioners as it may inform future message development or case study selection, particularly if used in combination with the findings from objective 1.

Future research should check these findings against other cancer sites. Owing to the lack of images available in the Nexis database, future research may also benefit from incorporating multi-modal analysis of published versions of newspaper articles to take into account any demographic information which can be gleaned through published images.

8.4: Considering how educational these cancer-related articles in UK newspapers are as they pertain to key public health awareness messages.

The third objective was to consider how educational cancer-related articles in UK newspapers are as they pertain to key public health awareness messages. The results suggested that more general newspaper articles do not contain many key public health messages, but even within those articles explicitly about the *BCOC* campaigns, key elements of the campaign messages were missing. Issues key to the success of meeting this objective are broadly similar to those of the previous objective in that quality of the coding and the representativeness of the corpus are important factors.

8.4.1: Effectiveness of the coding

As with the previous objective, the coding scheme was developed iteratively through the key messages of the *BCOC* campaigns and the ovarian cancer pilot study, checked by one of the supervisory team at that time, and subsequently added to where necessary during the main study. As such, the coding scheme is grounded in the data and is explicitly relevant for the objective at hand.

8.4.2: The corpus

The corpus was generated with the help of the Nexis database. Nexis provides articles from both online and print copies of newspapers. As highlighted in section 2.4.2, as well as in the interviews, this is important, because there is a move towards online publishing, particularly in regional and local newspapers. As such, the corpus reflects this shift, which is positive. Articles were selected for inclusion following a process not unlike that of a scoping review, which involved obtaining all potential articles, scanning

the title and article to see if it should be included, before making a final decision when reading the articles in-depth in order to undertake analysis. This approach should ensure that all relevant articles published within the time period have been included. However, it should be noted that this process was undertaken by the research student alone, meaning that it is possible that some articles were erroneously excluded.

There are two potential issues that should be highlighted. The first was the aforementioned issue of the random selection of non-*BCOC* breast cancer articles, which means that it is unknown whether the final sample is representative of all breast cancer articles. The second relates to issues with the Nexis database, from which articles were obtained.

The Nexis database

The Nexis database was used to identify the articles that comprised the corpus. The database contains hundreds of UK regional and national publications (LexisNexis, 2018b). In theory, this should allow for a relatively generalisable picture of newspaper reporting across the country. It should be noted, however, that Nexis coverage is not complete. Personal correspondence¹⁰ with Nexis revealed that they gain and lose the rights to multiple publications daily and that articles may be overwritten if corrections are published.

¹⁰ On 27th February 2016, the research student noted that their search had returned more hits than it had in the past, despite the search and date parameters being identical. An email was sent to Nexis customer support to identify why this might have happened and if it was possible to identify the new articles without searching through thousands of results and comparing manually. The response can be found in Appendix 11

At the time of writing (February 2019), the number of UK newspapers contained in the Nexis database is 705. This means that, in addition to the national publications, around 68% of the 1,043 local newspapers in operation in the UK (Mediatique, 2018) are represented.¹¹ The implications of this are that there may be hundreds of articles that have been published that were never included in the Nexis database, which have therefore been missed. A second implication is that even an exact replication of the searches reported in this thesis may result in slightly different numbers of articles (owing to the changing rights that Nexis have to hold the articles), which could translate into slightly different findings.

While there is no way to easily track which publications have been included in the Nexis database and which have not, the included articles do represent more than two thirds of UK publications and use of Nexis is perhaps the best option available when trying to get an overview of general coverage. Certainly, many other authors referenced within (e.g., Dixon-Woods et al, 2003; Atkin et al, 2008; Cohen et al, 2008; Stryker, 2008; Jensen et al, 2010; Konfortion et al, 2014; Niederdeppe et al, 2014) have used this approach.

8.4.3: Objective 3 conclusion

The third objective examined the extent to which UK newspaper articles about people who have had cancer or about the *BCOC* campaign feature national cancer awareness campaign messages. With the same caveat as objective 2 around the corpus not containing all cancer sites, this objective has been achieved. The coding was explicitly relevant as it was grounded in the data and the *BCOC* campaign messages, it was

¹¹ Although this number is falling according to subsequent reports, for example, Kakar, 2018b

checked during the piloting stage, and rigorous methods, similar to that of a systematic review, were used to obtain the newspaper articles. The sample was taken from a database representing over two thirds of relevant publications and reflected the contemporary shift towards online publishing. It has been possible, for the first time, to see the extent to which regional newspapers in the UK report cancer awareness information, but perhaps more importantly for public health professionals, this aspect of the thesis has highlighted which messages are more likely to be reported and suggests that quotes may be an important mode of campaign message dissemination within newspaper articles. It has also highlighted that the assumption stated in Taylor and Radford (2012), that targeting such newspapers with campaign materials will result in the campaign call to action being maintained, was not supported in the current study. Future research could examine a wider range of newspaper articles in order to see whether findings relating to the educational content of articles can be generalised to all cancer-related stories, just those reporting on some cancer sites, or indeed, particular types of story.

8.5: Using corpus linguistic methods to explore the relationship between journalists' accounts of the process of writing about cancer and the representation of cancer in newspaper reports.

The final objective was to use corpus linguistic analyses to explore the relationship between journalists' accounts of the process of writing about cancer and the representation of cancer in UK newspaper reports. The results demonstrated that journalists' decision-making process is influenced predominantly by norms within journalism and, for the most part, that scope for change is limited. As with the previous

objective, the success of answering this objective is partly influenced by the corpus, the strengths and weaknesses of which have already been discussed in the previous section. However, there are two further issues of particular relevance to the corpus linguistic element of the analysis, which are the fact that articles in the Nexis database are provided in plain text format, as well as the analysis itself.

8.5.1: Plain text format

The articles in the Nexis database are provided in plain text format, therefore any formatting or images have been lost. According to Lemke (2011, p.82), these are factors that may have contributed to the meaning of the article. For example, aspects such as font or paragraphing help to convey meaning. Images used may help to establish the frame of the article (Nelson et al, 1997). Photographs can be framed physically through a camera lens, but also as a construction of reality as seen by the photographer (Parry, 2010). Photographs may then be used by newspapers but without the photographer having a choice in how their image is presented, or framed (Meiselas, 1988, p.33). Factors such as how close or far away the people are, whether close-ups are provided of body parts, or whether faces can be seen may all affect image framing (Parry, 2010) and this may be used by newspapers to alter or reinforce the framing of an article. In other situations, the context of the article may alter the meaning of the image. For example, O'Donnell (2013) showed that, historically, the American press has been able to use images to establish different cultural groups as the outgroup either through explicit reinforcement of cultural stereotypes or highlighting particular groups of people as being somehow different.

As relating to the cancer articles of interest here, many different types of images may be used. For example, the case study may be pictured before, during, after, or physically undergoing treatment, looking ill, looking happy, or partaking in life events. Some examples are provided here for illustrative purposes. An article published on the *Manchester Evening News* website on 13th April 2018 (McMahon, 2018) featured a story about a 28-year old woman who has had two cancer diagnoses and is planning on having a baby using a surrogate mother. The story features five images, all of which feature the case study smiling or posing for the camera in images that appear to be from their social media accounts, except for one which shows the effect of chemotherapy on her hair; in this picture it is not possible to see her face. In all images that feature her partner, both individuals are smiling, except for one image, which is placed at the part of the story which deals with treatment. In this picture, the patient is posing, while their partner has a neutral expression. Conversely, an article published on the website of the *Liverpool Echo* on 2nd July 2017 (and subsequently updated on 5th July; Belger, 2017) was about a local man who was diagnosed with lung cancer after responding to a letter inviting him to a check-up and has since recovered. The case study is a barber; all three images in the article relate to his work, whether being photographed in his shop, holding barbering equipment, or an image of the outside of the shop. All appear to be professionally taken. Campaign articles similarly take different approaches. An article about lung cancer on the website of the *Liverpool Echo* on 15th July 2016 (Clay, 2016) about a lung BCOC campaign featured an image of unhealthy lungs (not specifically lung cancer). *The Guardian* website featured a story about the BCOC campaigns as a way to raise awareness of cancer in older people on 5th December 2013 (Meikle, 2013). It featured an image of an older couple dancing, which was mostly blurred but with their held hands in sharp focus. A *Target Ovarian Cancer* campaign was the focus of an article on *The*

Independent website on 16th June 2013 (Dobson, 2013). This story featured a picture of a scientist sitting in front of a screen looking at a series of graphs.

Even in this very small set of examples, the variety of potential images that could be used in a cancer story or article about a cancer campaign is clear. The research student has had no training in multimodal analysis, but some observations could be made about how an image of diseased lungs may discourage people from reading an article, or an image of a scientist may give a story more credibility. This might change the framing of the article for the consumer, or alter their focus, the context, and their perception of the article. In this thesis, it was decided to retain image captions in order to ensure that there was at least some consideration of framing attempted through the use of images. However, this is still considerably less than would have been obtained had images been included and a multi-modal content analysis employed.

8.5.2: Analytical approach

As previously described in section 8.1, the research student would argue that the 'following a thread' approach to analysis has facilitated the analysis of journalists' accounts and the content of the newspaper articles. Regarding the corpus linguistic analysis, the approach taken was critical, meaning key words and semantic fields were only considered for inclusion after manual checking of the relevant concordance lines. As a result, many key words/semantic fields that were highlighted as being statistically significant by WMatrix were not included in the results; to have included them would have been misleading. The interdisciplinary nature of this study and the public health background of the research student is also relevant here. The research student is not a linguist by background. However, they received training and expert guidance in utilising

WMatrix and in carrying out corpus linguistic analytical techniques. While true that it is possible that there may have been nuances or subtleties that that were not picked up on that a linguist might have done, the public health approach used when undertaking analysis means that the issues identified were pertinent to the cancer campaigns in question.

8.5.3: Objective 4 conclusion

The fourth objective was to explore the relationship between journalists' accounts of the process of writing about cancer and the representation of cancer in newspaper reports. This has been achieved by analysing the language of newspaper articles using WMatrix as part of a wider 'following a thread' approach to analysis. This allowed the research student to determine how article content, including educational messages, were presented, and for journalists' assertions to be tested. As stated previously in section 8.4.2, the corpus was developed from a database representing over two thirds of relevant publications. The approach to corpus linguistic analysis was rigorous and critical and appropriate training was provided to the research student. The public health context of the thesis could also be argued to make the issues identified through the corpus linguistic analysis more pertinent to public health professionals who may wish to apply the findings to a 'real-life' scenario.

While a focus on the text of the newspaper articles would be expected following corpus linguistic approaches (see section 5.2.1), the addition of multimodal analysis to understand visual framing techniques would enrich further the findings of the study. This would require copies of included articles to be obtained from online newspaper websites or from print copies in order to analyse paragraphing, font and images. Future

research may consider having both a public health and a linguistics expert undertake corpus linguistic analyses to ensure that all potentially useful results are considered.

8.6: Summary of strengths and weaknesses

To summarise the methodological achievements of the thesis, the research student proposes the following strengths and weaknesses:

Strengths:

- Successful integration of research methods resulting in rich, multi-source and mutually-informative data.
- Potential for real-world applicability.
- Expansion of findings to regional newspapers that have not been widely studied in the UK.
- Rigorous methods of newspaper article selection developed from over two thirds of all relevant publications.
- Cancer articles analysed may be those more likely to influence perceptions.
- Cancer sites investigated are those relevant to national stakeholders.
- Good quality interviews with expert informers.

Limitations:

- Causal effect of newspaper representations on consumer perceptions has not been investigated.
- Single researcher.

- Only five cancer sites investigated – other cancer sites may be associated with different stories.
- Some articles that could contribute to cancer perceptions excluded, for example, those about cancer scares or preventative surgery.
- Loss of context from formatting and images.
- Some limitations of the Nexis database.

8.7: Original contribution of the study

It was shown in the literature review (see chapter 3) that the content of cancer-related newspaper articles has been of interest to public health researchers across the world owing to the potential for these articles to influence public awareness of cancer. However, despite the theoretical importance of language in contributing to consumers' perceptions, none of the studies identified looked at the language used in the newspaper articles investigated, which is a gap addressed by this research. It cannot be said that the methodological approach used in this thesis is unique per se, as corpus linguistics have been utilised in a health context before, as have content analysis and qualitative interviews. However, the strength of this approach is that it is interdisciplinary and takes advantage of multiple contexts and viewpoints. For the first time, it is possible to see how regional newspapers in the UK, in addition to national newspapers, report cancer awareness information, both in terms of their manifest content and the language used when reporting on people who have cancer and national cancer awareness campaigns. It has been possible to begin to assess whether assumptions about the spread of cancer awareness messages through newspapers via press releases are appropriate. It is also possible to understand where and how

messages may change, why these decisions are made with explicit relevance to stories about cancer, and which aspects of the news production literature are most relevant to cancer stories about people and cancer awareness campaigns.

Given evidence that around 50% of people read a regional newspaper every week (Ofcom, 2013; 2014), this thesis incorporated both regional and national newspapers, unlike the majority of UK-based research, which increases the applicability of the findings. As such, the original contribution to knowledge is not only in terms of addressing gaps in the literature, but also in terms of the potential to move public health research into cancer message communication forward using analyses informed by corpus linguistics.

Aside from the implications for future research resulting from methodological issues described previously, the findings also have implications for public health practice and for future research directions. These are now described in sections 8.8 and 8.9 (following).

8.8: Implications for public health practice

There are three main implications for public health practice. The first implication is that, contrary to assumptions, it is not necessarily the case that targeting newspapers will allow the campaign call to action to be retained in its original form (cf. Taylor and Radford, 2012), nor will an article necessarily report all key messages of the campaign. The second is that in the process of disseminating a public health message through newspapers, there are multiple points along the journey at which the message may

change (cf. gatekeeping theory, Lewin, 1947; ethnographic and qualitative studies of news production, such as Breed, 1955; Van Hout and Jacobs, 2008; and Aşlk, 2019; the message flow model, Davie and Crane n.d.a). This may occur before it leaves the public health organisation, with local authority teams, reporters, or editors. The changes to the message may be as a result of simplification, news values, subtle changes to language or replacing case studies or quotes to those of more relevance to the target audience. The third implication is that current *BCOC* campaign messages are often working against contrasting messages that are more frequently reported in newspapers. These contrasting messages have a tendency to use different language than the campaigns, and present cancer in a more negative light than contemporary medical opinion. Such language has the potential for reinforcing patient fear, which is a known barrier to attending the GP with potential cancer symptoms (Smith et al., 2005, Khakbazan et al., 2014, and Whitaker et al., 2015).

Given this, the next question is how change might be effected. As stated in section 3.4.3, Russell (1999) highlighted that improving the way in which cancer risk is reported is a long-term project requiring commitment from both health experts and journalists. The research student suggests, having completed this thesis, that many of these arguments could still be made today. While one of the interviews undertaken as part of this PhD did provide one example of good working relationships between PR and newspapers (a local hospital that now gets most of their press releases picked up; P14), it is not particularly feasible, nor insightful, to simply suggest closer working between organisations and newspapers. Nor would it be to suggest that all press officers should train as journalists in order to give them more insight into newspaper reporting, which was felt to be beneficial by those press officers interviewed who had such experience.

Instead, these implications for public health have, in turn, implications for future avenues of research. The research student would suggest that this could focus, in part, on some changes to the production of press releases, alongside other avenues for research, which are discussed next in section 8.9.

8.9: Implications for research

The following section outlines possible future direction for research. The first directions for future research discussed are additions to the current approach taken that might help to clarify some findings. This section then turns to suggestions for future research based upon potential changes to public health press releases. These suggestions are based upon the findings of the current study and the existing literature.

8.9.1: Improvements and additions to the current research design

The biggest improvement that could be made to the current research is checking what consumer perceptions of cancer-related articles are in order to test some of the assertions made throughout this thesis. The intention from the outset was to include such a study in this work, however, time constraints prevented it from being included. Despite evidence of newspaper influence on reader attitudes, opinions and behaviours (cf. section 2.4.1), making claims about direct effects is problematic (cf. section 2.1.3). To the best of the research student's knowledge, how consumers actually interpret the sorts of articles featured within this work, and how much educational content they may pick up on has not been fully investigated. This could be examined through experimental manipulation of newspaper content, similar to the studies of Landrine and Corral (2015) and Nicholson et al (2008), who looked at disparity framing in Black populations (see

section 2.4.1) and how this influenced consumer perceptions of the articles and their intended future screening behaviours. This is perhaps the most important next step for research, so that the findings and conclusions of this thesis can be checked against how actual consumers view the articles.

The results appeared to show a trend towards more cancer articles being published during the campaign period and for those articles published both during, and six weeks after, the campaign period to contain more cancer awareness messages (see section 6.6.2). As this observation is based on small numbers, it would be worth checking this finding across a greater number of cancer sites and iterations of the campaign. If found to be consistent, further interviews with journalists may help to illuminate whether this is a conscious decision, whether the existence of the press releases in some way cues the journalist, or editorial staff, to include/retain more messages, or whether there is some other mode of action.

Future studies of this type could also address some of the other limitations of the current study by examining a wider range of cancer sites and a greater variety of cancer articles.

8.9.2: Changes to press release framing

Moving on to wider implications for research, one potential avenue is changes to BCOC press releases. There are two areas in which changes might be beneficial. The first is changing the framing of cancer statistics. The results demonstrated that cancer statistics tend to be framed in terms of death rather than survival and that many of the negative collocations relating to cancer came from replication of these statistics. It might be that

this is a relatively quick and simple change that could have wide-reaching implications for the portrayal of cancer, at least in articles relating to cancer campaigns.

The second avenue of research into changing press releases is acknowledging the fact that the *BCOC* campaign message is different to what people may be used to hearing (i.e., that cancer is associated with negative outcomes and that young people with cancer tend to be featured more frequently in the media). The advantage of this approach would be that it links in with key news values that may result in a campaign getting better newspaper coverage. It will be remembered that participants interviewed generally felt that the *BCOC* campaigns were only considered newsworthy when they were new. Conversely, a campaign that actively acknowledges that the message being portrayed is new, of relevance, in conflict with what is known already and/or unusual meets a number of the news values described by Galtung and Ruge (1965), Harcup and O'Neill (2017), Schultz (2007), and Allern (2017). This may mean that the stories would be more likely to be picked up by newspapers, at least at the outset. As an added benefit, readers encountering such articles (or, indeed, other campaign materials) might be expected to notice and recall more of the message. Research from the fields of neuroscience and advertising shows that unexpected stimuli are given high priority in the brain (Corbetta and Schulman, 2002), and unexpected information, such as framing that is incongruent with existing beliefs, can increase how memorable the content is (Hunt et al, 1992).

This approach may also reduce the effect of message fatigue. As detailed in the results (section 6.5.2), one issue that is problematic for public health experts is that repeating cancer awareness messages can be a barrier to journalists reporting on news stories that

focus on the launch of a new cancer campaign. Creating a public health campaign around a new message that is unexpected, surprising, novel and acknowledges the existing messages consumers are exposed to, may be worth investigating.

Such a study would require an interdisciplinary approach that brings together public health, journalism and PR. Key questions would need to be asked around the acceptability of the changes to press officers, reporters and subeditors through qualitative interviews or focus groups. Assuming that this was deemed appropriate, press releases would need to be drafted and piloted in a small area with their dissemination tracked. This is similar to the approach used in the *BCOC* pilots (Taylor and Radford, 2012), but with the additional analysis of how the press release is subsequently reported. As in the current study, both content analytic and corpus linguistic approaches would be required to evaluate both the manifest content and the language used, which may highlight “*non-obvious meaning*” (Partington, 2010, p.88, italics as in original). Nested within this study may be a more in-depth ethnographic study of the process of turning the press release into a newspaper article, (similar to the literature reported in section 2.4.2 about news production processes) in order to investigate how the journalists’ assertions in the current thesis fit with actual practice (cf. Mays and Pope, 1995). A further step in analysis could also involve consumers. Psychology studies of manipulated newspaper articles have been used to assess the effects of different language on consumer perceptions (e.g., Dunn et al, 2005; Nicholson et al, 2008; Young et al, 2008; Landrine and Corral, 2015; see section 2.4.1). The published articles could be collected, and consumer interpretations and reactions tested, and compared against those from a corresponding previous campaign, or

experimentally manipulated versions of the article based upon previous framing of the press release.

8.9.3: Changes to press release quotes

Given the findings about the importance of quotations in *BCOC* press releases, a potential suggestion is that all quotes could be made as short as possible and include all key messages. The importance of including all messages also refers to who is likely to get cancer; this message was featured over 90% of the time in the breast campaign articles because it was part of the key campaign message. In the other campaigns, inclusion was less frequent (around 20% and 50% in the oesophago-gastric and blood in pee campaigns respectively). This might mean that a greater number of more specific messages are necessary in press releases. Given evidence that newspapers are likely to keep the honorifics associated with a quote, these should always be included, as they can add weight to the person's words by making them seem more authoritative (Machin and Mayr, 2012, p.82). Alternatively, they can make the quote more relevant to a local audience.

As the changes are relatively small, this may not require all of the steps associated with the previously suggested study. This could perhaps be piloted in two comparable regions, one of which utilises the existing quotes and one of which uses newly designed ones that feature all key messages. The key outcomes would be whether full length quotes that contain all necessary messages are reported in newspaper articles in the respective areas.

8.9.4: The tracking and development of modifiable press releases

Further future research could also investigate the dissemination of these press releases. It was shown that some reportage of press releases in regional newspapers was largely copied from local websites, such as local NHS Trusts or local authority web pages. Discussions with local authority staff also showed that they may tailor a national message and upload it to the website ready for journalists to access. In addition, a small-scale, exploratory search (see Appendix 12) undertaken by the research student while writing up the thesis suggested that local press releases do not use the same framing as the national ones. Rather than frame the press release in terms of a survey or the return of a successful campaign, they tended to refer to the existence of the campaign or use one of the campaign taglines in the headline. Such framing may affect reporters' interpretations of the newsworthiness of the story.

However, this is an insight based on very small numbers. Given the importance of press release content on whether a story is picked up, it would be useful to know more explicitly how a national press release is disseminated and (whether it is) modified by different parties, or whether any parties create their own versions of press releases and how such decisions are made. Knowledge of this decision-making process may help with national press release planning. It may be possible to include content that can be exchanged or swapped based on space constraints or where a target audience is known by the local authority to prefer, or require, different content, all of which may contribute to improved uptake of press releases and dissemination of key messages. Such a study would likely make use of a multiple methods design, combining a quantitative, longitudinal audit of dissemination, content analysis of press releases, and qualitative interviewing to capture key decision-making. It may be complicated and would likely

require involvement of key stakeholders, and may need to be piloted in a single, localised region to assess feasibility.

8.9.5: Processes within PR

It should be remembered that processes within the organisation (e.g., the person writing the press release not being an expert) can influence the content of press releases. This was not explored in-depth in this thesis, partly because (at least initially) the focus was more on the people writing the newspaper articles, and because it did not come out of the interviews particularly strongly. However, it is worthy of future study within the context of potential changes to press releases. As stated in section 3.4.3 in the context of newspaper reporting, there is little merit in suggesting changes without first understanding the context in which one is operating.

8.9.6: Interdisciplinarity

As a final comment, and with reference to section 4.1.1, the research proposals such as those outlined above are good examples of the need for an interdisciplinary approach to solve 'real world' problems. The issues described in this thesis sit within multiple disciplines, including public health, corpus linguistics and journalism, and could be further expanded to include fields such as communication and psychology. It will be recalled that one participant made the comment that PR and journalism are: "not really singing from the same hymn sheet as entities..." (P14 J). As such, working more closely to understand the perspectives and purposes of different disciplines in an academic and professional context, and working together to research the same, should be a key element of any future research into the communication of public health awareness messages through newspapers, or any other form of mass media.

8.10: Reflections on interdisciplinary working

The last sections of the thesis now present some final reflections from the research student on carrying out the research presented herein. In section 4.1.1, some advantages and disadvantages of interdisciplinary working were presented, for example, time and monetary costs, personal or institutional resistance and difficulties in publishing, balanced against richer, more in-depth analyses and findings that then contribute to solving real-world problems (Brown et al, 2015; Ledford et al, 2015; Nature (anon), 2015; van Noorden, 2015; Rylance, 2015). The research student would add some additional comments based on their experience undertaking this research, which are outlined below.

8.10.1: Discipline-specific norms

The first issue is norms within the given disciplines. To provide an example, the research student's approach to identifying the newspaper articles to use in the corpus was based upon methods utilised when undertaking a scoping review. That is, identifying the research question, identifying relevant studies, selecting studies, tabulating data, and collating and summarising the findings (Arksey and O'Malley, 2005; also see section 3.1). Therefore, the research student decided to identify newspapers by using the Nexis database (which contains articles from hundreds of national and regional newspapers) and search using key words selected to identify articles related to the relevant cancer sites.

As in a scoping review, all of these articles were downloaded, and then manually screened for those that were relevant, with the other articles discarded. This produced a selection of articles from a wide range of sources. This could be considered analogous to the aim of the scoping review and therefore a logical method to identify all appropriate newspaper articles. This allowed the research student to understand how cancer is represented across a wide range of sources, understand the national and regional picture, and make generalisations to any newspapers not included in the Nexis databases.

However, during an informal conversation with one of the supervisory team, who is an expert in journalism, it was stated that this approach is the complete opposite to the approach that would, historically, be taken in their field, whereby selection would likely be more targeted and theoretical. It might be theorised, for example, that newspapers with a left-wing and right-wing political stance might report on cancer differently. For that reason, two newspapers, one left-wing, one right-wing, would be selected and all articles from those newspapers identified and any changes tracked over time.

The research student would argue that both approaches are valid and useful in selecting newspaper articles that will comprise a corpus designed to investigate how cancer is represented in the UK press. However, they would provide very different data and a different set of results. The key aspect here though, is that a researcher engaging in interdisciplinary research must be prepared to be challenged and to defend one's chosen methods against arguments that had been hitherto unfamiliar.

The norms within specific disciplines also create challenges in the write-up - and even the formatting - of the thesis. The challenge is to utilise a style of writing that works for all the component disciplines and research methods. This means not only trying to find a balance between the more distinct writing styles associated with public health and linguistics respectively, but also entering into sufficient depth to satisfy the experts in each field, while providing enough explanation and clarity that those from other disciplines can understand.

An added complication here is the balance of how much information is necessary for those aspects which must be acknowledged, yet do not form an essential part of the story. Communication theory is one example. Finding the appropriate level of depth in order to signal to the reader that the research student is aware of these issues without going down a 'rabbit hole' of unnecessary detail has been difficult, particularly given the fact that communication theories were completely new to the research student. In furthering one's own knowledge, it is perhaps all too easy to find oneself writing each step that aids in one's own understanding while forgetting the limits of what is necessary for the reader.

8.10.2: Change of mind-set

Rylance (2015) states that interdisciplinary research requires researchers to change their mind-set with regard to engaging fully in interdisciplinary research. The research student agrees with this statement but would also add that a change of mind-set is needed as the research continues if it is to be analysed effectively.

At the outset of the PhD the research student would have described themselves as undertaking public health research that borrowed methods from corpus linguistics and was trying to understand the wider contexts of journalism and PR. As discussed earlier in section 5.3.9, a reflexive diary was kept during analysis, during which he realised that his approach at that time was very much viewed through a public health lens that focussed on the dissemination of key messages. This resulted in an almost blameworthy mind-set, whereby it would be easy to ask a journalist “why don’t you just put the symptoms in your articles?”, rather than trying to understand the journalists’ perspective first, and then relate it back to the issue at hand. This realisation resulted in a change in coding practices as section 5.3.9 described. Upon reflection now, this moment was possibly also a catalyst for a change in mind-set about the research as a whole, towards the research student undertaking interdisciplinary research. The difference here is that it no longer feels as though methods are simply being borrowed from corpus linguistics and applied to a public health study. While it is certainly true that this work is rooted in public health and is informed by corpus linguistics, the work feels more unified; a single piece of research with multiple constituent parts undertaken within a context that bridges journalism and public health. Perhaps this is inevitable. It would be interesting to consider how the research project might have been different had it been approached with this more unified mind-set in the first place, or by a researcher with expertise in linguistics who then used public health to inform their study. It could be that by undertaking a single piece of interdisciplinary, multiple methods research that a researcher’s view is forever altered, leading them to consider different research questions and different ways of approaching them. This can only be reflected on further with time.

The benefits of such research certainly outweigh the negatives in this author's opinion. The personal development gained has been invaluable. As a result, the research student has improved their qualitative and quantitative analytical ability and confidence, has learnt new statistical methods and approaches, writing styles and understanding of multiple viewpoints. This has produced a much more rounded researcher overall. The process has been endlessly interesting; with there always being something new to learn, it is not possible to get bored even though the same research question is being looked at every day.

On a personal note, completing an interdisciplinary research project such as this provides a huge sense of self-satisfaction, not only when looking back at the amount of work done, but also in terms of feeling (at least to some extent) accepted by those working in the other disciplines that were, once, new and alien. To present this work to a different audience, for example, and realise that not only is the research student making themselves understood, but that the audience appears interested, works to reduce the feeling of being an 'impostor', and helps to build confidence. Indeed, the feeling that the research student can have an academic conversation with them and hold their own, is a wonderful one.

8.11: Summary

This thesis set out to answer the question of how journalists/media professionals talk about the process that leads to the production of cancer-related articles and how this relates to the representation of cancer in newspaper reports. More specifically, the objectives were: 1) To understand the process that results in the final newspaper articles

through interviewing journalists and those producing press releases. 2) To identify the demographic characteristics of people featured in cancer-related newspaper articles in the UK. 3) To consider how educational these cancer-related articles in UK newspapers are as they pertain to key public health awareness messages, and 4) To use corpus linguistic methods to explore the relationship between journalists' accounts of the process of writing about cancer and the representation of cancer in newspaper reports. Using an interdisciplinary, multiple methods approach, this research has identified that there is a tendency for newspaper articles to feature atypical cancer case studies who do not represent the target audience of the *BCOC* campaigns. Articles generally lack key public health awareness messages, even when those articles are specifically about the *BCOC* campaign. The language used often frames cancer in terms of negative outcomes and evaluations of treatment and use of battle metaphor was prevalent. Discussions with journalists and press officers suggested that there were reasons for this, including newsworthiness factors and norms within journalism, and there was a general opinion that scope for change is, for now, limited.

For public health practitioners, this research has highlighted some of the ways in which key cancer campaign messages may change when disseminated through the newspapers, as well as some indication of the background messages and journalism norms and processes that their campaigns may have to work with, or around. The research has also demonstrated a methodological approach that can enrich the methods more commonly utilised in public health campaign evaluations and public health research more widely. The road from public health to print has been shown to be complex with the representation of cancer not necessarily aligning with contemporary medical opinion. Yet the knowledge gained from this research may be used to inform new avenues of

interdisciplinary enquiry to help public health experts make better use of UK newspapers to disseminate campaign messages and, ultimately, have the potential to contribute to improvements in cancer survival.

From public health to print: an interdisciplinary
study of the presentation of cancer awareness
messages in UK newspapers

By

Neil Cook

Volume 2 of 2

A thesis submitted in partial fulfilment for the requirements for the
degree of Doctor of Philosophy at the University of Central Lancashire

December 2019

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APPENDIX 1: DATA ITEMS EXTRACTED IN SCOPING REVIEW

Demographics	
Author	
Country	
Aim	
Method	
Time period study took place	
Newspaper type (e.g. national, regional, language, mainstream/targeted audience)	
Cancers investigated	
Sample size (cancer articles)	
Outcomes	
Articles for each cancer site (n, %)	
Main topic/focus on articles (n, %)	
Comparison of article frequency (e.g. prevalence, incidence) (n, %)	
Prevention messages (n, %)	
Risk factor messages (n, %)	
Warning signs/symptoms messages (n, %)	
Presence of cancer statistics statistic, n, %)	
Efficacy, mobilisation and signposting messages (n, %)	
Additional notes	

APPENDIX 2: TABLE OF EXCLUDED STUDIES

Full reference	Reason for exclusion
Abdelmutti, N. and Hoffman-Goetz, L. (2009). Risk messages about HPV, cervical cancer, and the HPV vaccine Gardasil: a content analysis of Canadian and US national newspaper articles. <i>Women & Health</i> , 49(5), pp.422-440.	Not general cancer reporting
Abdelmutti, N. and Hoffman-Goetz, L. (2010). Risk messages about HPV, cervical cancer, and the HPV vaccine Gardasil in North American news magazines. <i>Journal of Cancer Education</i> , 25(3), pp.451-456.	Not general cancer reporting
Abelson, J. and Collins, P. A. (2009). Media hyping and the “Herceptin access story”: an analysis of Canadian and UK newspaper coverage. <i>Healthcare Policy</i> , 4(3), e113.	Not general cancer reporting
Abola, M. V. and Prasad, V. (2016). The use of superlatives in cancer research. <i>JAMA Oncology</i> , 2(1), pp.139-141.	Does not focus on newspapers
Al-Faris, E. A. (1993). The selection of appropriate health education topics for publication in the press. <i>Scandinavian Journal of Primary Health Care</i> , 11(3), pp.163-168.	Does not focus on outcomes of interest
Andsager, J. L., Hust, S. J. and Powers, A. (2001). Patient-blaming and representation of risk factors in breast cancer images. <i>Women & Health</i> , 31(2-3), 57-79.	Does not focus on outcomes of interest
Bartlett, C., Sterne, J. and Egger, M. (2002). What is newsworthy? Longitudinal study of the reporting of medical research in two British newspapers. <i>BMJ</i> , 325(7355), pp.81-84.	Does not focus on outcomes of interest
Bell, L., & Seale, C. (2011). The reporting of cervical cancer in the mass media: a study of UK newspapers. <i>European Journal of Cancer Care</i> , 20(3), pp.389-394.	Reporting of analysis and results unclear
Black, M. E. (1995). What did popular women's magazines from 1929 to 1949 say about breast cancer? <i>Cancer Nursing</i> , 18(4), 270-277.	Does not focus on newspapers
Brody, J. E. (1999). Communicating cancer risk in print journalism. <i>JNCI Monographs</i> , 1999(25), pp.170-172.	Not primary research

Calman, K. C. and Calman, A. (1983). Public response to cancer education in the press. <i>Health Education Journal</i> , 42(2), pp.53-54.	Does not focus on outcomes of interest
Caburnay, C. A., Luke, D. A., Cameron, G. T., Cohen, E. L., Fu, Q., Lai, C. L., ... and Kreuter, M. W. (2012). Evaluating the Ozioma cancer news service: A community randomized trial in 24 US cities. <i>Preventive Medicine</i> , 54(6), pp.425-430.	Does not focus on outcomes of interest
Carlsson, M. E. (2000). Cancer patients seeking information from sources outside the health care system. <i>Supportive Care in Cancer</i> , 8(6), pp.453-457.	Does not focus on outcomes of interest
Clarke, J. and Van Amerom, G. (2008). Mass print media depictions of cancer and heart disease: community versus individualistic perspectives? <i>Health & Social Care in the Community</i> , 16(1), pp.96-103.	Does not focus on outcomes of interest
Cokkinides, V., Kirkland, D., Andrews, K., Sullivan, K. and Lichtenfeld, J. L. (2012). A profile of skin cancer prevention media coverage in 2009. <i>Journal of the American Academy of Dermatology</i> , 67(4), pp.570-575.	No useable data provided
Cooper, C. P. and Yukimura, D. (2002). Science writers' reactions to a medical "breakthrough" story. <i>Social Science & Medicine</i> , 54(12), 1887-1896.	Does not focus on outcomes of interest
Dixon-Woods, M., Seale, C., Young, B., Findlay, M., & Heney, D. (2003). Representing childhood cancer: accounts from newspapers and parents. <i>Sociology of Health & Illness</i> , 25(2), pp.143-164.	Does not focus on outcomes of interest
Dodd, R. H., Marlow, L. A., Forster, A. S., & Waller, J. (2016). Print and online newspaper coverage of the link between HPV and oral cancer in the UK: a mixed-methods study. <i>BMJ Open</i> , 6(2), e008740.	Not general cancer reporting
Donelle, L., Hoffman-Goetz, L. and Clarke, J. N. (2005). Portrayal of genetic risk for breast cancer in ethnic and non-ethnic newspapers. <i>Women & Health</i> , 40(4), pp.93-111.	Full text unavailable
Elliott, J., Forster, A. J., McDonough, J., Bowd, K. and Crabb, S. (2018). An examination of Australian newspaper coverage of the link between alcohol and cancer 2005 to 2013. <i>BMC Public Health</i> , 18(1), pp.47.	Not general cancer reporting
Fishman, J., Ten Have, T. and Casarett, D. (2010). Cancer and the media: how does the news report on treatment and outcomes? <i>Archives of Internal Medicine</i> , 170(6), pp.515-518.	Does not focus on outcomes of interest

Friedman, D. B., & Hoffman-Goetz, L. (2003). Sources of cancer information for seniors: a focus group pilot study report. <i>Journal of Cancer Education</i> , 18(4), pp.215-222.	Does not focus on outcomes of interest
Gerlach, K. K., Marino, C., Weed, D. L. and Hoffman-Goetz, L. (1998). Lack of colon cancer coverage in seven women's magazines. <i>Women & Health</i> , 26(2), pp.57-68.	Does not focus on newspapers
Graham, J. A., Horowitz, A. M. and Canto, M. T. (2004). Coverage and quality of oral cancer information in selected popular press: May 1998 to July 2003. <i>Journal of Public Health Dentistry</i> , 64(4), pp.231-236.	No useable data provided
Greenberg, M., & Wartenberg, D. (1991). Newspaper coverage of cancer clusters. <i>Health Education Quarterly</i> , 18(3), pp.363-374.	Does not focus on outcomes of interest
Grilli, R., Ramsay, C., & Minozzi, S. (2002). Mass media interventions: effects on health services utilisation. <i>Cochrane Database of Systematic Reviews</i> , 1(1), CD000389	Does not focus on outcomes of interest
Hannon, P., Lloyd, G. P., Viswanath, K., Smith, T., Basen-Engquist, K., Vernon, S. W., ... and Backinger, C. L. (2009). Mass media and marketing communication promoting primary and secondary cancer prevention. <i>Journal of Health Communication</i> , 14(S1), pp.30-37.	Does not focus on outcomes of interest
Higashi, T., Nakamura, F., Saruki, N., Takegami, M., Hosokawa, T., Fukuhara, S., ... and Sobue, T. (2012). Evaluation of newspaper articles for coverage of public reporting data: a case study of unadjusted cancer survival data. <i>Japanese Journal of Clinical Oncology</i> , 43(1), pp.95-100.	Does not focus on outcomes of interest
Hind, D., Wailoo, A. J. and Sutcliffe, P. (2011). Demands for 'off-licence' access to trastuzumab (Herceptin): content analysis of UK newspaper articles. <i>Health Expectations</i> , 14(1), pp.38-47.	Not general cancer reporting
Hoffner, C. and Ye, J. (2009). Young adults' responses to news about sunscreen and skin cancer: The role of framing and social comparison. <i>Health Communication</i> , 24(3), pp.189-198.	Does not focus on outcomes of interest
Houn, F., Bober, M. A., Huerta, E. E., Hursting, S. D., Lemon, S. and Weed, D. L. (1995). The association between alcohol and breast cancer: popular press	Does not focus on outcomes of interest

coverage of research. <i>American Journal of Public Health</i> , 85(8_Pt_1), pp.1082-1086.	
Hughes-Hallett, A., Browne, D., Mensah, E., Vale, J. and Mayer, E. (2016). Assessing the impact of mass media public health campaigns. Be Clear on Cancer 'blood in pee': a case in point. <i>BJU International</i> , 117(4), pp.570-575.	No useable data provided
Jensen, J. D., Carcioppolo, N., King, A. J., Bernat, J. K., Davis, L., Yale, R. and Smith, J. (2011). Including limitations in news coverage of cancer research: Effects of news hedging on fatalism, medical skepticism, patient trust, and backlash. <i>Journal of Health Communication</i> , 16(5), pp.486-503.	Does not focus on outcomes of interest
Johnson, J. D. and Meischke, H. (1994). Women's preferences for cancer-related information from specific types of mass media. <i>Health care for women international</i> , 15(1), pp.23-30.	Does not focus on outcomes of interest
Jones, S. C. (2004). Coverage of breast cancer in the Australian print media—does advertising and editorial coverage reflect correct social marketing messages? <i>Journal of Health Communication</i> , 9(4), pp.309-325.	Does not focus on outcomes of interest
Hoffman-Goetz, L. (1999). Cancer experiences of African-American women as portrayed in popular mass magazines. <i>Psycho-Oncology: Journal of the Psychological, Social and Behavioral Dimensions of Cancer</i> , 8(1), pp.36-45.	Does not focus on newspapers
Hoffman-Goetz, L. and MacDonald, M. (1999). Cancer coverage in mass circulating Canadian women's magazines. <i>Canadian Journal of Public Health</i> , 90(1), pp.55-59.	Does not focus on newspapers
King, A. J., Jensen, J. D., Guntzviller, L. M., Perez Torres, D. and Krakow, M. (2018). Ethnic newspapers and low-income Spanish-speaking adults: influence of news consumption and health motivation on cancer prevention behaviors. <i>Ethnicity & health</i> , 23(4), pp.410-424.	Does not focus on outcomes of interest
Kromm, E. E., Smith, K. C. and Singer, R. F. (2007). Survivors on cancer: the portrayal of survivors in print news. <i>Journal of Cancer Survivorship</i> , 1(4), pp.298-305.	Not general cancer reporting
MacDonald, M. M. and Hoffman-Goetz, L. (2002). A retrospective study of the accuracy of cancer	Does not focus on outcomes of interest

information in Ontario daily newspapers. <i>Canadian Journal of Public Health/Revue Canadienne de Sante'e Publique</i> , 93(2), pp.142-145.	
MacKenzie, R., Chapman, S., Barratt, A. and Holding, S. (2007). "The news is [not] all good": misrepresentations and inaccuracies in Australian news media reports on prostate cancer screening. <i>Medical Journal of Australia</i> , 187(9), pp.507.	No useable data provided
MacKenzie, R., Chapman, S., Holding, S. and McGeechan, K. (2007). A matter of faith, not science': analysis of media coverage of prostate cancer screening in Australian news media 2003-2006. <i>Journal of the Royal Society of Medicine</i> , 100(11), pp.513-521.	No useable data provided
Martinson, B. E. and Hindman, D. B. (2004). Building a health promotion agenda in local newspapers. <i>Health Education Research</i> , 20(1), pp.51-60.	Not general cancer reporting
McCauley, M. P., Blake, K. D., Meissner, H. I. and Viswanath, K. (2012). The social group influences of US health journalists and their impact on the newsmaking process. <i>Health education research</i> , 28(2), pp.339-351.	Does not focus on outcomes of interest
McWhirter, J. E., Hoffman-Goetz, L. and Clarke, J. N. (2012). Can you see what they are saying? Breast cancer images and text in Canadian women's and fashion magazines. <i>Journal of Cancer Education</i> , 27(2), pp.383-391.	Does not focus on outcomes of interest
Nagler, R. H., Bigman, C. A., Ramanadhan, S., Ramamurthi, D. and Viswanath, K. (2016). Prevalence and framing of health disparities in local print news: Implications for multilevel interventions to address cancer inequalities. <i>Cancer Epidemiology, Biomarkers & Prevention</i> , 25(4), pp. 60.3-612.	No useable data provided
Nakamura, F., Higashi, T., Saruki, N., Fukuhara, S. and Sobue, T. (2014). Understanding by the General Public of Newspaper Reports on Publicly Reported Cancer Survival in Japan: A Randomized Controlled Trial. <i>Japanese Journal of Clinical Oncology</i> , 44(7), pp.651-660.	Does not focus on outcomes of interest
Nguyen, D. H., Shimasaki, S., Stafford, H. S. and Sadler, G. R. (2010). Health journalism internships: a social marketing strategy to address health disparities. <i>Journal of Cancer Education</i> , 25(3), pp.371-376.	Does not focus on outcomes of interest

Nichols, S. and Chase, N. (2005). A content analysis of health research reported by the daily newspapers of Trinidad and Tobago. <i>West Indian Medical Journal</i> , 54(5), pp.308-314.	Not general cancer reporting
Niederdeppe, J., Frosch, D. L. and Hornik, R. C. (2008). Cancer news coverage and information seeking. <i>Journal of Health Communication</i> , 13(2), pp.181-199.	Does not focus on outcomes of interest
Noar, S. M., Willoughby, J. F., Myrick, J. G. and Brown, J. (2014). Public figure announcements about cancer and opportunities for cancer communication: a review and research agenda. <i>Health Communication</i> , 29(5), pp.445-461.	Not primary research
Okuhara, T., Ishikawa, H., Okada, H., & Kiuchi, T. (2015). Readability, suitability and health content assessment of cancer screening announcements in municipal newspapers in Japan. <i>Asian Pacific Journal of Cancer Prevention</i> , 16(15), pp.6719-6727.	Not general cancer reporting
Ooi, E. S. and Chapman, S. (2003). An analysis of newspaper reports of cancer breakthroughs: hope or hype? <i>Medical journal of Australia</i> , 179(11/12), pp.639-643.	Not general cancer reporting
Passalacqua, R., Caminiti, C., Salvagni, S., Barni, S., Beretta, G. D., Carlini, P., ... and Campione, F. (2004). Effects of media information on cancer patients' opinions, feelings, decision-making process and physician-patient communication. <i>Cancer</i> , 100(5), pp.1077-1084.	No usable data provided
Pierce, J. P. and Gilpin, E. A. (2001). News media coverage of smoking and health is associated with changes in population rates of smoking cessation but not initiation. <i>Tobacco Control</i> , 10(2), pp.145-153.	Does not focus on cancer
Reinau, D., Meier, C. R., Blumenthal, R. and Surber, C. (2016). Skin cancer prevention, tanning and vitamin D: a content analysis of print media in Germany and Switzerland. <i>Dermatology</i> , 232(1), pp.2-10.	No useable data provided
Reynolds, T. (1993). Media coverage of cancer risks may mislead. <i>Journal of the National Cancer Institute</i> , 85(17), pp.1366.	Not primary research
Rimer, I. (1984). The mass media and the cancer patient: Some views. <i>Health Education Quarterly</i> , 10(spec suppl), pp.95-101	Not primary research

Rosenthal, A. N. (2017). Media must report celebrity health stories responsibly. <i>BMJ</i> , 356, j192.	Not primary research
Russell, C. (1999). Living can be hazardous to your health: How the news media cover cancer risks. <i>JNCI Monographs</i> , 1999(25), pp.167-170.	Not primary research
Sabel, M. S. and Dal Cin, S. (2016). Trends in media reports of celebrities' breast cancer treatment decisions. <i>Annals of Surgical Oncology</i> , 23(9), pp.2795-2801.	Not general cancer reporting
Schwartz, L. M., Woloshin, S., Andrews, A. and Stukel, T. A. (2012). Influence of medical journal press releases on the quality of associated newspaper coverage: retrospective cohort study. <i>BMJ</i> , 344, d8164.	Does not focus on outcomes of interest
Scully, M., Wakefield, M., & Dixon, H. (2008). Trends in news coverage about skin cancer prevention, 1993-2006: increasingly mixed messages for the public. <i>Australian and New Zealand Journal of Public Health</i> , 32(5), pp.461-466.	Not general cancer reporting
Senior, K. (2008). The bad news about cancer and the popular media. <i>The Lancet Oncology</i> , 9(10), pp.920-921.	Not primary research
Smith, K. C., Kromm, E. E., & Klassen, A. C. (2010). Print news coverage of cancer: What prevention messages are conveyed when screening is newsworthy? <i>Cancer Epidemiology</i> , 34(4), pp.434-441.	Not general cancer reporting
Spencer, M. C. (2009). Overlooking evidence: media ignore environmental connections to breast cancer. <i>International Journal of Health Services</i> , 39(4), pp.811-817.	No useable data provided
Steele, W. R., Mebane, F., Viswanath, K. and Solomon, J. (2005). News media coverage of a women's health controversy: How newspapers and TV outlets covered a recent debate over screening mammography. <i>Women & Health</i> , 41(3), pp.83-97.	Full text unavailable
Stryker, J. E. (2002). Reporting medical information: Effects of press releases and newsworthiness on medical journal articles' visibility in the news media. <i>Preventive Medicine</i> , 35(5), pp.519-530.	Does not focus on outcomes of interest
Taylor, J. W., Long, M., Ashley, E., Denning, A., Gout, B., Hansen, K., ... and Wojtowicz, A. (2015). When medical news comes from press releases—A case study of	Not general cancer reporting

pancreatic cancer and processed meat. <i>PloS One</i> , 10(6), e0127848.	
Trendowski, M (2014). The rhetoric of cancer. <i>Cancer Causes & Control</i> , 25(10), pp.1243-1246	No data provided
Van Dam, F.S. and Renckens, C. N. (2002). Information about cancer treatment and the media. <i>Nederlands tijdschrift voor geneeskunde</i> , 146(11), pp.524-525.	Not in English
Van Maldegem, B.T. and Overbeke, A. J. (1999). Reports in the Dutch newspapers prompted by articles from medical scientific journals. <i>Nederlands tijdschrift voor geneeskunde</i> , 143(39), pp.1969-1972.	Not in English
Wang-Buholzer, C. F., Lomazzi, M., & Borisch, B. (2010). Media response to colon cancer campaigns in Switzerland 2005-2007: regional newspapers are the most reliable among the printed media. <i>BMC Research Notes</i> , 3(1), pp.177.	Not general cancer reporting
Waszak, P. M. and Kawalec, N. (2017). Impact of celebrities' cancer deaths on oncology-related news and internet searches in Poland. <i>Public Health</i> , 144, pp.13-15.	Does not focus on newspapers
Williamson, J. M. and Hocken, D. B. (2010). Pancreatic cancer in the media: the Swayze shift. <i>The Annals of the Royal College of Surgeons of England</i> , 92(6), pp.537-538.	No data provided
Wilson, A. J., Bonevski, B., Jones, A. L. and Henry, D. A. (2010). Deconstructing cancer: what makes a good-quality news story. <i>Medical Journal of Australia</i> , 193(11-12), pp.702-706.	Does not focus on newspapers
Woloshin, S., Schwartz, L. M., Casella, S. L., Kennedy, A. T. and Larson, R. J. (2009). Press releases by academic medical centers: not so academic? <i>Annals of Internal Medicine</i> , 150(9), pp.613-618.	Does not focus on outcomes of interest

APPENDIX 3: SUMMARY RESULTS TABLES

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Al-Naggar et al (2011)	Malaysia	1 year (2007)	National (n=1)	Breast	79	-	<i>[Only n is provided, % is calculated]</i> Risk factors: 11 (13.9) Prevention: 9 (11.4) Treatment: 9 (11.4) Awareness: 8 (10.2)
Atkin et al (2008)	USA	18 months (Jun 2003-Dec 2004)	Leading newspapers (n=3)	Breast	84	-	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Al-Naggar et al (2011)	-	<i>[Only n provided, % is calculated]</i>	<i>[Only n provided, % is calculated]</i>	-	-	-
		breast self-exam: 12 (15.2), exercise: 8 (10.1), diet: 7 (8.9), screening: 7 (8.9)	11 (13.9) [family history: 9 (11.4), obesity: 9 (11.4), alcohol: 4 (5.1), wearing wrong bra, early menarche, late menopause, dense breast, left handed, stress, race: data not provided]			
Atkin et al (2008)	-	<i>[Only % provided, n is calculated]</i>	<i>[Only % provided, n is calculated]</i>	-	<i>[Only % provided, n is calculated]</i>	-
		Prevention: 35 (42), Screening: 19 (23)	Environmental: 24 (29)		Prevalence: 29 (35)	

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Caburnay et al (2008)	USA	24 months (Jan 2004-Dec 2005)	Weekly Black-audience (n=24) and community-matched general audience (n=12)	All	1,070 (472 general audience, 598 Black),	<p><i>[Only % provided, n is calculated]</i></p> <p>Breast: 106 (22.5) general, 187 (31.3) ethnic,</p> <p>prostate: 43 (9.1) general, 114 (19.2) ethnic,</p> <p>lung and bronchus: 36 (7.6) general, 10 (1.7) ethnic,</p> <p>colon and rectum: 30 (6.4) general, 45 (7.5) ethnic,</p> <p>ovary: 12 (2.5) general, 6 (1.0) ethnic,</p> <p>leukaemia: 8 (1.7) general, 21 (3.5) ethnic,</p> <p>uterus: 5 (1.1) general, 9 (1.5) ethnic</p>	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Caburnay et al (2008)	-	<i>[Only % provided, n is calculated]</i> 328 (69.7) general, 416 (79.7) ethnic. (Primary: 119 (25.4), general, 174 (30.0) ethnic. Secondary: 96 (20.3) general, 217 (36.3) ethnic	-	-	<i>[Only % provided, n is calculated]</i> Disparity: 49 (10.4) (general), 178 (29.8) (ethnic)	<i>[Only % provided, n is calculated]</i> Personal mobilisation: 71 (15.0) general, 254 (42.4) ethnic; community mobilisation: 23 (4.9) general, 98 (16.4) ethnic

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Cai et al (2009)	China	7 years 2000-2007	National (n=152) and local (n=362)	All	7,643	<p><i>[n estimated based on bar chart, % calculated]</i></p> <p>Breast: ~1683 (22), lung: ~1377 (18), liver: ~1071 (14), leukaemia: ~1071 (14), gastric: ~765 (10), uterine cervix: ~535 (7), prostate: ~535 (7), ovary: ~229 (3), pancreas: ~229 (3), oesophageal: ~229 (3), colorectal: ~191 (2.5), nasopharyngeal: ~191 (2.5), skin: ~76 (1), renal: ~76 (1), endometrial: ~76 (1), Didymus: <76 (<1), penis: <76 (<1)</p>	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Cai et al (2009)	Disease burden Graphical representation only. Concluded not to be representative	-	-	-	-	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Canto et al (1998)	USA	10 years (1987-1998)	Unclear; [note: search terms included tobacco]	Oral	18	-	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Canto et al (1998)	-	Tobacco cessation: 2 (11), alcohol cessation: 0 (0.0), sun protection: 0 (0.0), diet: 0 (0.0)	Tobacco (100) [snuff: 16 (89), chewing: 15 (83), cigarette: 7 (39), cigar: 2 (11), pipe: 1 (6)], alcohol 5 (28), sun exposure: 0 (0.0), diet: 0 (0.0), virus: 0 (0.0)	Ulcer/sore: 8 (44), red/ white patches: 7 (39), burning sensation: 4 (22), lump: 3 (17), thickness/ swelling: 3 (17), no pain: 2 (11), discomfort (throat):1 (6) discomfort (dental): 0 (0.0) numbness: 0 (0.0)	Morbidity/ mortality: 9 (50)	'Referral': 2 (11)

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Cohen et al (2008)	USA (24 cities and metropolitan areas)	12 months (Apr 2004-Mar 2005)	Weekly Black-audience (n=23) and community-matched general audience (n=12)	Breast, prostate, colon and rectum, oesophagus, kidney, leukaemia, lung and bronchus, melanoma, non-Hodgkins lymphoma, oral cavity, ovary, pancreas, prostate, thyroid, urinary/bladder, uterine corpus, bone, liver, brain, cervical, testicular, other, general	593 (261 general audience, 332 Black)	<i>{Only % provided, n calculated}</i> Breast : 55 (21.1) general, 96 (28.9) ethnic, prostate: 26 (10.0) general, 67 (20.2) ethnic, colon and rectum: 16 (6.1) general, 17 (5.1) ethnic, lung and bronchus: 12 (4.6) general, 6 (1.8) ethnic, melanoma: 7 (2.7) general, 3 (0.9) ethnic, brain: 6 (2.3) general, 4 (1.3) ethnic, leukaemia: 6 (2.3) general, 13 (3.9) ethnic,	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
						liver: 6 (2.3) general, 1 (0.3) ethnic,	
						thyroid: 5 (1.9) general, 4 (1.2) ethnic,	
						bone: 4 (1.5) general, 0 (0.0) ethnic,	
						cervical: 4 (1.5) general, 4 (1.2) ethnic,	
						ovary: 4 (1.5) general, 2 (0.6) ethnic,	
						non-Hodgkins lymphoma: 3 (1.1) general, 4 (1.2) ethnic,	
						pancreas: 3 (1.1) general, 1 (0.3) ethnic,	
						kidney: 2 (0.8) general, 1 (0.3) ethnic,	
						testicular: 2 (0.8) general, 1 (0.3) ethnic,	

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
						uterine corpus: 2 (0.8) general, 5 (1.5) ethnic,	
						oesophagus: 1 (0.4) general, 3 (0.9) ethnic,	
						oral cavity: 1 (0.4) general, 3 (0.9) ethnic,	
						urinary/bladder: 1 (0.4) general, 0 (0.0) ethnic,	
						other: (not presented)	

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Cohen et al (2008)	Disease rates, Disease burden No inferential analyses undertaken, descriptives used. Concluded not to be representative	-	-	-	-	Personal: 189 (32.1) 43 (16.7) general, 146 (11.4) ethnic

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Donelle et al (2005)	Canada	4 years (1996-2000 ethnic), 12 months (2000) (general)	Weekly, biweekly, monthly or quarterly Jewish newspapers (n=6), matched daily provincial newspapers with highest circulation (n= not reported)	Breast	813 (721 general, 92 ethnic)	<i>[% calculated]</i> Breast: 145 (20.1) general, 34 (37.0) ethnic	-
Heneghen et al (2007)	USA	25 years (Jan 1980-Dec 2004)	National (n=1)	Skin	874	-	-
Henry et al (2012)	Canada	3 months (Apr-Jun 2008)	Major daily (n=6)	All	576	Breast: 114 (19.8), leukaemia: 54 (9.4), central nervous system: 44 (7.6), lung: 34 (6.1), colon: 27 (4.7), prostate: 27 (4.7)	Research: 154 (26.7), risk factors: 150 (26.0), treatment: 140 (24.3), education/prevention: 114 (19.8), fundraising: 112 (19.4)
Hilton & Hunt (2010)	UK	7 months (19 th August 2008-5 th April 2009)	National (n=15)	Jade Goody, cervical	527	-	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Donelle et al (2005)	-	-	Genetics 25 (17.0) general 16 (47.0) ethnic	-	-	-
Heneghen et al (2007)	Disease rates No inferential analyses undertaken, descriptives used. Concluded not to be representative	-	-	-	-	-
Henry et al (2012)	-	-	-	-	-	-
Hilton & Hunt (2010)	-	Screening guidelines: 34 (6.5)	HPV: 40 (7.6) Defaulting on screening: 20 (3.8), multiple sexual partners: 15 (2.8), early age at first sexual intercourse: 12 (2.3), deprivation: 8 (1.5), smoking: 8 (1.5)	15 (2.8)	Prevalence: 50 (9.5)	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Hoffman-Goetz and Friedman (2005)	Canada	12 months (2000)	Mainstream (n=7) and ethnic minority audience (n=25)	Breast, prostate, colorectal, lung	748 (721 general audience, 27 ethnic)	Breast: 145 (20.1) general, 9 (33.3) ethnic, prostate: 53 (7.4) general, 2 (8.6) ethnic, colorectal: 28 (3.9) general, 1 (3.7) ethnic, lung: 28 (3.9) general, 0 (0.0) ethnic	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Hoffman-Goetz and Friedman (2005)	-	-	-	-	-	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Jensen et al (2010)	USA	12 months (2003)	Top US mainstream (n=44)	Male reproductive, breast, lung, colon/rectum, bladder, female reproductive, lymphatic system, non-Hodgkin's lymphoma, skin, leukaemia/blood, stomach, pancreas, kidney, brain, thyroid, bone/muscle, other	5,327	<i>[Only % provided, n calculated]</i> Breast: 1385 (26.0), lung: 602 (11.3), male reproductive: 554 (10.4), colon/rectum: 453 (8.5), leukaemia/blood: 431 (8.1) female reproductive: 320 (6.0), skin: 272 (5.1), non-Hodgkin's lymphoma: <160 (<3), bladder: <160 (<3) bone/muscle: <160 (<3), brain: <160 (<3), kidney: <160 (<3), lymphatic system: <160 (<3),	

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Jensen et al (2010)						pancreas: <160 (<3), other: <160 (<3), stomach: <160 (<3), thyroid: <160 (<3)	

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Jensen et al (2010)	<i>[Only % provided, n calculated]</i> treatment: 1316 (24.7), profiles: 1193 (22.4), prevention: 405 (7.6), detection: 330 (6.2), survivorship: 261 (4.9), end of life: 85 (1.6)	Disease rates, Disease burden No inferential analyses undertaken, descriptives and ranks used. Concluded not to be representative	-	<i>[Only % provided, n calculated]</i> 1498 (28.1) Of these: lifestyle: 733 (45.9), demographics: 631 (39.5), genetic: 356 (22.3), environment/ occupation: 355 (22.2), medical: 318 (19.9)	-	<i>[Only % provided, n calculated]</i> Incidence: 1,433 (26.9). Mortality: 325 (6.1)

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Jones et al (2012)	UK	12 months (Jan-Dec 2009)	Top 10 national (n=10)	Colorectal	203	-	-
Kamenova et al (2014)	Canada, USA, UK	13 th May-12 th June 2013	Top daily broadsheets (n=15)	Angelina Jolie, Breast, ovarian	103	-	-
Kelly et al (2016)	UK	3 years (Aug 2011-Oct 2014)	National (n=10)	Oral	239	-	Recent research: 66 (27.6), health information: 58 (24.3), celebrity: 56 (24.4), 'survivor' stories: 41 (17.2), oral cancer as other topic: ~31 (13.0), legal issues~13 (5.4) <i>[Data for these last two topics is only presented graphically]</i>

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Jones et al (2010)	-	-	-	13 (6.4)	-	-
Kamenova et al (2014)	-	100 (preventive mastectomy)	Rarity of mutation: 33 (32) (Canada: 11 (10.7), USA: 14 (13.6), UK: 8 (7.8)) Link between BRCA and cancer: 23 (22.3) (Canada: 23 (22.3), USA: 27 (26.2), UK: 22 (21.4))	-	-	-
Kelly et al (2016)	-	-	88 (36.8) (Smoking and alcohol: 57 (23.8), other risk factors: 31 (13.0))	<i>[Only n provided, % calculated]</i> 20 (8.4)	-	<i>[Only n provided, % calculated]</i> 35 (14.6)

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Kishi et al (2008)	Japan	Fifteen years (1992-2007)	Daily national (n=5)	All	7,046 in 2007. Other years unclear.	<i>[only n provided. % have been calculated]</i> Lung: 1,720 (24.4), breast: 1,355 (19.2), stomach: 1,246 (17.6), haematological: 1,129 (16.0), colon/rectal: 865 (12.3), liver: 731 (10.4)	-
Konfortion et al (2012)	UK	12 months (2011)	National (n=18)	Breast, lung, colorectal, prostate	5,938	Breast: 2,725 (46), prostate: 1,265 (21), lung: 1,106 (19), bowel/colorectal: 842(14)	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Kishi et al (2008)	Disease rates, Disease burden No inferential analyses undertaken, descriptives used. Reporting appears to reflect morbidity and mortality	-	-	-	-	-
Konfortion et al (2012)	Disease rates No inferential analyses undertaken, descriptives used. Concluded not to be representative	-	-	-	-	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Konfortion et al, 2014)	UK	24 months (2011-2012)	National (n=18)	Breast, lung, prostate, bowel	9,178	Breast: 4,237 (46), prostate: 1,757 (19.1), lung: 1,746 (19.0), bowel: 1,438 (15.7)	-
Kye et al (2015)	Korea	5 years (2008-2012)	General newspapers (n=16)	All	1,138	Breast: 80 (7.0), colorectal: 79 (6.9), cervical: 67 (5.9), other: 65 (5.8) prostate: 42 (3.7), lung: 33 (2.9), skin: 24 (2.1), thyroid: 23 (2.0), liver: 20 (1.8), stomach: 17 (1.5), pancreas: 15 (1.3)	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Konfortion et al, 2014)	Disease rates No inferential analyses undertaken, descriptives used. Concluded not to be representative	-	-	-	-	-
Kye et al (2015)	-	-	715 (62.8) (Environment/ occupation: 151 (21.1), diet: 97 (13.6); radiation: 71 (9.9); infection: 62 (8.7); smoking: 61 (8.5); health behaviours: 55 (7.7); other: 51 (7.1); electromagnetic waves: 36 (5.0); genetic: 30 (4.2); food contaminants: 23 (3.2); reproductive/ hormones: 23 (3.2); obesity: 21 (2.9); ultraviolet waves: 16 (2.2); drinking: 12 (1.7); stress: 4 (0.6); physical activity: 2 (0.3)	-	-	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Liu et al (2010)	China	8 years (2000-2007)	Most widely read Chinese newspapers	Skin	134	-	<i>[Only % provided n are calculated]</i> Treatment: 134 (42), prevention: 29 (22), diagnosis: 27 (20), causes and development: 13 (10) Other: 8 (6)
Macdonald et al (2018)	UK	24 months (Jan 2013-Dec 2014)	National (n=8)	Breast, colorectal, prostate, lung	483	-	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Liu et al (2010)	-	-	-	-	-	-
Macdonald et al (2018)	-	-	<p><i>[Data calculated from 2013-14 time period only]</i></p> <p>Family history: 58 (12.0), diet: 20 (4.1), age: 49 (10.1), smoking: 34 (7.0), alcohol: 27 (5.6), environment: 8 (1.7)</p> <p>[Breast: Family history: 44 (15.3), diet: 32 (11.1), age: 24 (8.4), smoking: 9 (3.1), alcohol:16 (5.6), environment: 20.7.]</p> <p>[Prostate: 15 (13.6) Family history: 8 (7.3), diet: 5 (4.5), age: 15 (13.6), smoking: 2 (1.8), alcohol: 2 (1.8) , environment: 0.0]</p>	-	-	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
			[Lung: Family history: 3 (7.0), diet: 0 (0.0), age: 1 (0.0), smoking: 18 (41.9), alcohol: 0.0, environment: 6 (14.0)]			
			[Colorectal: Family history: 3 (7.1), diet: 14 (33.3), age: 9 (21.4), smoking: 5 (11.9), alcohol: 9 (21.4), environment: 0 (0.0)]			

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
MacDonald and Hoffman-Goetz (2001)	Canada (Ontario)	12 months (1991)	Local, high and low circulating (n=10)	All	1,027	Breast: 144 (14), leukaemia/lymphoma: 73 (7), brain/nervous system: 65 (6), liver/pancreas: 49 (5), lung: 44 (4), gastro-intestinal tract: 33 (3), other: <2	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
MacDonald and Hoffman-Goetz (2001)	Disease rates No inferential analyses undertaken, descriptives used. Concluded not to be representative	-	-	-	-	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
McDonnell et al (2008)	USA (California)	12 months (Jan-Dec 2006)	1 daily regional general audience and 1 daily regional Korean audience	All	Article frequency: 2,383 (1,380 general audience, 1,003 Korean audience) Content: 600 (300 general audience, 300 Korean audience)	Breast: 198 (14.3) general, 308 (30.7) ethnic, lung: 131 (9.5) general, 128 (12.8) ethnic, leukaemia: 93 (6.7) general, 126 (12.6) ethnic, prostate: 83 (6.0) general, 70 (7.0) ethnic, colon: 62 (4.5) general, 90 (9.0) ethnic, cervical: 31 (2.2) general, 31 (3.1) ethnic, skin: 37 (2.7) general, 33 (3.3) ethnic,	

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
McDonnell et al (2008)						liver: 24 (1.7) general, 93 (9.3) ethnic, stomach: 19(1.4) general, 97 (9.7) ethnic bladder: 6 (0.4) general, 10 (1.0) ethnic	

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Metcalfe et al (2010)	UK	7 months (19 th August 2008-22 nd March 2009)	National (n=18)	Jade Goody (cervical)	1203	-	-
Miyawaki et al (2017)	Japan	12 months (2011)	Daily national (n=5)	Lung, stomach, colon, breast, leukaemia, brain, thyroid, other, childhood.	5,314	<i>[Only n provided. % are calculated]</i> Lung: 575 (10.8), leukaemia: 331 (6.2), breast: 302 (5.6), liver: 261 (4.9), colon: 228 (4.3), thyroid: 206 (3.9), stomach: 206 (3.9), cervical: 170 (3.2), prostate: 145 (2.7), childhood: 141 (2.7)	<i>[Only n provided. % are calculated]</i> Social issues: 797 (15.0), information: 762 (14.3), Great East Japan Earthquake: 653 (12.3), celebrities: 650 (12.2), research: 339 (6.4), industry: 232 (4.4), medical system/policies: 161 (3.2), health care provider/medical institution: 147 (2.8), risk: 123 (2.3), medical expenses: 69 (1.3), medicine: 68 (1.3)

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Metcalfe et al (2010)	-	116 (9.6) (cervical screening: 99 (8.2), HPV vaccine: 36 (3.0), lifestyle: 17 (1.4), condom use: 8 (0.7), smoking: 7 (0.6)	-	-	-	-
Miyawaki et al (2017)	Disease rates, Disease burden No inferential analyses undertaken, descriptives used. Concluded not to be representative	-	-	-	-	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Moriarty and Stryker (2008)	USA	12 months (2003)	Top US mainstream (n=44)	All	2,448	-	-
Musso and Wakefield (2009)	Canada	6 non-consecutive months (Jan, May, Aug 2003; Apr, Sept, Dec 2004)	Widest circulating English language newspapers in Canada (n=3)	All	254	-	Risk factors: 90 (32.3), treatment: 32 (12.6), detection and screening: 30 (11.8), fundraising: 30 (11.8), health care system: 19 (7.5), coping: 18 (7.1), economics: 13 (5.1), other: 13 (5.0) background information: 9 (3.5), side effects: 3 (1.2), gender issues: 2 (0.8), prevention: 2 (0.8)

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Moriarty and Stryker (2008)	-	Screening: 589 (24.0) Prevention: 466 (19.0) (of these: diet: 141 (30.0), tobacco: 116 (25.0), sun: 69 (14.8), exercise: 57 (12.2), alcohol: 25 (5.3), sexual practices: 15 (3.2))	-	-	-	screening efficacy: 197 (8.0), Efficacy:160 (6.5) <i>[Only % provided, n is calculated for the below]</i> Among these: diet: 26 (16.31), sun: 18 (10.94), tobacco: 6 (3.65), exercise: 5 (3.43), sexual activity: 1 (0.86), alcohol: 1 (0.43)]
Musso and Wakefield (2009)	-	-	-	-	-	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Slater et al (2008)	USA	24 months (2002 and 2003)	Local (n=1064; 18 sampled per day) and national (n=1)	25 types (specifics not listed) or general	677	Breast: 126 (29.6), colon: 48 (11.3), prostate: 41 (9.6), lung: 37 (8.7), brain: 30 (7.0), leukaemia: 27 (6.3), pancreatic: 14 (3.3), pharyngeal: 13 (3.1), cervical: 12 (2.8), bone: 11 (2.6), liver: 11 (2.6), lymphoma: 11 (2.6), other: 10.5	Treatment: 118 (17.4), causes: 114 (16.8), death: 104 (15.4), survivor: 98 (14.5), funding: 74 (10.9), detection/diagnosis: 68 (10.0), industry: 52 (7.7), prevention: 49 (7.2)

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Slater et al (2008)	<p>Disease burden</p> <p>Incidence – greater coverage than stats: Breast ($Z = 6.37$, $p < .001$),</p> <p>colon ($Z = 1.82$, $p < .05$),</p> <p>brain cancer ($Z = 9.34$, $p < .001$),</p> <p>leukemia ($Z = 4.80$, $p < .001$),</p> <p>cervical cancer ($Z = 3.73$, $p < .001$),</p> <p>liver ($Z = 2.11$, $p < .05$)</p> <p>Less coverage: Prostate cancer ($Z = -4.73$, $p < .001$),</p> <p>lung cancer ($Z = -3.35$, $p < .001$),</p> <p>lymphoma ($Z = -2.35$, $p < .01$)</p>	-	-	-	-	

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Slater et al (2008)	<p>Mortality – greater coverage than stats:</p> <p>Breast cancer ($Z = 16.26, p < .001$),</p> <p>prostate cancer ($Z = 3.24, p < .001$),</p> <p>brain cancer ($Z = 5.48, p < .001$),</p> <p>leukemia ($Z = 1.91, p < .05$),</p> <p>pharyngeal cancer ($Z = 2.72, p < .005$),</p> <p>cervical cancer ($Z = 4.63, p < .001$)</p> <p>Lung cancer ($Z = -10.24, p < .001$),</p> <p>pancreatic cancer ($Z = -2.41, p < .01$),</p> <p>lymphoma ($Z = -2.27, p < .05$)</p>	-	-	-	-	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Smith et al (2010)	USA	4 months (Jun-Sep 2005)	National daily, (n=12), local (n=2), national news magazine (n=3)	All	517	-	Treatment: 128 (25), survivorship: 97 (19), secondary prevention: 79 (15), causes: 69 (13), funding and fundraising: 56 (11), primary prevention: 44 (9), cancer trends: 27 (5), knowledge, beliefs and attitudes: 13 (3), tertiary prevention: 4 (1)

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Smith et al (2010)	-	-	-	-	-	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Stryker et al (2007)	USA	4 months (Jun-Sep 2005)	National daily, (n=12), local (n=2), national news magazine (n=3)	All	517	-	Treatment: 128 (25), survivorship: 97 (19), secondary prevention: 79 (15), causes: 69 (13), funding and fundraising: 56 (11), primary prevention: 44 (9), cancer trends: 27 (5), knowledge, beliefs and attitudes: 13 (3), tertiary prevention: 4 (1)

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Stryker et al (2007)	Disease rates No inferential analyses undertaken, descriptives used. Concluded not to be representative, although the most common cancers did receive the most coverage	<i>[Only % provided. n are calculated]</i> Screening 1001 (18.8) general, 198 (35.0) ethnic, diet 298 (5.6) general, 104 (18.4) ethnic, tobacco 277 (5.2) general, 71 (12.6) ethnic, medication 170 (3.2) general, 14 (2.4) ethnic, sun 128 (2.4) general, 10 (1.8) ethnic, exercise 107 (2.0) general, 47 (8.4) ethnic, surgery 64 (1.2) general, 10 (1.8) ethnic,	-	-	-	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Stryker et al (2007)		alcohol 53 (1.0) general, 21 (3.7) ethnic, sexual activity 32 (0.6) general, 4.5 (0.8) ethnic alt. medicine 27 (0.5) general, 6 (1.1) ethnic	-	-	-	-

Author	Country	Time period	Newspaper type	Cancers investigated	Sample size (cancer articles)	Cancer sites featured articles n (%)	Main focus of cancer articles n (%)
Williamson et al (2011)	UK	12 months (2009)	Top national (n=10)	Breast, lung, colorectal, prostate, non-Hodgkin's lymphoma, melanoma, bladder, kidney, oesophagus, stomach	5,832	<i>[Only n presented. % are calculated]</i> Breast: 1797 (30.8), prostate: 1136 (19.4), colorectal: 953 (16.0), oesophagus: 92 (1.6) non-Hodgkin's lymphoma: 46 (0.8), Lung: not presented, melanoma: not presented, bladder: not presented, kidney: not presented, stomach: not presented.	-

Author	Comparison of frequency	Prevention n (%)	Risk factors n (%)	Warning signs/symptoms n (%)	Cancer statistics n (%)	Efficacy, Mobilisation and signposting n (%)
Williamson et al (2011)	Disease rates No inferential analyses undertaken, graphical presentation only. . Concluded not to be representative, although the most common cancers did receive the most coverage	-	-	-	-	-

APPENDIX 4: INTERVIEW CONSENT FORM



Representation of cancer awareness messages in various media

CONSENT FORM

Please insert your initials in the boxes provided to indicate 'YES' to the following statements:

I have read and understood the information sheet dated 19.02.16 (version 1.2) and I have had the opportunity to ask questions	
I agree to the interview being audio-recorded and/or written notes being made (please delete as appropriate)	
I understand that I am free to not answer any questions during the interview and may stop the interview at any point	
I understand I will be able to withdraw from the study within a one month period (post interview) at which point any information given including contact details, personal information and the interview recording/transcript will be destroyed.	
I understand that any details that might identify me will not be included in reports or other publications produced from the study	
I agree that anonymised data created as a result of my participation in the research project can be shared openly with other researchers, research students and with members of the public in published research (open access)	
I agree to selected, anonymised data being archived in the University of Central Lancashire's data repository or other reputable repository on the understanding that any guarantees made to me about confidentiality will be maintained	
I understand that other researchers and members of the public will have access to this archived, anonymous data and may use quotes from the study in publications, reports, web pages, and other outputs, although they will not be attributable to me	
I agree to take part in the interview	

Name (PRINT):	
Signature:	Date:
Name of researcher taking consent:	
Signature:	Date:

I would like to receive a copy of the key themes Yes/No I would like to receive them by Email/Post I consent to my details being held so that I may be contacted about follow-up focus groups Yes/No	Contact details:
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APPENDIX 5: BASE INTERVIEW SCHEDULES

Journalists and editors interview schedule

- Please could you tell me a little bit about what you do?
- In your experience, where do articles about cancer come from?
 - How do you tend to acquire cancer awareness messages designed for public dissemination?
- How would you go about following these up and developing them into a story?
- Within the environment here at [newspaper], what would you say is the perceived importance of cancer as a news item?
- Would there be any difference in terms of importance between different types of cancer stories, e.g. potential cures, human interest stories, those promoting a campaign etc.?
- When it comes to putting the story together, what kind of pressures are you operating under?
 - Prompts: In house, political, personal, targets, time, resources
- What influences your journalistic decisions when it comes to deciding what should be included in the article?
 - Prompts: Personal experience or personal feelings towards cancer, expectations, interests, training, press release content
- What influences the actual words you use when writing the article?
 - Prompts: press releases, management, personal, the way the subject matter is discussed in general
- When it comes to writing about cancer, do you have any access to any training or guidelines?
- What role do you see for yourself in terms of disseminating cancer awareness messages?
 - Prompts: is it part of your role as a journalist? Should it be? Do personal interests or feelings have a bearing?
- If as the result of this study I came back in a few years' time with some guidelines for writing a story about cancer awareness which suggested a change in practice, do you think that there would be scope within the newspaper or even the industry for changing current practice if necessary?
 - What do you think would influence the success of implementing any such guidelines?

Press officers interview schedule

- Please could you tell me a little bit about what you do and what sort of PR you're involved in?
- Where do the press releases initially come from? What's the brief?
- Do you put ones out specific to campaign? Talk about these mostly but other examples of course welcome. What are your intentions when putting together a press release?
 - Prompts: To inform? To give the journalists and editors something to use? Who is it aimed at? Do you think beyond the journalists and editors?
- Where does the information that you put in the press release comes from?
- How do you go about constructing the message?
 - Prompts: is it tested on anybody? Which audience is in your mind when constructing the message?
- Are there certain words or phrases you particularly like to use? What influences your decisions about the message or the wording you use?
 - Prompts: In house issues, political, personal, targets, time, resources, audience
 - Case studies – how do you choose them?
- When you send a press release out to the press, what do you believe journalists/editors will do with the press release?
 - Prompts: Is this what you want to happen?
 - What if it isn't picked up as widely as you'd hope? Can you do anything to make it more appealing? What kind of things?
- Could you tell me about your experiences of how the press have reported on your PR/messages?
- Do you have a preference where a story based on your press release goes? Paper, online or any particular section?
- If as the result of this study I came back in a few years' time with some guidelines for writing a cancer awareness press release which suggested a change in practice, do you think that there would be scope within your organisation or even the industry for changing current practice if necessary?
 - What do you think would influence the success of implementing any such guidelines?

Subeditors interview schedule

- Question to clarify role of subeditor and how much of the process they see/influence
- What are you looking for in a good (cancer) article?
 - Prompts: Subject
 - Would you ever need to bounce an article back?
 - What changes might you make?
- What kind of pressures are you operating under?
 - Is one of them political? Might these be any different at your level than the journalists' level?
- Headlines – how do you come up with them?
 - What are you trying to do with a headline?
- Language – battle metaphor and fear. What do you think about their use and would you change an article draft from a journalist to either use or exclude these?
- From my conversations it would seem that number of organisations see newspapers as a place to disseminate public health messages – what is your view on it?
 - When might you remove content related to these - symptom lists for example?
 - Would you ever request that more educational content is put in?
- Should newspapers listen to people with cancer and their perceptions regarding language use or story content?
- Would you be looking for anything different for an online story than a print story?
- Might online articles be a better for public health messages than print editions?

APPENDIX 6: ETHICAL APPROVAL LETTER



12th April 2016

Paola Dey/Neil Cook
School of Dentistry
University of Central Lancashire

Dear Paola/Neil,

Re: STEMH Ethics Committee Application
Unique Reference Number: STEMH 430

The STEMH ethics committee has granted approval of your proposal application '**Representation of cancer awareness messages in various media**'. Approval is granted up to the end of project date* or for 5 years from the date of this letter, whichever is the longer.

It is your responsibility to ensure that:

- the project is carried out in line with the information provided in the forms you have submitted
- you regularly re-consider the ethical issues that may be raised in generating and analysing your data
- any proposed amendments/changes to the project are raised with, and approved, by Committee
- you notify roffice@uclan.ac.uk if the end date changes or the project does not start
- serious adverse events that occur from the project are reported to Committee
- a closure report is submitted to complete the ethics governance procedures (Existing paperwork can be used for this purposes e.g. funder's end of grant report; abstract for student award or NRES final report. If none of these are available use [e-Ethics Closure Report Proforma](#)).

Yours sincerely,

A handwritten signature in black ink, appearing to read 'KBB' followed by a stylized flourish.

Kevin Butt
Vice Chair
STEMH Ethics Committee

* for research degree students this will be the final lapse date

NB - Ethical approval is contingent on any health and safety checklists having been completed, and necessary approvals as a result of gained.

APPENDIX 7: PARTICIPANT INFORMATION SHEET

7.1 Journalist/editor



Representation of cancer awareness messages in various media

Information Sheet

Before you decide if you would like to take part, it is important for you understand why the work is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. If there is anything that is not clear or if you would like more information please contact us on the details provided at the end of the information sheet.

Why is this work being done?

This study forms part of the programme of studies for a PhD being undertaken by the research student at the University of Central Lancashire.

Research has shown that there are gaps in the public's cancer awareness in the UK. The UK Government has therefore invested heavily in public cancer awareness campaigns (Be Clear on Cancer) that have included a mass media component. The campaign evaluations have mostly considered the reach of the campaigns and the number of people visiting their GP with key signs and symptoms. However, there has been no evaluation of how the intended message has been represented in the print media and/or how they are perceived by readers.

Some research has been carried out in non-health-related fields which has looked at headline choices and how articles are framed, however they have tended to make inferences from the articles themselves, rather than talking to the people who wrote them. In the few studies which have used interviews, only a small number of findings have been reported in order to supplement the inferences. In addition, health-related articles may be subject to different considerations.

Therefore, this study is investigating the decision making process and important influences surrounding the production of cancer-related newspaper articles through a number of semi-structured interviews with press officers, newspaper editors and journalists (minimum 12, practical maximum of 20).

The findings will be used to write up the PhD thesis. The results may also be presented at conferences and may be written up for publication purposes.

Why have I been invited to participate?

You have been selected to participate because you are a journalist or editor at a regional or national newspaper in the UK who has been involved in the production of health-related stories.

What will I be asked to do?

If you agree to take part, this will mean taking part in an individual interview. This will take place either face to face or via the telephone or Skype to suit your preference. All interviews will be organised at a convenient time and location to suit you, and will take up to 45 minutes to complete.

During the interview, basic information about your position, job role and expertise will be recorded. The interview questions will explore issues such as the production of cancer-related newspaper articles and the pressures and influences associated with this, your opinions about cancer awareness and its importance within the media and training or guidance regarding cancer which is currently available to you.

With your permission the interview will be audio-recorded, or if preferred detailed notes will be taken.

At the start of the interview, the researcher will answer any questions you may have and provide you with a consent form to sign indicating that you wish to take part.

Please note that a summary of the key points to emerge from the study can be forwarded to you via opt-in on the consent form.

You will also be given the opportunity to take part in a follow-up focus group to discuss the findings of the study and what scope there may be for developing or implementing guidelines based on the results. At the bottom of the consent form you may opt in or out of us to keeping your contact details in order to follow you up. If for any reason the follow-up focus groups do not run, you will be informed and your contact details destroyed immediately afterwards. A decision to opt out will not be reported or used in any other way.

Who has approved the study?

In order to make sure that the study that is being proposed is ethical the project has been reviewed by the Science, Technology, Engineering, Medicine and Health (STEMH) Ethics Committee at the University of Central Lancashire.

What will happen to the data?

All data will be kept secure in a lockable filing cabinet, and on password protected files on a computer. All anonymised transcribed data will be kept for a minimum of 5 years in line with University policy and will then be destroyed. Selected, anonymised data may be archived in the University of Central Lancashire's data repository or other reputable repository on the understanding that any guarantees made to you about confidentiality will be maintained.

Will the data be kept confidential?

All information will be kept confidential. During the transcription process, transcripts will be anonymised. Whilst anonymised quotes will be used in the final report or publications produced, these will not be directly attributable to any individual. We ask that you do not disclose your name and that of other people during the interviews, or voice any professional concerns about other professionals during the interviews.

Do I have to take part?

No - it is up to you to decide whether or not to take part.

Even if you agree to participate you are still free to withdraw at any time up until one month after the interview without giving a reason. If you choose to withdraw, any information given including contact details, personal information and the interview recording/transcript will be destroyed. During the interview, you are free to not answer any of the questions presented and leave the interview at any time.

Please contact the research student for more information.

A decision to withdraw, or a decision not to take part, will not be recorded or reported within any write-ups.

What would participating mean for me?

- To take part in an interview at a convenient time and location
- The interview will be audio-recorded and/or detailed notes taken (following consent)

Are there any benefits or risks of taking part?

There are no direct benefits to you if you choose to take part in the study.

As these interviews are about the production of cancer-related articles, there is the possibility that the conversation may involve reflection of personal/familial experiences of cancer which some people may find upsetting. You are, of course, free to not discuss anything that you do not want to, however you can find the contact details of Macmillan Cancer Support and Samaritans if you wish to talk to someone and the web address of Cancer Research UK if you wish to look for more information about cancer below.

Macmillan Cancer Support: 0808 808 00 00 (Mon-Fri, 9am-8pm); www.macmillan.org.uk

Samaritans: 116 123

Cancer Research UK: www.cancerresearchuk.org

What do I do if I have any concerns or issues about this study?

If you have any concerns about the study, in particular about the conduct of the study or the individuals involved, you should contact the University Officer for Ethics at OfficerForEthics@uclan.ac.uk. Please provide the study name or description, the name of the research student (Neil Cook) and the substance of your complaint.

Thank you for reading this information sheet and considering taking part in this study.

For further information on the study

Contact:

- Neil Cook (Research Student) 01772 893409 NCook2@uclan.ac.uk
- Professor Paola Dey (Professor of Public Health) 01772 892782 MPDey@uclan.ac.uk

7.2 Press officer



Representation of cancer awareness messages in various media

Information Sheet

Before you decide if you would like to take part, it is important for you understand why the work is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. If there is anything that is not clear or if you would like more information please contact us on the details provided at the end of the information sheet.

Why is this work being done?

This study forms part of the programme of studies for a PhD being undertaken by the research student at the University of Central Lancashire.

Research has shown that there are gaps in the public's cancer awareness in the UK. The UK Government has therefore invested heavily in public cancer awareness campaigns (Be Clear on Cancer) that have included a mass media component. The campaign evaluations have mostly considered the reach of the campaigns and the number of people visiting their GP with key signs and symptoms. However, there has been no evaluation of how the intended message has been represented in the print media and/or how they are perceived by readers.

Some research has been carried out in non-health-related fields which has looked at headline choices and how articles are framed, however they have tended to make inferences from the articles themselves, rather than talking to the people who wrote them. In the few studies which have used interviews, only a small number of findings have been reported in order to supplement the inferences. In addition, health-related articles may be subject to different considerations.

Therefore, this study is investigating the decision making process and important influences surrounding the production of cancer-related newspaper articles through a number of semi-structured interviews with press officers, newspaper editors and journalists (minimum 12, practical maximum of 20).

The findings will be used to write up the PhD thesis. The results may also be presented at conferences and may be written up for publication purposes.

Why have I been invited to participate?

You have been selected to participate because you are a press release officer who has been involved in the production of health-related press releases.

What will I be asked to do?

If you agree to take part, this will mean taking part in an individual interview. This will take place either face to face or via the telephone or Skype to suit your preference. All interviews will be organised at a convenient time and location to suit you, and will take up to 45 minutes to complete.

During the interview, basic information about your position, job role and expertise will be recorded. The interview questions will explore issues such as the intentions and production of press releases, the construction of key messages, influences on your decisions and your views about what happens to the press release once it reaches the newsroom

With your permission the interview will be audio-recorded, or if preferred detailed notes will be taken.

At the start of the interview, the researcher will answer any questions you may have and provide you with a consent form to sign indicating that you wish to take part.

Please note that a summary of the key points to emerge from the study can be forwarded to you via opt-in on the consent form.

You will also be given the opportunity to take part in a follow-up focus group to discuss the findings of the study and what scope there may be for developing or implementing guidelines based on the results. At the bottom of the consent form you may opt in or out of us to keeping your contact details in order to follow you up. If for any reason the follow-up focus groups do not run, you will be informed and your contact details destroyed immediately afterwards. A decision to opt out will not be reported or used in any other way.

Who has approved the study?

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Will the data be kept confidential?

All information will be kept confidential. During the transcription process, transcripts will be anonymised. Whilst anonymised quotes will be used in the final report or publications produced, these will not be directly attributable to any individual. We ask that you do not disclose your name and that of other people during the interviews, or voice any professional concerns about other professionals during the interviews.

Do I have to take part?

No - it is up to you to decide whether or not to take part.

Even if you agree to participate you are still free to withdraw at any time up until one month after the interview without giving a reason. If you choose to withdraw, any information given including contact details, personal information and the interview recording/transcript will be destroyed. During the interview, you are free to not answer any of the questions presented and leave the interview at any time.

Please contact the research student for more information.

A decision to withdraw, or a decision not to take part, will not be recorded or reported within any write-ups.

What would participating mean for me?

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As these interviews are about the production of cancer-related articles, there is the possibility that the conversation may involve reflection of personal/familial experiences of cancer which some people may find upsetting. You are, of course, free to not discuss anything that you do not want to, however you can find the contact details of Macmillan Cancer Support and Samaritans if you wish to talk to someone and the web address of Cancer Research UK if you wish to look for more information about cancer below.

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If you have any concerns about the study, in particular about the conduct of the study or the individuals involved, you should contact the University Officer for Ethics at OfficerForEthics@uclan.ac.uk. Please provide the study name or description, the name of the research student (Neil Cook) and the substance of your complaint.

Thank you for reading this information sheet and considering taking part in this study.

For further information on the study

Contact:

- Neil Cook (Research Student) 01772 893409 NCook2@uclan.ac.uk
- Professor Paola Dey (Professor of Public Health) 01772 892782 MPDey@uclan.ac.uk

APPENDIX 8: CODING

8.1: First draft coding scheme based on interviews 1-4, 5;7,14

Topic	Stories (general)	Case studies	Cancer	Journalism	Content	Language	PR	Miscellaneous
Codes	<i>Newsworthiness /types of stories written/followed up (inc. stats?)</i>	<i>Importance of a case study</i>	<i>Public perceptions</i>	<i>How (certain) publications work</i>	<i>What the reader wants</i>	<i>Use of battle language</i>	<i>Understanding of what is needed</i>	<i>Why write about health?</i>
	<i>Where stories come from, pool of stories available</i>	<i>Origin/building relationships/ trust</i>		<i>Aims of health journalists</i>	<i>What works (or not), readership figures</i>	<i>Reasons/ justification for language and everyday use</i>	<i>Content of various press releases</i>	<i>What would be useful for journalists?</i>
	<i>Why people want stories to be featured</i>	<i>What is a good case study?/ Celebrities</i>		<i>Challenging journalists/ telling them what to do/ guidelines</i>	<i>Personal situation as an influence</i>	<i>Journey metaphor</i>	<i>Agendas/ purpose</i>	<i>Role of the reader/passivity</i>
	<i>Cancer as a story</i>	<i>Practicalities</i>		<i>Varying knowledge between journalists/in the team</i>	<i>Sources of (cancer) information</i>	<i>Implications of/reactions to various metaphors</i>	<i>What should a campaign message be?</i>	<i>Involvement with community</i>
	<i>Process and colleagues</i>			<i>4th estate/running own campaigns</i>	<i>Decisions around content to include/exclude, what is the meat/most</i>	<i>Hyping?</i>	<i>Restrictions</i>	<i>Why write about health?</i>

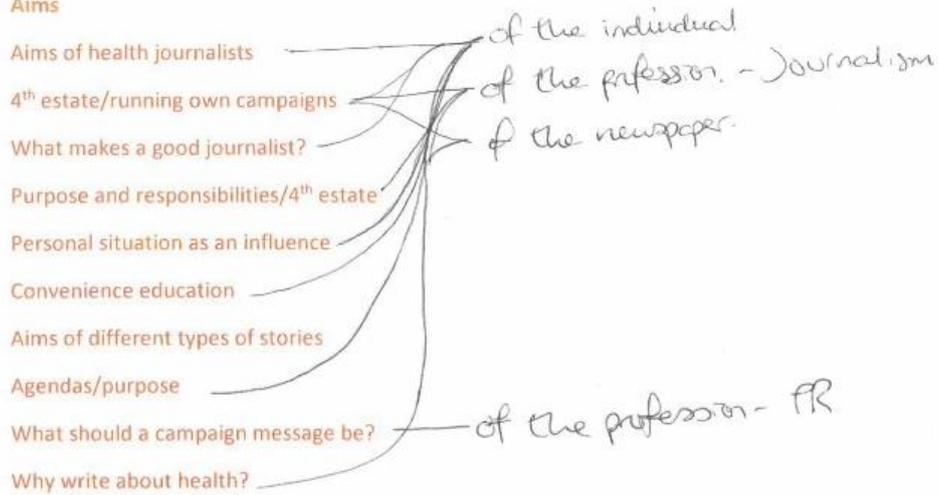
					<i>important part of the story?</i>			
	<i>What should be covered</i>			<i>Power</i>	<i>Reporting quality (and critiquing, not raising hopes unjustly)</i>	<i>'cancer' as a word</i>	<i>What journalists want</i>	
	<i>Format/ structure</i>			<i>What makes a good journalist?</i>	<i>How to make a story useful to readers</i>	<i>Drug names</i>	<i>How PR works</i>	
	<i>Reusing</i>			<i>Scope for change</i>	<i>Reaching (and being aware of) a particular audience</i>	<i>How much to journalists think about it?</i>	<i>Language</i>	
	<i>Newspaper-specific issues</i>			<i>Online journalism: Differences</i>	<i>Headlines</i>	<i>Influences on language (inc. other staff)</i>	<i>Links with PR</i>	
				<i>Online journalism: Pressures</i>	<i>Nuances?</i>	<i>Variation between newspapers</i>		
				<i>Online journalism: Linking/ signposting</i>	<i>Signposting (purpose?)</i>	<i>Issues of having to simplify</i>		
				<i>Online journalism: Online metrics</i>	<i>What the editor/paper wants</i>			
				<i>Pressures: Time</i>	<i>Convenience education</i>			
				<i>Pressures: To publish (fresh content?)</i>	<i>Aims of different types of stories</i>			

				<i>Pressures: Political/editorial line</i>	<i>Norms or requirements, suggestions from colleagues at the paper (?)</i>			
				<i>Pressures: Money/commercia l/dissemination (tone)</i>	<i>Space to evaluate practice</i>			
				<i>Pressures: To be new/unique</i>				
				<i>Pressures: Finding a story</i>				
				<i>Pressures: Collating information</i>				
				<i>Pressures: Differences between newspapers</i>				
				<i>Pressures: Space</i>				
				<i>Pressures: Other stories (inc. previous cancer ones)</i>				
				<i>Purpose and responsibilities/4th estate</i>				

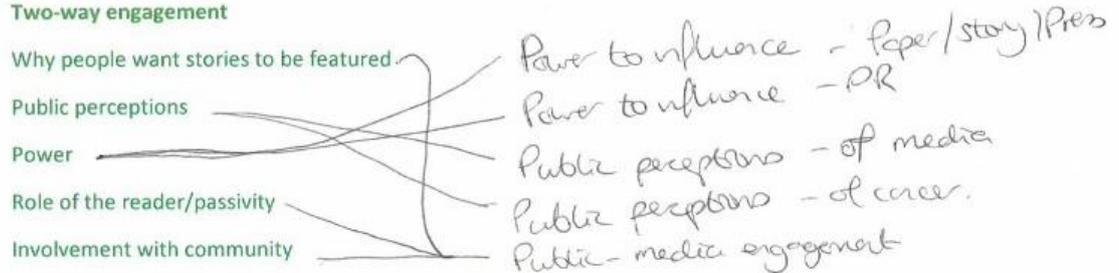
				<i>Roles/changes in the profession</i>				
--	--	--	--	--	--	--	--	--

8.2: Example step between the second and third coding scheme

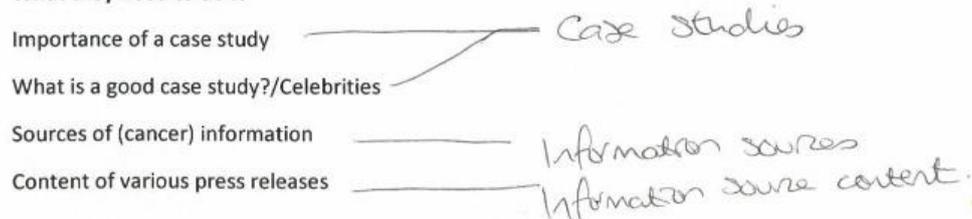
Aims



Two-way engagement



What they need to do it



How they do it and why

- Newsworthiness/types of stories written/followed up (inc. stats?)
- Where stories come from, pool of stories available
- Cancer as a story
- Process and colleagues

APPENDIX 9: SCREENSHOTS OF WMATRIX OUTPUT

9.1: Top 50 results of key POS analysis across all newspaper articles

		Item	O1	%1	O2	%2	LL	LogRatio
1	List1	Concordance PPIS1	3525	1.60	6898	0.71 +	1369.10	1.17
2	List1	Concordance NPD1	628	0.28	408	0.04 +	894.06	2.76
3	List1	Concordance NPM1	1049	0.48	1231	0.13 +	893.13	1.90
4	List1	Concordance APPGE	5443	2.47	14933	1.54 +	815.04	0.68
5	List1	Concordance PPHS1	3257	1.48	7823	0.81 +	762.51	0.87
6	List1	Concordance NNT2	1094	0.50	1905	0.20 +	532.16	1.33
7	List1	Concordance MC	4425	2.01	13154	1.36 +	470.14	0.56
8	List1	Concordance VBDZ	2975	1.35	8369	0.86 +	403.16	0.64
9	List1	Concordance RG	1567	0.71	3762	0.39 +	367.37	0.87
10	List1	Concordance TO	4426	2.01	14041	1.45 +	334.79	0.47
11	List1	Concordance NN	1300	0.59	3059	0.32 +	322.87	0.90
12	List1	Concordance CS	2537	1.15	7380	0.76 +	297.82	0.59
13	List1	Concordance PPH1	2652	1.20	8211	0.85 +	229.59	0.50
14	List1	Concordance VVG	4068	1.84	13564	1.40 +	224.93	0.40
15	List1	Concordance VV0	3377	1.53	11012	1.14 +	216.30	0.43
16	List1	Concordance VHD	1335	0.61	3605	0.37 +	212.31	0.70
17	List1	Concordance VVI	6862	3.11	24649	2.55 +	207.70	0.29
18	List1	Concordance VBM	387	0.18	673	0.07 +	188.69	1.34
19	List1	Concordance PPIO1	617	0.28	1373	0.14 +	178.04	0.98
20	List1	Concordance PNQS	842	0.38	2093	0.22 +	177.67	0.82
21	List1	Concordance PN1	867	0.39	2193	0.23 +	173.07	0.80
22	List1	Concordance DAR	446	0.20	875	0.09 +	172.30	1.16
23	List1	Concordance VHG	238	0.11	336	0.03 +	160.81	1.64
24	List1	Concordance VVD	6146	2.79	22749	2.35 +	136.15	0.25
25	List1	Concordance RRR	462	0.21	1066	0.11 +	121.16	0.93
26	List1	Concordance VHZ	964	0.44	2901	0.30 +	96.54	0.54
27	List1	Concordance VH0	976	0.44	2971	0.31 +	92.30	0.53
28	List1	Concordance VVGK	128	0.06	186	0.02 +	83.05	1.59
29	List1	Concordance IF	2458	1.11	8765	0.91 +	79.70	0.30
30	List1	Concordance JJT	399	0.18	1011	0.10 +	79.20	0.79
31	List1	Concordance VBG	345	0.16	847	0.09 +	75.65	0.84
32	List1	Concordance VHN	135	0.06	218	0.02 +	74.63	1.44
33	List1	Concordance CCB	1290	0.58	4282	0.44 +	73.55	0.40
34	List1	Concordance VDI	224	0.10	483	0.05 +	69.92	1.03
35	List1	Concordance RA	108	0.05	167	0.02 +	63.92	1.51
36	List1	Concordance VBZ	2998	1.36	11171	1.15 +	61.49	0.24
37	List1	Concordance VD0	431	0.20	1262	0.13 +	49.12	0.58
38	List1	Concordance XX	1707	0.77	6186	0.64 +	47.39	0.28
39	List1	Concordance PPHS2	1062	0.48	3693	0.38 +	42.84	0.34
40	List1	Concordance VBR	1497	0.68	5435	0.56 +	40.79	0.27
41	List1	Concordance NNU21	33	0.01	30	0.00 +	36.30	2.27
42	List1	Concordance IW	1908	0.87	7154	0.74 +	36.30	0.23
43	List1	Concordance PPH01	584	0.26	1917	0.20 +	35.85	0.42
44	List1	Concordance JJR	619	0.28	2061	0.21 +	34.56	0.40
45	List1	Concordance VHI	538	0.24	1763	0.18 +	33.39	0.42
46	List1	Concordance NNU22	23	0.01	17	0.00 +	29.92	2.57
47	List1	Concordance VDG	80	0.04	161	0.02 +	29.27	1.13
48	List1	Concordance ND1	240	0.11	700	0.07 +	27.84	0.59
49	List1	Concordance VVZ	1980	0.90	7602	0.79 +	27.45	0.19
50	List1	Concordance NNO2	66	0.03	139	0.01 +	21.79	1.06

9.2: Example concordance lines for semantic tag *knowledgeable* in all campaign articles

to be flushed away lightly . A CAMPAIGN to raise	awareness	of cancer symptoms gave health advice to people in	1
pping Centre , Gloucester , for two days to raise	awareness	amongst residents of a key symptom for both bladde	2
lth England , which is behind the campaign , said	awareness	of cancer symptoms is crucial . She said : " Blood	3
their pee , to go to their doctor straight away .	Awareness	is crucial , because the earlier cancer is diagnos	4
ncer increases the chances of survival , so being	aware	of the symptoms is crucial . For those diagnosed a	5
cross England for five weeks . Leaflets providing	information	on bladder and kidney cancers were distributed and	6
Be Clear on Cancer campaign has been supported by	well-known	figures who are also survivors of the disease . Ia	7
the sooner you speak to your GP , the sooner you	know	what you 're dealing with . " Gloucestershire Echo	8
the sooner you speak to your GP , the sooner you	know	what you 're dealing with . " GRAPHIC : Actor Ian	9
ushed away lightly ; CANCER . A CAMPAIGN to raise	awareness	of cancer symptoms gave health advice to people in	10
pping Centre , Gloucester , for two days to raise	awareness	amongst residents of a key symptom for both bladde	11
lth England , which is behind the campaign , said	awareness	of cancer symptoms is crucial . She said : " Blood	12
their pee , to go to their doctor straight away .	Awareness	is crucial , because the earlier cancer is diagnos	13
ncer increases the chances of survival , so being	aware	of the symptoms is crucial . For those diagnosed a	14
cross England for five weeks . Leaflets providing	information	on bladder and kidney cancers were distributed and	15
Be Clear on Cancer campaign has been supported by	well-known	figures who are also survivors of the disease . Ia	16
s ' advice at shops . A BLADDER and kidney cancer	awareness	roadshow is dropping in on www.Middlesbrough.Be Cl	17
ncer increases the chances of survival , so being	aware	of the symptoms is crucial . For those diagnosed a	18
ch 24 , 2016 Thursday . Bladder and kidney cancer	awareness	roadshow visits Stretford . Stretford Mall , on Ma	19
ford Mall , on March 26 and 28 . It aims to raise	awareness	among residents of blood in pee as a key symptom f	20
ncer increases the chances of survival , so being	aware	of the symptoms is crucial . For those diagnosed a	21
event , leaflets will be distributed that provide	information	on bladder and kidney cancers . A nurse will also	22
evon Gazette . March 23 , 2016 Wednesday . Cancer	awareness	roadshow in Bideford . BIDEFORD : A bladder and ki	23
Bideford . BIDEFORD : A bladder and kidney cancer	awareness	roadshow will visit Atlantic Village today (Wedne	24
ire Standard . March 23 , 2016 Wednesday . Health	experts	visit Gloucestershire with 'simple message' on how	25
'simple message' on how to combat cancer . HEALTH	experts	will visit Gloucestershire tomorrow and Friday to	26
isit Gloucestershire tomorrow and Friday to raise	awareness	for bladder and kidney cancer . Latest figures sho	27
Leigh Journal . March 22 , 2016 Tuesday . Cancer	awareness	roadshow comes to shopping centre . A BLADDER and	28
to shopping centre . A BLADDER and kidney cancer	awareness	roadshow is visiting Spinning Gate Shopping Centre	29
istributed at the Leigh shopping centre providing	information	on bladder and kidney cancers and a nurse will be	30
onal Edition . Do n't flush danger signs . HEALTH	experts	are warning that we should all take a moment to "	31
. Do n't flush danger signs . HEALTH experts are	warning	that we should all take a moment to " look before	32
he Be Clear On Cancer campaign is aiming to raise	awareness	- and decrease the instances of - kidney and bladd	33
your doctor but the issues persist , let your GP	know	. Recurring and persistent cystitis (urinary trac	34
onal Edition . Do n't flush danger signs . HEALTH	experts	are warning that we should all take a moment to "	35
. Do n't flush danger signs . HEALTH experts are	warning	that we should all take a moment to " look before	36
he Be Clear On Cancer campaign is aiming to raise	awareness	- and decrease the instances of - kidney and bladd	37
your doctor but the issues persist , let your GP	know	. Recurring and persistent cystitis (urinary trac	38
r , and around 640 people die annually . The good	news	is that the earlier these cancers are diagnosed ,	39
re you flush is a simple way to stay alert to the	warning	signs . If you do n't look you may not notice it .	40
, tell your doctor " . Geraldine Sinfield , 67 ,	knows	the importance of looking before you flush . In 20	41
onal Edition . Do n't flush danger signs . HEALTH	experts	are warning that we should all take a moment to "	42
. Do n't flush danger signs . HEALTH experts are	warning	that we should all take a moment to " look before	43
he Be Clear On Cancer campaign is aiming to raise	awareness	- and decrease the instances of - kidney and bladd	44
your doctor but the issues persist , let your GP	know	. Recurring and persistent cystitis (urinary trac	45
6 , 2016 Wednesday Edition 1 ; National Edition .	Awareness	roadshow . CLEVELAND Centre Middlesbrough , is hol	46
adshow tomorrow and Friday . It is hoped to raise	awareness	of " blood in pee " as a key symptom for both blad	47
onal Edition . Do n't flush danger signs . HEALTH	experts	are warning that we should all take a moment to "	48
. Do n't flush danger signs . HEALTH experts are	warning	that we should all take a moment to " look before	49
he Be Clear On Cancer campaign is aiming to raise	awareness	- and decrease the instances of - kidney and bladd	50

9.3: Example concordance lines for key word *awareness* in all campaign articles

not to be flushed away lightly . A CAMPAIGN to raise awareness of cancer symptoms gave health advice to people in Glo 1
 Shopping Centre , Gloucester , for two days to raise awareness amongst residents of a key symptom for both bladder an 2
 Health England , which is behind the campaign , said awareness of cancer symptoms is crucial . She said : " Blood in 3
 in their pee , to go to their doctor straight away . Awareness is crucial , because the earlier cancer is diagnosed , 4
 a flushed away lightly ; CANCER . A CAMPAIGN to raise awareness of cancer symptoms gave health advice to people in Glo 5
 Shopping Centre , Gloucester , for two days to raise awareness amongst residents of a key symptom for both bladder an 6
 Health England , which is behind the campaign , said awareness of cancer symptoms is crucial . She said : " Blood in 7
 in their pee , to go to their doctor straight away . Awareness is crucial , because the earlier cancer is diagnosed , 8
 signs ' advice at shops . A BLADDER and kidney cancer awareness roadshow is dropping in on www.Middlesbrough.Be Clear 9
 March 24 , 2016 Thursday . Bladder and kidney cancer awareness roadshow visits Stretford . Stretford Mall , on March 10
 tretford Mall , on March 26 and 28 . It aims to raise awareness among residents of blood in pee as a key symptom for b 11
 th Devon Gazette . March 23 , 2016 Wednesday . Cancer awareness roadshow in Bideford . BIDEFORD : A bladder and kidney 12
 in Bideford . BIDEFORD : A bladder and kidney cancer awareness roadshow will visit Atlantic Village today (Wednesday 13
 ll visit Gloucestershire tomorrow and Friday to raise awareness for bladder and kidney cancer . Latest figures show th 14
 . " Leigh Journal . March 22 , 2016 Tuesday . Cancer awareness roadshow comes to shopping centre . A BLADDER and kidn 15
 omes to shopping centre . A BLADDER and kidney cancer awareness roadshow is visiting Spinning Gate Shopping Centre tod 16
 . The Be Clear On Cancer campaign is aiming to raise awareness - and decrease the instances of - kidney and bladder c 17
 . The Be Clear On Cancer campaign is aiming to raise awareness - and decrease the instances of - kidney and bladder c 18
 . The Be Clear On Cancer campaign is aiming to raise awareness - and decrease the instances of - kidney and bladder c 19
 ch 16 , 2016 Wednesday Edition 1 ; National Edition . Awareness roadshow . CLEVELAND Centre Middlesbrough , is holding 20
 roadshow tomorrow and Friday . It is hoped to raise awareness of " blood in pee " as a key symptom for both bladder 21
 . The Be Clear On Cancer campaign is aiming to raise awareness - and decrease the instances of - kidney and bladder c 22
 . The Be Clear On Cancer campaign is aiming to raise awareness - and decrease the instances of - kidney and bladder c 23
 ough this may not seem like many people , by raising awareness we can bring these numbers down even further . Indeed 24
 e useful health advice . A bladder and kidney cancer awareness roadshow has been held in the Abbeygate Shopping Centr 25
 stwood and Chris Ryder of Public Health England raise awareness of bladder and kidney cancer in the Abbey gate Shoppin 26
 non in the over 50s . " The aim is to increase public awareness of key cancer symptoms and to encourage people with th 27
 ng The Octagon shopping centre , in Burton , to raise awareness among residents of blood in pee as a key symptom for b 28
 ease . Public Heath England 's campaign aims to raise awareness of a key symptom for both bladder and kidney cancers - 29
 said : " It 's vital that we all do our bit to raise awareness that blood in pee could be an early sign of bladder or 30
 ease . Public Heath England 's campaign aims to raise awareness of a key symptom for both bladder and kidney cancers - 31
 said : " It 's vital that we all do our bit to raise awareness that blood in pee could be an early sign of bladder or 32
 aign arrives in Hillsborough . A roadshow , to raise awareness of the symptoms of bladder and kidney cancer , will be 33
 ng The Octagon shopping centre , in Burton , to raise awareness among residents of blood in pee as a key symptom for b 34
 Public Health England holds roadshow in Sale to raise awareness of cancer . ON March 1 AND 2 the Be Clear on Cancer , 35
 coming to The Square , Town Square , Sale , to raise awareness of the key symptom of bladder and kidney cancer - bloo 36
 it is an area Public Health England is keen to raise awareness in . At each of the events leaflets will be distribute 37
 ton on Saturday March 5 and Sunday , March 6 to raise awareness amongst residents of blood in pee as a key symptom for 38
 adder and kidney cancer - particularly blood in pee . Awareness is crucial , because the earlier cancer is diagnosed , 39
 ae campaign runs throughout March , and aims to raise awareness that the problem is a key symptom of bladder and kidn 40
 on Cancer campaigns are hugely important in raising awareness of common symptoms of cancer . Blood loss from anywher 41
 Mail . February 25 , 2016 Thursday . Roadshow raising awareness of bladder and kidney cancer symptoms . EAST RIDING : 42
 ping Centre in Bridlington today and Friday to raise awareness of bladder and kidney cancer symptoms . About 17,450 p 43
 to the South West last week , with the aim of raising awareness of a key symptom for both bladder and kidney cancers - 44
 s lives . It 's vital that we all do our bit to raise awareness that blood in pee could be an early sign of bladder or 45
 nd is holding a cancer roadshow this weekend to raise awareness of the key symptom of bladder and kidney cancer . The 46
 ls . Hull Daily Mail . February 24 , 2016 Wednesday . Awareness roadshow makes pit stop in Hull . CITY CENTRE : A road 47
 pit stop in Hull . CITY CENTRE : A roadshow to raise awareness of bladder and kidney cancer will stop off in St Steph 48
 its Hastings . An NHS roadshow aiming to raise public awareness around bladder and kidney cancer will be visiting Hast 49
 a doing vital work for the communities it reaches . " Awareness is crucial , because the earlier cancer is diagnosed , 50

9.4: Example concordance lines for key word *information* in all campaign articles

s across England for five weeks . Leaflets providing	information	on bladder and kidney cancers were distributed and St	1
s across England for five weeks . Leaflets providing	information	on bladder and kidney cancers were distributed and St	2
he event , leaflets will be distributed that provide	information	on bladder and kidney cancers . A nurse will also be	3
e distributed at the Leigh shopping centre providing	information	on bladder and kidney cancers and a nurse will be on	4
is crucial to helping us achieve this . For further	information	about the signs and symptoms of bladder and kidney ca	5
ys . Residents visiting the mall were able to access	information	about what to do if they witness blood in their pee .	6
n England if people would just check . " For further	information	about the signs and symptoms of bladder and kidney ca	7
he event , leaflets will be distributed that provide	information	on bladder and kidney cancers . A nurse will also be	8
erious but it 's important to be sure . You can find	information	on your local GP on the NHS choices website . " The C	9
he event , leaflets will be distributed that provide	information	on bladder and kidney cancers . A nurse will also be	10
of the events leaflets will be distributed that give	information	on bladder and kidney cancer , and a nurse will also	11
mes in cancer care and routine operations . For more	information	visit www.nhs.uk/bloodinpee . Asian Image . February	12
more treatable if they are found early . For further	information	about the signs and symptoms of bladder and kidney ca	13
ur of England . Doctors and nurses are sharing vital	information	about symptoms , taking down case history and handing	14
case history and handing out leaflets packed full of	information	in the hope it will help prompt those who need it to	15
n tomorrow (February 26) . After this leaflets and	information	about symptoms will be available from pharmacies arou	16
, keep active and eat healthy " he added . For more	information	, contact Denmark Street Pharmacy on 01325 482498 . N	17
ibs that does n't go away and weight loss . For more	information	to go www.nhs.uk/bloodinpee . Hull Daily Mail . Febru	18
shopping centre on Saturday and Sunday , which give	information	on bladder and kidney cancer . Visit nhs.uk/bloodinpe	19
omen , who may be less likely to do so . For further	information	about the signs and symptoms of bladder and kidney ca	20
please look out for these for more " blood in pee "	information	. Nuneaton News . February 22 , 2016 Monday . Bladder	21
statistics are revealed . NEW figures have revealed	information	about bladder and kidney cancer in the region . The s	22
y , February 16 and runs for six weeks . For further	information	visit nhs.uk/bloodinpee . Littlehampton Gazette . Feb	23
r you know what you 're dealing with . " For further	information	about the signs and symptoms of bladder and kidney ca	24
r you know what you 're dealing with . " For further	information	about the signs and symptoms of bladder and kidney ca	25
r you know what you 're dealing with . " For further	information	about the signs and symptoms of bladder and kidney ca	26
3 in the Rother area from a total of 83 cases . More	information	is available online at www.nhs.uk/bloodinpee . Bristo	27
3 in the Rother area from a total of 83 cases . More	information	is available online at www.nhs.uk/bloodinpee . Belfas	28
cancers are in people in this age group . For more	information	visit nhs.uk/bloodinpee . birminghammail.co.uk . Febru	29
ur of your urine , always consult your doctor . More	information	is available on the NHS website . Retford Trader & G	30
gn begins today and runs for six weeks . For further	information	about the signs and symptoms of bladder and kidney ca	31
diagnoses are in people in this age group . For more	information	about the six-week campaign visit nhs.uk/bloodinpee ,	32
's best to see your GP to get checked out . For more	information	, log on to www.nhs.uk/bloodinpee . Nuneaton News . F	33
nday 13 July and will run for eight weeks . For more	information	on the signs and symptoms of breast cancer please vis	34
an half , around 5,400 , aged 70 and over . For more	information	, visit www.nhs.uk/breastcancer . chroniclelive.co.uk	35
y should contact their GP straight away . " For more	information	on the signs and symptoms of breast cancer please vis	36
ay July 13 , and will run for eight weeks . For more	information	on the signs and symptoms of breast cancer visit nhs .	37
y should contact their GP straight away . " For more	information	on the signs and symptoms of breast cancer , visit **	38
n in the south west died of breast cancer . For more	information	on the signs and symptoms of breast cancer visit **25	39
you should contact your GP straightaway . " For more	information	on the signs and symptoms of breast cancer please vis	40
y should contact their GP straight away . " For more	information	, please visit www.nhs.uk/breastcancer70 . GRAPHIC :	41
y should contact their GP straight away . " For more	information	, please visit nhs.uk/breastcancer70 . Former Wimbled	42
y should contact their GP straight away . " For more	information	, please visit **25;653;TOOLONG . GRAPHIC : so all wo	43
changes in your breasts you experience . " For more	information	about the campaign visit **44;679;TOOLONG . Hull Dail	44
y should contact their GP straight away . " For more	information	, visit nhs.uk/breastcancer70 . Liverpool Echo July 2	45
y should contact their GP straight away . " For more	information	, please visit www.nhs.uk/breastcancer70 . GRAPHIC :	46
y should contact their GP straight away . " For more	information	, please visit www.nhs.uk/breastcancer70 . GRAPHIC :	47
they should contact their GP straightaway . For more	information	on the signs and symptoms of breast cancer please vis	48
treatment is more likely to be successful . For more	information	on the signs and symptoms of breast cancer please vis	49
e campaign is set to last for eight weeks . For more	information	, including further details on the symptoms of breast	50

9.5: Example concordance lines for key word *experts* in all campaign articles

tershire Standard . March 23 , 2016 Wednesday . Health	experts	visit Gloucestershire with 'simple message' on how to c	1
with 'simple message' on how to combat cancer . HEALTH	experts	will visit Gloucestershire tomorrow and Friday to raise	2
National Edition . Do n't flush danger signs . HEALTH	experts	are warning that we should all take a moment to " look	3
National Edition . Do n't flush danger signs . HEALTH	experts	are warning that we should all take a moment to " look	4
National Edition . Do n't flush danger signs . HEALTH	experts	are warning that we should all take a moment to " look	5
National Edition . Do n't flush danger signs . HEALTH	experts	are warning that we should all take a moment to " look	6
National Edition . Do n't flush danger signs . HEALTH	experts	are warning that we should all take a moment to " look	7
ursday . Investigate blood in urine immediately , urge	experts	. INVESTIGATE blood in urine immediately , say health e	8
. INVESTIGATE blood in urine immediately , say health	experts	. A Darlington pharmacy is supporting a nationwide init	9
nd kidney cancer : 'Look before you flush' urge health	experts	in new campaign ; Catching the cancers in the early sta	10
ges can dramatically increase life expectancy . Health	experts	are urging the public to check for blood in their urine	11
persistent cough to a sore throat that wo n't heal ...	experts	reveal the 10 'red flag' symptoms that mean YOU could h	12
g mole could be a sign you are suffering skin cancer ,	experts	say . Unexplained weight loss is a red flag for a numbe	13
Rickman - as well as many other forms of the disease .	Experts	advise anyone displaying 1 or more red flags to visit t	14
hey may seeminnocuous , irritating facts of life . But	experts	warn people not to dismiss them and six other key chang	15
are workers the world over . But on World Cancer Day ,	experts	are reminding members of the public to familiarise them	16
and other forms - is persistent and unexplained pain ,	experts	say . If you or a member of your family is suffering at	17
suffering at least one of these 10 red flag symptoms ,	experts	advise you book an appointment with a doctor straight a	18
uth can also be a sign . As for the rest of the body ,	experts	at Cancer Research UK say a person should seek advise f	19
, stomach , esophagus (swallowing tube) , or lung .	Experts	at Cancer Research UK add that small weight changes ove	20
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	21
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	22
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	23
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	24
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	25
use their knowledge of symptoms is limited to a lump ,	experts	have warned . One in three women diagnosed each year is	26
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	27
lump , is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	28
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	29
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	30
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	31
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with the dis	32
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	33
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	34
MT Breast cancer has symptoms other than a lump , warn	experts	worried about health of older women ; One in three wome	35
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	36
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	37
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	38
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	39
iser and Times July 19 , 2015 Sunday Be cancer aware ,	experts	urge . Health professionals are urging Ribble Valley re	40
Longridge News July 19 , 2015 Sunday Be cancer aware ,	experts	urge . Health professionals are urging Ribble Valley re	41
men diagnosed with breast cancer aged over 70 , health	experts	are advising older women to be aware of the signs of br	42
a lump is putting the health of older women at risk ,	experts	have warned . One in three women diagnosed with breast	43
ymptoms is putting the health of older women at risk ,	experts	have www.warned.UK researchers found one in three women	44
r News February 16 , 2015 Monday Worcestershire cancer	experts	support awareness campaign . HEALTHCARE workers in Worc	45
the Abbeygate Shopping Centre in Nuneaton where health	experts	will set up a stall on Monday and Tuesday as part of th	46
roximately 130 people die from these diseases . Health	experts	are worried because surveys suggest only around half of	47
On Cancer campaign today warns of regular heartburn .	Experts	say pain could be a sign of oesophageal or stomach canc	48
for three weeks or longer could be a sign of cancer ,	experts	warned today . A new Be Clear On Cancer campaign is urg	49
r is when someone finds it difficult to swallow food .	Experts	warn that these symptoms could be a sign of oesophageal	50

9.6: Example concordance lines for semantic tag *knowledgeable* in all human interest articles

r , and around 640 people die annually . The good	news	is that the earlier these cancers are diagnosed ,	1
re you flush is a simple way to stay alert to the	warning	signs . If you do n't look you may not notice it .	2
, tell your doctor " . Geraldine Sinfield , 67 ,	knows	the importance of looking before you flush . In 20	3
England (PHE) Be Clear on Cancer campaign . She	knows	only too well about the importance of seeing your	4
a result , then I feel I 've made a difference !	Remember	to always look before you flush the toilet and if	5
e treatable if they are found early . For further	information	about the signs and symptoms of bladder and kidney	6
died in hospital just two days later , aged 42 .	Well-known	county bowler and charity fundraiser Simon Blyth ,	7
Plough , in the town , and let friends and family	know	that he would be there . He was also anxious to ma	8
brothers , Gordon and Colin , and sister Pauline	knew	his funeral plans . Brother Gordon said : " He did	9
yer and a friend . He was popular in the club and	news	of his death has been met with huge sadness . " As	10
her first home when she received the devastating	news	she had bladder cancer . At a time when she should	11
over your head . At Macmillan we offer financial	information	and support to help people get back on their feet	12
appy in the house , " said Mr Barnard . Following	news	of Poppy-Mai 's death , donations to the family 's	13
ard intends to publish a book about the family 's	experiences	, to help other parents who find themselves facing	14
. " PANEL - Poppy-Mai : the public reaction . As	news	of Poppy-Mai 's story spread , people in the famil	15
eyond have organised a string of fund-raising and	remembrance	events : A busking event in Thetford raised more t	16
has named one of its lorries after Poppy-Mai . A	remembrance	parade is taking place tonight in Blackburn , wher	17
be forgotten . ' The little girl gained worldwide	fame	when her name was narrowly beaten by Boaty McBoatf	18
the right thing to let all of you special people	know	. " His wife Sammi , 29 , later added : " Today I	19
y grow her angel wings , as much as it hurt me to	know	I will never watch my baby grow , laugh , smile ag	20
said : " We have been sharing her story to raise	awareness	to save other lives and to raise funds to build a	21
was serving with his squadron in America was kept	informed	over the phone . Only later that day an ultrasound	22
id : " The consultant sat me down and said : 'You	know	this is much worse than constipation now , do n't	23
n children . The heartbroken mum had to break the	news	to her husband over the phone and bosses arranged	24
thrilled to see her daddy again but there was bad	news	when a CT scan revealed the mass on her kidney had	25
nary , they took Poppy-Mai to their hearts and to	know	she was so loved makes us so proud . " mirror.co.u	26
e bed Princess has been sleeping in . Although we	knew	what was going to happen we never would have imagi	27
be forgotten . " The little girl gained worldwide	fame	when her name was narrowly beaten by Boaty McBoatf	28
the right thing to let all of you special people	know	. " His wife Sammi , 29 , later added : " Today I	29
y grow her angel wings , as much as it hurt me to	know	I will never watch my baby grow , laugh , smile ag	30
said : " We have been sharing her story to raise	awareness	to save other lives and to raise funds to build a	31
was serving with his squadron in America was kept	informed	over the phone . Only later that day an ultrasound	32
id : " The consultant sat me down and said : 'You	know	this is much worse than constipation now , do n't	33
n children . The heartbroken mum had to break the	news	to her husband over the phone and bosses arranged	34
thrilled to see her daddy again but there was bad	news	when a CT scan revealed the mass on her kidney had	35
nary , they took Poppy-Mai to their hearts and to	know	she was so loved makes us so proud . " Remembering	36
nd to know she was so loved makes us so proud . "	Remembering	brave Poppy-Mai Barnard . Poppy-Mai what can I say	37
ds to describe you , You keep on going , I do n't	know	how , For that Princess I take a bow , Many memori	38
hey tell a story , At the end of this there is no	glory	, So at peace you will be , The pain in my face yo	39
so she and her husband James , 31 , had no way of	knowing	a massive tumour was growing inside of him . Mum-o	40
lways a bit lazy with his crawling but we did n't	know	that was because he had a tumour in the way . He l	41
r and Amy wants to tell her son 's story to raise	awareness	about the condition . His tumour was to undergo a	42
ittle boy 's liver for which he has been put on a	specialist course	of medicine that cost around 20,000 . There were t	43
e said : " We are all there for each other and we	remember	that there is always someone worse off than us . W	44
en under five . The cause of the condition is not	known	in most children , although about one in 100 will	45
most 3,500 in husband Paul 's memory ; The latest	news	from Clatterbridge Cancer Charity . I recently cau	46
o his lymph nodes , his lungs and his liver . The	oncologist	told us that Paul would only have 4-6 weeks and wo	47
adamant he wanted to try the chemo again , so the	oncologist	agreed and things seemed to be going well . In Nov	48
n and that we got the chance to say goodbye and I	know	that he did n't want to be an invalid , so really	49
so really it was the best way for him . I try to	remember	that as I face the seemingly impossible task of fa	50

9.7: Example concordance lines for key word *die* in all campaign articles

r or kidney cancer each year and approximately 20 people die from these cancers annually . The roadshow , which is tou
er or kidney cancer every year , and around 7,600 people die from these cancers annually . Blood in pee is a symptom i
se cancers annually . Each year 852 people in the region die from these cancers . In 2013 , there were 38 recorded bla
r or kidney cancer each year and approximately 20 people die from these cancers annually . The roadshow , which is tou
er or kidney cancer every year , and around 7,600 people die from these cancers annually . Blood in pee is a symptom i
or kidney cancer each year and approximately 428 people die annually . The roadshow encourages anyone who notices blo
or kidney cancer each year and approximately 382 people die from these cancers annually . The roadshow encourages any
ncer each year and approximately 20 people in Gloucester die from these cancers annually . In a bid to check those fi
kidney cancer in the borough and approximately 51 people die from these cancers . Given that people may not spot blood
dder or kidney cancer every year , and around 640 people die annually . The good news is that the earlier these cancer
uneaton and Bedworth . As about 876 people in the region die from these cancers annually , with around 91 lives lost i
cancer each year , while about 142 people in the region die from these cancers annually . Dr Lola Abudu , health impr
y cancer each year , and around 852 people in the region die from these cancers annually . The 'Be Clear ... ' campaig
se cancers annually . Each year 852 people in the region die from these cancers . In 2013 , there were 38 recorded bla
y cancer each year , and around 852 people in the region die from these cancers annually . The 'Be Clear ... ' campaig
se cancers annually . Each year 852 people in the region die from these cancers . In 2013 , there were 38 recorded bla
ncers in Sheffield each year and that approximately half die of the diseases , often due to late diagnosis . Actor Ian
cancer each year , while about 142 people in the region die from these cancers annually . Dr Lola Abudu , health impr
er each year and approximately 21 people in Peterborough die from these cancers annually . Be Clear on Cancer 's 'Bloo
outcomes - more people survive or live with cancer than die from it so please do not ignore important warnings get ch
reveals that approximately 852 people in the South West die from these cancers annually . Early diagnosis of bladder
ncers . It is estimated that more than 35 people in Hull die from these cancers every year . The roadshow will stop of
, five-week tour . In Hastings , approximately 14 people die from these illnesses each year , according to figures rel
with bladder and kidney cancer each year and about 7,600 die from these cancers . These cancers are less well-known ge
also reveals that approximately 27 people in St. Helens die from these cancers annually . And in response St Helens C
ney cancer each year and that approximately 1,380 people die from these cancers every 12 months . This year 's campaig
ney cancer each year and that approximately 1,380 people die from these cancers every 12 months . This year 's campaig
ney cancer each year and that approximately 1,380 people die from these cancers every 12 months . This year 's campaig
ealed that approximately 574 people in the East Midlands die from these cancers annually . The new campaign is aimed a
ommon amongst over 50s . In North Lincolnshire 30 people die each year from these cancers ; of which two thirds are me
ommon amongst over 50s . In North Lincolnshire 30 people die each year from these cancers ; of which two thirds are me
ommon amongst over 50s . In North Lincolnshire 30 people die each year from these cancers ; of which two thirds are me
ommon amongst over 50s . In North Lincolnshire 30 people die each year from these cancers ; of which two thirds are me
reveals that approximately 852 people in the South West die from these cancers annually . In Taunton Deane the figure
It is estimated that around 852 people in the South West die from these cancers annually . Nationally , around 17,450
ople in England are diagnosed and more than 7,000 people die from the diseases , for which blood in urine can be a sym
ey cancer each year . About 850 people in the South West die from these cancers annually , while nationally , around 1
ople in England are diagnosed and more than 7,000 people die from the diseases , for which blood in urine can be a sym
dder or kidney cancer every year and around 7,600 people die annually , PHE said . PHE 's new campaign is aimed at men
ar . Worryingly , more than 400 people in the North East die from these conditions every 12 months . While doctors say
 . Data also reveals that about 574 people in the region die from these cancers annually . Nationally , about 17,450 p
with bladder and kidney cancer than women , and more men die as a result of the diseases . Men are more at risk as the
d 639 women affected , and that approximately 932 people die from these cancers annually . Nationally , around 17,450
ar . Worryingly , more than 400 people in the North East die from these conditions every 12 months . While doctors say
in England . Approximately 7,600 of those patients will die . Previous campaigns highlighting the easily identifiable
ar . Worryingly , more than 400 people in the North East die from these conditions every 12 months . While doctors say
men and 370 women . Just under half would be expected to die from the cancers . Ann Goodwin , deputy director , health
eals that approximately 1,035 people in the North West die from these cancers annually . Jane Rossini , deputy centr
e data also reveals that around 876 people in the region die from these cancers annually . Dr Lola Abudu , health impr

9.8: Concordance lines for key word *died* in all campaign articles

dder cancer and a steep increase in the rate of men who died from the disease . More than 90 per cent of bladder and 1
similar to Medway 's - around 274,000 - just 35 people died . In Kent , the next highest was Thanet , with 32 deaths 2
ladder and kidney cancer after 18 people in North Devon died from the illnesses in 2013 . Public Health England 's an 3
e past , cancer was always a bad prognosis and everyone died . Now , we know if we catch people early , they can be c 4
hs in around 25 cases on average . More than 200 people died from bladder and kidney cancers in Suffolk and north Ess 5
raintree and Tendring areas - 172 were diagnosed and 80 died . Across the east of England in the same period , more t 6
e past , cancer was always a bad prognosis and everyone died . Now , we know if we catch people early , they can be c 7
east cancer each year , and 48 out of the 79 people who died from breast cancer across the Bradford district in 2013 8
reast cancer in England every day . In 2013 , 257 women died of breast cancer in the North East . Dr Helen Turnbull i 9
gnosed with breast cancer in 2013 , and 52 Dorset women died from breast cancer in the same year . The campaign is ai 10
reast cancer in England every day . In 2013 , 257 women died of breast cancer in the North East . Dr Helen Turnbull i 11
ged 70 and over . In 2013 , 684 women in the south west died of breast cancer . For more information on the signs and 12
h breast cancer in North Somerset . Of these , 36 women died as a result , while 684 women across the region fell vic 13
ound half of women over 70 diagnosed with breast cancer died of the disease . In 2013 , 87 of the 175 women diagnosed 14
n 2013 , 87 of the 175 women diagnosed with the disease died - the second highest number in the South West . Jo Suthe 15
al cancer in East Staffordshire in 2012 , and 22 people died from the condition . Doctors suggest that if people have 16
er had experienced exactly the same symptoms before she died from oesophageal cancer at the age of 69 . After tests r 17
18

9.9: Concordance lines for key word *dying* in all campaign articles

r in Greater Manchester , with approximately 382 people dying from the disease . So it is an area Public Health Englan 1
cancer each year in Hull , with approximately 35 people dying from the disease . Leaflets will be handed out at St Ste 2
ases since 2013 in Nuneaton and Bedworth with 23 people dying of the diseases . In North Warwickshire there were 29 ca 3
00) . This equates to around 15 women aged 70 and over dying from breast cancer in England every day . Debashis Ghosh 4
s to help reduce the 250 women aged 70 and over who are dying from breast cancer in the North East every year . Public 5
over . This equates to around 15 women aged 70 and over dying from breast cancer in England every day . In 2013 , 257 6
s to help reduce the 250 women aged 70 and over who are dying from breast cancer in the North East every year . Public 7
s to help reduce the 250 women aged 70 and over who are dying from breast cancer in the North East every year . Public 8
aged over 70 . This equates to around 15 women over 70 dying from breast cancer in England every day . In 2013 , 257 9
. OLDER women are putting themselves at higher risk of dying from breast cancer as they do not know the warning signs 10
00) . This equates to around 15 women aged 70 and over dying from breast cancer in England every day . Early diagnosi 11
stomach cancer each year , with approximately 40 people dying from these diseases in North Tyneside . Another symptom 12
ic cancers each year , with approximately 10,200 people dying from these diseases annually . This equates to 28 people 13
rom these diseases annually . This equates to 28 people dying from either oesophageal or stomach cancer every day . Oe 14
ic cancers each year , with approximately 10,200 people dying from the diseases each year . This equates to 28 people 15
from the diseases each year . This equates to 28 people dying from either oesophageal or stomach cancer each day . Oes 16
ic cancers each year , with approximately 10,200 people dying from these diseases annually . This equates to 28 people 17
rom these diseases annually . This equates to 28 people dying from either oesophageal or stomach cancer every day . MI 18
cancers diagnosed each year , with about 10,200 people dying from these diseases annually . Campaigners estimate that 19

9.10: Concordance lines for key word *suffered* in all campaign articles

better . Dad 's Army actor Ian Lavender , right , who suffered from bladder cancer , is supporting the campaign . " I 1
better . Dad 's Army actor Ian Lavender , right , who suffered from bladder cancer , is supporting the campaign . " I 2
better . Dad 's Army actor Ian Lavender , right , who suffered from bladder cancer , is supporting the campaign . " I 3
better . Dad 's Army actor Ian Lavender , right , who suffered from bladder cancer , is supporting the campaign . " I 4
better . Dad 's Army actor Ian Lavender , right , who suffered from bladder cancer , is supporting the campaign . " I 5
straight away . " Dad 's Army star Ian Lavender , who suffered from bladder cancer , is supporting this year 's campa 6
if they have had difficulty swallowing food , or have suffered heartburn for more than three weeks . The specialist t 7
m the condition . Doctors suggest that if people have suffered from heartburn most days , for three weeks or more , t 8
ople (55 per cent) would visit their doctor if they suffered prolonged heartburn . A similar awareness-raising camp 9
eneral Practice , found that more than 900 people had suffered such a problem in the previous three months . But when 10
paign warns . Just 55% of us would see a doctor if we suffered such symptoms , a poll by Public Health England found 11

9.11: Example concordance lines for key word *suffered* in all articles

en respectively . It has been estimated that around 950 lives could be saved in England each year if survival rates fo 102
 been treated , I 'm back to enjoying a normal , active life . " Professor Michael Griffin , of the Northern Oesophag 103
 eatment possible and could potentially save hundreds of lives . " The Times (London) January 26 , 2015 Monday Editio 104
 diseases annually . Campaigners estimate that about 950 lives could be saved in England each year if our survival rates fo 105
 o your doctor . " It has been estimated that around 950 lives could be saved in England each year if our survival rate 106
 . Do n't ignore blood in your pee , it could save your life ; Early diagnosis of bladder and kidney cancers makes th 107
 n and to talk to their GP about their symptoms . If one life is saved as a result , then I feel I 've made a differen 108
 ecorating . I had insurance for building and contents , life and unemployment insurance - but I 'd turned down critic 109
 below the breadline . Many have been forced to dip into life savings , rack up credit card bills and take out loans t 110
 by it all . Poppy-Mai has done more in her 17 months of life than a lot of people do in their whole lives . She has s 111
 7 months of life than a lot of people do in their whole lives . She has shown me a new direction in my life and I inte 112
 ir whole lives . She has shown me a new direction in my life and I intent to carry it on . I think the fund-raising w 113
 and we will . Her legacy will live on . She has touched lives around the world and will never be forgotten . ' The lit 114
 e and gave us a lifetime of happy memories in her short life which will stay with me for forever . " Poppy-Mai with m 115
 he globe meant she had already achieved far more in her life than he ever would . Andy and Sammi on their wedding day 116
 been sharing her story to raise awareness to save other lives and to raise funds to build a permanent centre for other 117
 and we will . Her legacy will live on . She has touched lives around the world and will never be forgotten . " The lit 118
 e and gave us a lifetime of happy memories in her short life which will stay with me for forever . " Mr Barnard and h 119
 he globe meant she had already achieved far more in her life than he ever would . He said : " We have been sharing he 120
 been sharing her story to raise awareness to save other lives and to raise funds to build a permanent centre for other 121
 e work of the cancer doctors who are saving children 's lives daily . Together with family and friends she will be doi 122
 that as I face the seemingly impossible task of facing life without him . As Christmas and the anniversary of Paul ' 123
 which is phenomenal . By choosing to celebrate Paul 's life by raising money for Clatterbridge , Helen is helping fu 124
 thinking of setting up a Tribute Fund to celebrate the life of a loved one , visit clatterbridgecc.org.uk for detail 125
 e , 32 . " It was probably the hardest three days of my life , " said Natasha , who lives in Burgess Hill . We are so 126
 id : " Dad but had never spent a day in hospital in his life . He was always out on his bike or he would be off fishi 127
 ght about cancer in along time , simply getting on with life , but the news it was back made her so angry . She said 128
 . Her mum Pam Dennis said she did n't realise how many lives her daughter had touched until their family home began f 129
 , said : " It was probably the hardest three days of my life . We are so proud of him . It was very difficult for him 130
 cer ; Graham opens his heart on learning how to get his life back . SURGEONS carried out the operation that gave Grah 131
 out the operation that gave Graham Southan the gift of life . But it was the care and understanding of a remarkable 132
 n dead in a couple of years without the op and now I 'm alive - what 's more important than that ? " In many ways Joan 133
 o help my situation but , for now , I am enjoying being alive , being with my lovely girl and hopefully stopping someo 134
 tnash cancer patient 's mates take on cycle to save his life . The close friends of a Whitnash cancer patient are abo 135
 tnash cancer patient 's mates take on cycle to save his life . The close friends of a Whitnash cancer patient are abo 136
 tnash cancer patient 's mates take on cycle to save his life . The close friends of a Whitnash cancer patient are abo 137
 e must be something . " But treatment could prolong her life by a few weeks at most and would come at a cost . Sammi 138
 know so many have taken Poppi-Mai into their hearts and lives . Of course we have always known how special she is but 139
 oms and know my daughter will have helped to save other lives . " To donate visit **26;975;TOOLONG . MailOnline . Marc 140
 e must be something . " But treatment could prolong her life by a few weeks at most and would come at a cost . Sammi 141
 know so many have taken Poppi-Mai into their hearts and lives . Of course we have always known how special she is but 142
 oms and know my daughter will have helped to save other lives . " Now ten days after the bombshell news Poppy-Mai is f 143
 upport of St Leonard 's Hospice in the last days of her life was magnificent and a great comfort at a difficult time 144
 e night and day . I have survived and am back to normal life - yet , dad was diagnosed on September 1 , 2014 , and pa 145
 " Amy is so proud to be a big sister and she 's loving life . Amy has a hospital check up every four months but is d 146
 l . We 're so grateful for the treatment that saved her life . Now looking at her I ca n't believe she was ever so ill 147
 rallied a 16-strong team of family and friends to raise life saving cash for Cancer Research UK at Race for Life in G 148
 cts from their treatment which can last long into adult life . We hope people across Scotland will support our drive 149
 TK Maxx will help fund research which really could save lives . " Cancer Research UK 's Children 's Cancer Trials Team 150
 n with a limp because I have never been a quitter in my life and I am not going to start now . Yes , I am not in good 151
 . " We are so grateful for the treatment that saved her life . Now , looking at her , I ca n't believe she was so ill 152
 TK Maxx will help fund research which really could save lives . " Looking at her , I ca n't believe she was so ill . G 153
 ph and Argus . March 1 , 2016 Tuesday . Bradford Dad 's life saving gesture to raise awareness about kidney cancer . 154
 and is now clinging to the hope that it will extend his life . " I live for today , " he says , referring to the impa 155
 and I do n't know who he was , " says Simon . His other life saving gesture is to encourage everyone to seek medical 156
 ne-Zandvliet is gearing up for the biggest battle of his life after doctors told him he had inoperable cancer . Paul , 157
 h fight starts now . I have never been a quitter in my life and I 'm not going to start now . I have got a lot of lo 158
 . I have a fantastic family , I have been blessed in my life with sport and a family to be proud of . I have a brilli 159
 " Paul continued . " I have never been a quitter in my life and I 'm not going to start now . I have got a lot of lo 160
 . I have a fantastic family , I have been blessed in my life with sport and a family to be proud of . I have a brilli 161
 burgh House where he would spend the last month of his life . Julie said : " They were amazing with his care and all 162
 an absolute miracle . Robert tells me that I saved his life that day . " After four months in hospital , Robert is n 163
 h caused him to slip . Robert tells me that I saved his life that day by giving him the wrong boots . " She said the 164
 same time I was scared of thought of him going through life with one kidney . It was the worst time of our lives . Y 165
 ough life with one kidney . It was the worst time of our lives . Your whole world just falls apart . But Robert was ama 166
 e was wearing wrong football boots . A LITTLE boy whose life was saved by the wrong football boots has seen his great 167
 h caused him to slip . Robert tells me that I saved his life that day by giving him the wrong boots . " Over the last 168
 REVOLUTIONARY cancer drug expected to save hundreds of lives a year has been deemed so effective the Government has c 169
 isease . Cancers were cleared or halted , extending the lives of some patients by more than two years . Patients also 170
 side effects at all and it 's amazing . It has saved my life and given me my life back . " Scientists are developing 171
 nd it 's amazing . It has saved my life and given me my life back . " Scientists are developing a 10-minute do-ityour 172
 are slapped on the bottom at birth . But I am enjoying life I want it to go on for as long as possible . When I was 173
 ' I am aware I have got relatively little time left to live compared with what I 've had before , so I do n't want t 174
 They were followed by a recording session in front of a live audience that would typically take two hours from 7.30pm 175
 f kidney cancer . It was n't the ideal start to married life for Market Harborough couple James and Rebecca Dixon . J 176
 a shark " . But the couple have also got on with their lives . James has kept working , as sales and marketing direct 177
 be here then " said Rebecca . " But we have to live our life in three month blocks . " Lutterworth Mail . February 5 178
 f kidney cancer . It was n't the ideal start to married life for Market Harborough couple James and Rebecca Dixon . J 179
 a shark " . But the couple have also got on with their lives . James has kept working , as sales and marketing direct 180

9.12: Example concordance lines for key semantic tag *Personal relationship: general* in all articles

kidney cancers are in this age group . Family and	friends	are all-important , though , in understanding that	1
idney cancer cases on average . Dr Simon Rudland ,	partner	GP at Stowhealth in Stowmarket , said : " The key t	2
ct infection or urinary stones . These are usually	accompanied	by pain and discomfort , so you would probably noti	3
breast shape , size , skin or nipple . Family and	friends	- please do encourage loved ones to seek medical he	4
who has been touched by breast cancer . Family and	friends	- please do encourage loved ones to seek medical he	5
breast shape , size , skin or nipple . Family and	friends	- please do encourage loved ones to seek medical he	6
breast shape , size , skin or nipple . Family and	friends	- please do encourage loved ones to seek medical he	7
breast shape , size , skin or nipple . Family and	friends	- please do encourage loved ones to seek medical he	8
he topic of breast cancer with older relatives and	friends	while communicating the importance of TLC - Touch ,	9
he topic of breast cancer with older relatives and	friends	while communicating the importance of TLC - Touch ,	10
breast shape , size , skin or nipple . Family and	friends	- please do encourage loved ones to seek medical he	11
breast shape , size , skin or nipple . Family and	friends	- please do encourage loved ones to seek medical he	12
hageal cancer receiving treatment . Penny Mordaunt	met	with department lead Professor Pradeep Bhandari and	13
n for oesophageal cancer can save lives . She also	met	two patients who were being treated there and she w	14
cked if they were encouraged to do so by family or	friends	, or if they saw a cancer awareness campaign . One	15
ut did not see his GP said : " You 've just got to	get on	with it . And if you go to the doctor too much , it	16
campaign or being encouraged to do so by family or	friends	, this seemed to almost legitimise their symptoms a	17
e in bladder habits , said : " You 've just got to	get on	with it . And if you go to the doctor too much , it	18
sked him about it he said he had discussed it with	friends	and they thought it was probably caused by the beet	19
. People should avoid self-diagnosing and letting	friends	and family guide them with alternative remedies . T	20
terminal cancer who held a final get-together with	friends	and family at his local pub on Saturday died in hos	21
, Simon 's thoughts were focused on his family and	friends	. On Saturday , he arranged to leave his hospital b	22
local pub , the New Plough , in the town , and let	friends	and family know that he would be there . He was als	23
ryone else . " Former Ross High School pupil Simon	met	his wife Lynette when they were teenagers . He had	24
. He said : " Simon was a very valued player and a	friend	. He was popular in the club and news of his death	25
popular in the club and news of his death has been	met	with huge sadness . " As well as helping Tranent to	26
thousands of families are struggling to make ends	meet	, a cancer diagnosis can be the straw that breaks t	27
e to remove his kidney - is now in remission . His	partner	, Kirsty Sohl-Osborne , aged 28 - who runs Tribal T	28
le bride 'married' her hero father . Poppy-Mai was	escorted	to the aisle by her mother and big brothers . Andy	29
le bride 'married' her hero father . Poppy-Mai was	escorted	to the aisle by her mother and big brothers . Andy	30
e 's spent at the Royal Marsden means that she has	encountered	so many other families who have children with cance	31
children 's lives daily . Together with family and	friends	she will be doing the South Downs 26-mile Trekathon	32
previous six months . Helen told me : " Paul and I	met	25 years ago in 1990 . We would have been married 2	33
aul really wanted one . It was fab and packed with	friends	. That was really the last time he went out , he go	34
ngside The Clatterbridge Cancer Charity and all my	friends	at Stanley 's Cask , Wallasey , in order to raise m	35
ere over the Rainbow' as the title . Helen and her	friends	at the Cask raised almost 3,500 in Paul 's memory f	36
ed her sister , daughter , nieces , colleagues and	friends	to join her in the 5k Basildon Race for Life on Jun	37
ied out thanks to the generosity of the family and	friends	of Paul Alexander who was a patient on ward 17 befo	38
ice for the patients to get away from the ward . "	Friends	and family donated more than 2,000 at Paul 's fune	39
manner that was more than a job , they became our	friends	. " Grace and Harriet were guests of honour , cutti	40
ad n't thought about cancer in along time , simply	getting on	with life , but the news it was back made her so an	41
ig C Big Cuppa event which was attended by Ruth 's	friends	, neighbours and family , and raised 341.25 . The C	42
bs , The Bullnose Morris , in Watlington Road , to	meet	friends tomorrow , a day before the big game . He s	43
The Bullnose Morris , in Watlington Road , to meet	friends	tomorrow , a day before the big game . He said : "	44
ch 26 , 2016 Saturday . Whitnash cancer patient 's	mates	take on cycle to save his life . The close friends	45
s mates take on cycle to save his life . The close	friends	of a Whitnash cancer patient are about to embark on	46
al Ajax Football Club in Warwick - and three of his	mates	who he met there , Sam Canty , Joe Weston and Matt	47
al Club in Warwick - and three of his mates who he	met	there , Sam Canty , Joe Weston and Matt Wells , hav	48
ties that have helped us along the way . " Matt 's	friends	are starting their cycle from the club in Hampton R	49
ch 26 , 2016 Saturday . Whitnash cancer patient 's	mates	take on cycle to save his life . The close friends	50

9.13: Example concordance lines for key semantic tag *kin* in all articles

ng with . " Ian Lavender , actor and star of	Dad	's Army , is a bladder cancer survivor . He s	22
upported by Ian Lavender , actor and star of	Dad	's Army , who is another bladder cancer survi	23
ng with . " Ian Lavender , actor and star of	Dad	's Army who is a bladder cancer survivor , sa	24
nditions such as kidney failure and having a	family	history of cancer . As well as spotting blood	25
n , experts say . If you or a member of your	family	is suffering at least one of these 10 red fla	26
omen to engage older female members of their	families	in conversations about breast cancer to help	27
your breast shape , size , skin or nipple .	Family	and friends - please do encourage loved ones	28
eone who has been touched by breast cancer .	Family	and friends - please do encourage loved ones	29
your breast shape , size , skin or nipple .	Family	and friends - please do encourage loved ones	30
your breast shape , size , skin or nipple .	Family	and friends - please do encourage loved ones	31
your breast shape , size , skin or nipple .	Family	and friends - please do encourage loved ones	32
raise the topic of breast cancer with older	relatives	and friends while communicating the importanc	33
photos of themselves chatting with an older	relative	over a cup of tea , showing their support for	34
raise the topic of breast cancer with older	relatives	and friends while communicating the importanc	35
photos of themselves chatting with an older	relative	over a cup of tea , showing their support for	36
. They should know if any other women in the	family	have had breast cancer and if they have any c	37
your breast shape , size , skin or nipple .	Family	and friends - please do encourage loved ones	38
your breast shape , size , skin or nipple .	Family	and friends - please do encourage loved ones	39
% . But just as care is improving , and more	families	are kept together longer , our NHS is treatin	40
nd . Cancer has had an effect on most of our	families	, mine included . I lost my mother to a blood	41
of our families , mine included . I lost my	mother	to a blood cancer a few years ago , this is a	42
chair of Penguin Random House UK , lost her	husband	Philip Gould , 61 to oesophageal cancer three	43
Chair of Penguin Random House UK , lost her	husband	Philip Gould to oesophageal cancer three year	44
y , heavy smoking and drinking . " I lost my	husband	Philip Gould to this cancer in 2011 when he w	45
chair of Penguin Random House UK , lost her	husband	Philip Gould to oesophageal cancer three year	46
that oesophageal cancer can have . I lost my	husband	Philip Gould to this cancer in 2011 when he w	47
checked if they were encouraged to do so by	family	or friends , or if they saw a cancer awarenes	48
ess campaign or being encouraged to do so by	family	or friends , this seemed to almost legitimise	49
ike blood in your urine . She sadly lost her	grandfather	to kidney cancer when he was in his 70s . He	50
void self-diagnosing and letting friends and	family	guide them with alternative remedies . There	51
. May 12 , 2016 Thursday . Tributes paid to	dad	and bowler who held final get-together at pub	52
ogether at pub two days before his death . A	DAD	with terminal cancer who held a final get-tog	53
o held a final get-together with friends and	family	at his local pub on Saturday died in hospital	54
inburgh , lived on Coalgate Avenue with his	parents	Gordon and Lilian , his wife Lynette and 14-y	55
nue with his parents Gordon and Lilian , his	wife	Lynette and 14-year-old son Rhys . The family	56
nd Lilian , his wife Lynette and 14-year-old	son	Rhys . The family have been left devastated b	57
wife Lynette and 14-year-old son Rhys . The	family	have been left devastated by the loss , which	58
ff work to undergo surgery on his Achilles .	Mum	Lilian told the Courier : " Everyone loved Si	59
rs , always happy . He is such a loss to our	family	, we ca n't believe he is gone . It is devast	60
t believe he is gone . It is devastating . "	Wife	Lynette said Simon had undergone surgery late	61
nd diagnosed renal cancer , described to his	family	as a hidden cancer which is often discovered	62
osis , Simon 's thoughts were focused on his	family	and friends . On Saturday , he arranged to le	63
w Plough , in the town , and let friends and	family	know that he would be there . He was also anx	64
. He was also anxious to make sure that his	brothers	, Gordon and Colin , and sister Pauline knew	65
e that his brothers , Gordon and Colin , and	sister	Pauline knew his funeral plans . Brother Gord	66
and sister Pauline knew his funeral plans .	Brother	Gordon said : " He did n't want our parents t	67
Brother Gordon said : " He did n't want our	parents	to have to arrange his funeral , no parent sh	68
parents to have to arrange his funeral , no	parent	should have to bury their child , and he want	69
Former Ross High School pupil Simon met his	wife	Lynette when they were teenagers . He had bee	70
al details are still to be finalised but the	family	will be requesting donations in lieu of flowe	71
dden side effect of having cancer . ' Single	mum	Jo Coulson had just bought her first home whe	72
add up to an extra 570 a month . Jo - whose	son	Paddy was five years old when she was first d	73
g to Macmillan 's calculations , the average	family	is left with around 375 each month after payi	74

9.14: Example concordance lines for key semantic tag *helping* in all articles

if you 're taking medicine and it seems to be	helping	. It 's probably nothing serious , but if it i	283
urn campaign on cancer . DOCTORS in Devon are	supporting	a new campaign which urges people to visit the	284
if you 're taking medicine and it seems to be	helping	. It 's probably nothing serious , but if it i	285
to improve early diagnosis rates , we need to	encourage	people with symptoms to go to their doctor , w	286
an January 29 , 2015 Thursday Cancer campaign	backed	in Cheshire . A NATIONAL campaign to raise awa	287
ess of stomach and oesophagus cancer is being	backed	in west Cheshire . The campaign runs to the en	288
Even if you 're taking medicine that seems to	help	, you still need to see your doctor if you hav	289
to improve early diagnosis rates , we need to	encourage	people with symptoms to go to their doctor , w	290
'Be Clear on Cancer' campaign , run by Public	Help	England (PHE) , will see a touring bus make	291
stent heartburn of food sticking , you should	encourage	them to seek medical help . " Gazette Series J	292
g , you should encourage them to seek medical	help	. " Gazette Series January 28 , 2015 Wednesday	293
see adverts running nationally in the press ,	encouraging	people to visit their doctor if they have hear	294
to improve early diagnosis rates , we need to	encourage	people with symptoms to go to their doctor , w	295
to improve early diagnosis rates , we need to	encourage	people with symptoms to go to their doctor , w	296
rning signs . COUNCILS in Nottinghamshire are	backing	a campaign to raise awareness of stomach and o	297
ancer . ' Notts County Council is putting its	support	behind the latest cancer awareness campaign an	298
d the latest cancer awareness campaign and is	encouraging	anyone with symptoms of stomach or oesophagael	299
he key signs of cancer and will be waiting to	help	. " Other symptoms of oesophageal or stomach c	300
ancer . ' Notts County Council is putting its	support	behind the latest cancer awareness campaign an	301
d the latest cancer awareness campaign and is	encouraging	anyone with symptoms of stomach or oesophagael	302
he key signs of cancer and will be waiting to	help	. " Other symptoms of oesophageal or stomach c	303
to improve early diagnosis rates , we need to	encourage	people with symptoms to go to their doctor , w	304
to oesophageal cancer three years ago and is	supporting	the Be Clear on Cancer campaign which will run	305
at occurs when acid and digestive juices flow	back up	from the stomach to the gullet , which does n'	306
stomach to the gullet , which does n't have a	protective	lining , so it causes inflammation and pain .	307
to improve early diagnosis rates , we need to	encourage	people with symptoms to go to their doctor , w	308
tical to improving survival . Part of this is	helping	people understand what symptoms to look out fo	309
ch cancer each year . Earlier diagnosis makes	curative	treatment possible and could potentially save	310
of lives . Cancer campaigns like this , which	encourage	people to speak to their doctor if they have h	311
ancer . ' Notts County Council is putting its	support	behind the latest cancer awareness campaign an	312
d the latest cancer awareness campaign and is	encouraging	anyone with symptoms of stomach or oesophagael	313
he key signs of cancer and will be waiting to	help	. " Other symptoms of oesophageal or stomach c	314
oat when you swallow ? If so , the council is	encouraging	you to visit your GP as part of the national '	315
board member for health , wellbeing and adult	services	, said : " The message from us is do n't learn	316
to live with it , tell your doctor . " We 're	supporting	this national campaign and want to help raise	317
supporting this national campaign and want to	help	raise awareness of the symptoms of this type o	318
to improve early diagnosis rates , we need to	encourage	people with symptoms to go to their doctor , w	319
hat only one in two people would seek medical	help	if they had persistent heartburn . But doctors	320
ch cancer each year . Earlier diagnosis makes	curative	treatment possible and could potentially save	321
e likely to get symptoms checked if they were	encouraged	to do so by family or friends , or if they saw	322
earch UK , said British attitudes appeared to	play a part	in the reluctance to visit the doctor . " Inte	323
-gastric cancers each year . And 10,200 die .	Promoting	the Be Clear campaign , NHS England 's Sean Du	324
tical to improving survival . Part of this is	helping	people understand what symptoms to look out fo	325
gher the chance of survival . Part of this is	helping	people to understand what persistent symptoms	326
what persistent symptoms to look out for and	encouraging	them to go to their doctor . " People may be r	327
r on Cancer campaign for Wessex is focused on	helping	people to particularly spot the signs of esoph	328
r seeing a cancer awareness campaign or being	encouraged	to do so by family or friends , this seemed to	329
decide whether or not they would seek medical	help	. The survey specifically did not mention canc	330
nurse with 30 years experience , was there to	help	as were events manager Marie Cue and brand amb	331
to improve early diagnosis rates , we need to	encourage	people with symptoms to go to their doctor , w	332
rtburn . However , a delay in seeking medical	help	could prove fatal . Public health England reck	333
s aimed at men and women aged 50 and over and	encourages	people to visit their GP if they regularly hav	334
ably caused by the beetroot he was eating . I	encouraged	him to make an appointment to see his GP to ch	335
orked with the Girl Guides , raised money for	charity	, she read at Mass and became involved in the	879
atch . She was county board secretary ... she	looked after	team lists , pen pics , profiles ... " In May	880
celebrate Ann 's life and raise some money for	charity	. " I was sitting around a table with the top	881
nn' . " It was perfect , " James says . " The	support	for 'All in for Ann' has been unreal . We 're	882
The Armagh ladies have been unbelievable . It	helps	you get back on your feet . It 's been hard on	883
Focus NI Breast Cancer Awareness because they	helped her out	whenever she had cancer . I remember her and m	884
cer . I remember her and my sister Joanne got	looked after	, got their hair done and that stuff for free	885
on local women to hold a Girls ' Night In to	help	raise funds for breast cancer research at QUB	886
e of Brides since she was 18 , and went on to	help	the store grow into a thriving business . Cynt	887
aid : " She was so good at what she did . She	took care of	the business end of things . She was such a sp	888
dy at the cancer unit on Ward 201 for all the	support	they gave us - they were fantastic . " Sharon	889
to raise money to fund a new clinic . It will	enable	women living to have all the investigations an	890
the local community who wanted to show their	support	. " Shamaela Waheed , a consultant oncoplastic	891
id : " This is a fantastic amount towards the	service	we would like to offer women locally and we ar	892
iends for organising this event and for their	support	. " Herts Mercury . October 2 , 2015 Friday .	893
nly marathon . Every pound raised at the will	help	to fund our lifesaving research to help beat 2	894
will help to fund our lifesaving research to	help	beat 200 types of cancer . " The News . Octobe	895
ntment on the same day and on a Sunday really	helped	save my life - I want this centre to stay open	896
" The centre in Guildhall Walk has a walk-in	service	alongside the GP surgery . The Portsmouth Clin	897
ical Commissioning Group , which pays for the	service	, is looking at making a change as the contrac	898
year , and has four options . One is for the	services	to remain as they are , while the other three	899
and radiotherapy . She also requires further	reconstructive	surgery . Paula has a faulty BRCA 2 gene where	900
her tests and the lump . Her main priority was	looking after	her young son , so she did not want to worry a	901
ing a wife and mother . She received constant	support	from the consultants , nurses , her husband ,	902
nd friends I was better after they 'd been so	supportive	when I needed it . " Having lost her hair duri	903

9.15: Example concordance lines for key semantic tag *bravery* in all articles

been through so much so far and yet she puts on a	brave	face and tries to carry on regardless . " Because o	54
mail.co.uk . January 4 , 2016 Monday 6:14 PM GMT .	Brave	Sheldon schoolgirl honoured with a Cancer Research	55
day has been recognised as a 'little star' for her	bravery	by Cancer Research UK . A Birmingham schoolgirl who	56
day has been recognised as a 'little star' for her	bravery	by Cancer Research UK . Ellie Greenway , from Sheld	57
eeded an emergency blood transfusion . But after a	courageous	fight back , she was able to start chemotherapy a f	58
om her stomach . Sarah added : " She is a strong ,	courageous	, amazing little girl who fills our hearts with pri	59
been through so much so far and yet she puts on a	brave	face and tries to carry on regardless . We 're so g	60
estly can not tell you how excited we are that our	brave	and courageous son will be coming home , " she adde	61
not tell you how excited we are that our brave and	courageous	son will be coming home , " she added . " It 's bee	62
who died ten years ago . Garry Mathieson lost his	brave	battle against cancer on January 13 , 2005 , aged j	63
Tuesday . Firefighters battle it out in memory of	brave	colleague . FIREFIGHTERS from Hull have raised more	64
eds of people attending to celebrate the life of a	brave	and beloved firefighter . Mr Matsell said : " Mike	65
se 300 for CancerResearch UK in celebration of the	heroic	efforts of her mother - she has already raised 160	66
y . Trader raises thousands for cancer charity . A	brave	father-of-two has raised thousands of pounds for ch	67
015 Monday . Burnley nurse loses cancer battle . A	brave	woman who fought a long battle against cancer has b	68
said : " My auntie fought this cruel condition so	bravely	and with great dignity . For the last year she was	69
015 Monday . Burnley nurse loses cancer battle . A	brave	woman who fought a long battle against cancer has b	70
said : " My auntie fought this cruel condition so	bravely	and with great dignity . For the last year she was	71
ss Welsh hospitals . As part of this , a number of	brave	volunteers have now agreed to pose for a " calendar	72
ience , she can not believe she has stripped off .	Brave	Jo , says : " I felt like The Grinch that year . Ch	73
ember 30 , 2015 Wednesday , Edition 1 ; Scotland ,	Courage	of the M & S; Magnificent Seven ; Battle-scarred but	74
of what they have suffered . Instead they show the	bravery	of seven women who have vowed not to let breast can	75
nal meeting with woman given life back by selfless	courage	of her dead mother ; Selfless Diana King made the b	76
of her dead mother ; Selfless Diana King made the	brave	decision to donate her body to medical science when	77
meet the woman given her life back by the selfless	courage	of her dead mother . And it is a moment full of poi	78
most incredible act . " Nurse Diana 's outstanding	courage	and kindness is captured in an upcoming two-part TV	79
quite happy to be upstaged that day by my mum . "	Brave	Diana , 54 , even organised her own last birthday p	80
d : " It was such fun doing it . The women were so	brave	stripping off but their faces are n't in the photog	81
alk in front of their friends and families . Their	courage	and hard work is an inspiration that not only makes	82
ra 's legacy will live on . Lara Streatfield was a	courageous	and inspirational woman who dealt with her impendin	83
the cancer . Lara was so fierce , independent and	fearless	, she had no time for self pity . " Lara was thrown	84
I ask how she feels about being celebrated for her	courage	. " My beef is people associating having cancer wit	85
ciating having cancer with being inspirational and	brave	, and I do n't think those two things should be lin	86
if I have inspired someone to do something good .	Brave	I hate , as I have no choice but to do what I can t	87
ce but to do what I can to survive . I think I was	brave	to make a documentary , as that was not easy , but	88
ay 7:37 PM GMT . BBC presenter Victoria Derbyshire	bravery	reveals the side of her removed breast in poignant	89
y to beat cancer . Victoria Derbyshire , 47 , gave	brave	insight into operation from hospital bed . The BBC	90
ation . Journalist Victoria Derbyshire has given a	brave	and touching insight into the moments she woke up f	91
ry the current affairs host has kept to record her	brave	battle with the disease . The clip was filmed in th	92
itten signs and praised 'awesome' NHS staff as she	bravely	recorded her thoughts after the four-hour operation	93
Sunday , Edition 1 ; National Edition . PICTURE OF	COURAGE	; GRAN REVEALS PHOTO DIARY OF CANCER TREATMENT TO R	94
ee my decision to share these pictures publicly as	brave	- I just wanted to show what having breast cancer r	95
Awareness Month . A picture of a cancer victim who	bravely	showed off her mastectomy scars from a life-saving	96
cial media users praising the mum-of-three for her	bravery	and confidence . Susie , mum to sons Brandon , Luke	97
h . The Gazette documented Gayle 's journey as she	bravely	put her own cancer treatment on hold and delayed a	98
lcox was diagnosed with breast cancer she made the	brave	decision to literally grin and 'bare' it . Now Stac	99
at the treatment for cancer continued . She was so	brave	. I watched her cope with so much and I do n't know	100
diagnosed in 2011 , it broke my heart . She was so	brave	. She 'd planned her own funeral and no-one knew .	101
ailOnline . June 25 , 2015 Thursday 12:16 PM GMT .	Brave	mother who lost one breast to cancer at 26 has her	102
en that . People thought I was being very calm and	brave	but Steve , my husband , and daughter Hannah saw th	103
ken from her back to reconstruct her breasts . But	brave	num-of-two Katie , who lives in Keyham with partner	104

9.16: Example concordance lines for key semantic tag *trying hard* in all articles

h of England , said : " It 's vital that we all	do our bit	to raise awareness that blood in pee could be an	7
er and kidney cancers were identified earlier .	Efforts	get under way on Tuesday to raise more awareness	8
dder cancer in 2013 , and 110 people lost their	battles	, while in north Essex - in the Colchester , Bra	9
ance of making an early diagnosis . " If we are	trying	to help identify cancers early we have got to wo	10
y we have got to work with patients together to	try	and achieve that . That 's about our patient pop	11
er and kidney cancers were identified earlier .	Efforts	get under way today to raise more awareness in a	12
er and kidney cancers were identified earlier .	Efforts	get under way on Tuesday to raise more awareness	13
, all of which may need treatment . But do n't	try	and diagnose yourself . Go and see your doctor n	14
ust 69 . Days later actor Alan Rickman lost his	battle	with pancreatic cancer , also aged just 69 . One	15
you lose a noticeable amount of weight without	trying	to , tell your doctor . 7 . A persistent change	16
ght to see a female member of staff . " Rye and	Battle	Observer July 14 , 2015 Tuesday Cancer campaign	17
ould contact their GP straight away . " Rye and	Battle	Observer September 21 , 2015 Monday Council is b	18
en if it 's 'just the once' do n't ignore it or	try	to treat it yourself - please tell your doctor a	19
time when she should have been concentrating on	battling	the disease , Jo was left wondering how she was	20
as a big change , and not surprisingly it was a	struggle	, which came on top of already having to deal wi	21
id : " At a time when thousands of families are	struggling	to make ends meet , a cancer diagnosis can be th	22
the country . As 17-month-old Poppy-Mai Barnard	battled	an incurable condition , her family chronicled h	23
ore pain and suffering . She fought the biggest	battle	and gave us a lifetime of happy memories in her	24
vomiting , was immediately admitted as doctors	battled	to stabilise her . Her dad dreamed she would one	25
ore pain and suffering . She fought the biggest	battle	and gave us a lifetime of happy memories in her	26
vomiting , was immediately admitted as doctors	battled	to stabilise her . Sammi said : " Her calcium le	27
tated . However , Paul was adamant he wanted to	try	the chemo again , so the oncologist agreed and t	28
lid , so really it was the best way for him . I	try	to remember that as I face the seemingly impossi	29
me aside and said that I should go for it , and	try	for America " , Clare said of Cate . " She reall	30
to try on and model at a special Race for Life	Battle	HQ event at Lakeside Shopping Centre on Saturday	31
local women will come to Lakeside to visit our	Battle	HQ event and feel inspired to join the pink army	32
ace for Life . " As well as the chance to get "	battle	ready " in the style of Race for Life , shoppers	33
n picture of defiance in the specially-designed	Battle	HQ selfie station . To enter Race for Life today	34
. A mother and daughter have revealed how they	battled	cancer five times between them over 15 years . K	35
r 15 years . Kathy Lawley , 28 , from Chester ,	battled	kidney cancer as a child while her mother Hazel	36
l Lawley , 63 , from Solihull , West Midlands ,	battled	breast , lung , kidney and bladder cancer but re	37
r in 1990 and went into overdrive to cope . She	tried	to make everything as normal as possible for Kat	38
rton , died on Monday March 7 after a ten month	battle	with kidney cancer . Her mum Pam Dennis said she	39
whether that be in the UK or abroad - and will	try	anything that can give me a half a chance . To h	40
whether that be in the UK or abroad - and will	try	anything that can give me a half a chance . To h	41
whether that be in the UK or abroad - and will	try	anything that can give me a half a chance . To h	42
vomiting , was immediately admitted as doctors	battled	to stabilise her . Sammi said : " Her calcium lev	43
. Sammi said : " At that point we knew we had a	battle	on our hands but we had hope and vowed to do any	44
ck and disbelief . We just looked at each other	trying	to take it in . For someone to tell you that you	45
vomiting , was immediately admitted as doctors	battled	to stabilise her . Sammi said : " Her calcium le	46
. Sammi said : " At that point we knew we had a	battle	on our hands but we had hope and vowed to do any	47
ck and disbelief . We just looked at each other	trying	to take it in . " " For someone to tell you that	48
t in Leek on Saturday evening in fancy dress to	try	and drum up as many donations as possible for th	49
I took Amy down to the operating theatre I was	trying	to stop myself crying to keep Amy calm so she wo	50
emails that I have n't even opened yet and I am	trying	to reply to every single person . " The family f	51
aul Van-Zandvliet is gearing up for the biggest	battle	of his life after doctors told him he had inoper	52
, 2016 Monday . Tributes to Frank after cancer	battle	. A WOMAN today said she " could not believe " t	53
an aggressive form of cancer . Frank MacDonald	battled	the disease for around eight months before passi	54
on him because he was different . He was always	trying	to do everything for everybody else . He worked	55
few of the people that he cared for . He always	tried	to work and did n't like to be unemployed . My d	56
18 , 2016 Thursday . Banks is upbeat on cancer	battle	. STOKE City and England hero Gordon Banks has d	57
on Banks has delivered a positive update on his	battle	against kidney cancer . The World Cup-winning go	58
rthday and he immediately began chemotherapy to	try	and shrink his rare tumour . After four weeks ,	59

9.17: Example concordance lines for key semantic tag *tough/strong* in all articles

t 's seen as a sign of weakness or that you are not	strong	enough to manage things on your own . " Others said	1
t 's seen as a sign of weakness or that you are not	strong	enough to manage things on your own . " Dr Richard R	2
our hearts , focusing on building this has kept us	strong	and it will be achieving this for her that keeps us	3
astonished when she appeared to briefly regain her	strength	and sparkle . Her father said the way Poppy-Mai had	4
a permanent centre for other families . It gives us	strength	and comfort to do that when we ca n't do a lot else	5
our hearts , focusing on building this has kept us	strong	and it will be achieving this for her that keeps us	6
astonished when she appeared to briefly regain her	strength	and sparkle . Her father said the way Poppy-Mai had	7
a permanent centre for other families . It gives us	strength	and comfort to do that when we ca n't do a lot else	8
, but Amy said : " Brodie is a very determined and	strong-willed	child and it has brought him through some very stick	9
lled Sonny and Amy said that the family are staying	strong	. She said : " We are all there for each other and w	10
ly lucky . I survived , my hair grew back and I got	strong	again . I look relatively normal on the outside , bu	11
He kept fighting until the last minute , and stayed	strong	until the end . I miss him very much , he is always	12
cote , said : " It was very hard , but I am quite a	strong	person and just sort of ploughed through . We spent	13
d and a certificate signed by celebrities including	Strictly	Come Dancing stars Kevin and Karen Clifton , childre	14
mbled and moved by the response and it has given us	strength	to know so many have taken Poppi-Mai into their hear	15
mbled and moved by the response and it has given us	strength	to know so many have taken Poppi-Mai into their hear	16
ague of Mrs Keogh 's , said she had been a tower of	strength	to anybody involved in community productions and wor	17
. " For Paul , one of the things that is giving him	strength	is the support which has flooded in for him since ne	18
or spoken to for ages and if I am going to have my	strength	I need my friends and family . This is the biggest f	19
or spoken to for ages and if I am going to have my	strength	I need my friends and family . This is the biggest f	20
's going on and they say it has given them a lot of	strength	to help them to deal with everything . It shows comm	21
neys and they are hoping that the other one will be	strong	enough to support her body . " Lola-Mai will turn tw	22
ir Orchard Park home . " She is only on 50 per cent	strength	, " he said . " If everything goes to plan , it will	23
h nodes from her stomach . Sarah added : " She is a	strong	, courageous , amazing little girl who fills our hea	24
h nodes from her stomach . Sarah added : " She is a	strong	, courageous , amazing little girl who fills our hea	25
d and a certificate signed by celebrities including	Strictly	Come Dancing stars Kevin and Karen Clifton , former	26
as much money as we can and the event has gone from	strength	to strength . We 've been really shocked by how much	27
y as we can and the event has gone from strength to	strength	. We 've been really shocked by how much has been do	28
r the past five years to improve care , including a	strong	focus on closely monitoring surgical recovery so tha	29
ses of stomach cancer . Heartburn/regurgitation - A	strong	association has long been identified between these s	30
rcy Hospital was so amazing and helpful during this	tough	time that she just had to give something back . " I	31
like I had some sort of blockage . It was a really	tough	time . My wife , Johanna , is a nurse at Stepping Hi	32
-long stay in a Marie Curie hospice to build up her	strength	. " We went to have a look and it was a wonderful ,	33
e with the illness . Eventually I started to get my	strength	back . My husband Peter and daughter Caroline have b	34
r the past five years to improve care , including a	strong	focus on closely monitoring surgical recovery so tha	35
ses of stomach cancer . Heartburn/regurgitation - A	strong	association has long been identified between these s	36
quickly . " Stephen added : " Margaret has been so	strong	and supported me . They warned me the chemo would ge	37
quickly . " Stephen added : " Margaret has been so	strong	and supported me . They warned me the chemo would ge	38
ess would carry on as a tribute to Donna . " We are	strong	, " she said . " We do n't want anybody to think we	39
back into her face to make her feel presentable and	strong	again ; " it really does make a difference " . She a	40
chips are down and that got me through and made me	strong	. " The life-saving blogger . IN the midst of gruell	41
fe . That 's an incredible feeling . " Mum who took	strength	from family . THE hardest thing for Sharon Jhheent w	42
ths-old and learning to walk , has been a source of	strength	to his grandmother Shirene Smith ever since she was	43
ry positive and very social , but I 'm not sure how	strong	she is , so I did n't want to burden her with it . "	44
was going to be a cyst , " said Lucy . " It 's been	tough	but I 'm determined to beat this thing . " And Lucy	45
fantastic cause - I want it to be a celebration of	strong	women , " she added . Lucy is also making plans for	46
death . Jackie Collins felt her sister Joan was n't	strong	enough to cope with the news of her cancer diagnosis	47
ry positive and very social , but I 'm not sure how	strong	she is , so I did n't want to burden her with it . "	48
ome time . I want people to see me as an example of	strength	- and doing things my way . " And Jackie insisted th	49
're my inspiration . My husband has been a tower of	strength	. He 's a great listener and motivator , and Laura (50
ng tasted of burn and I just could n't eat . It was	tough	but Lee is a very good , very strong man , and right	51
't eat . It was tough but Lee is a very good , very	strong	man , and right from the start he said we 'd fight t	52
will be the toughest fight of our lives but you 're	strong	and we 'll do this ' . He took time off from work an	53

9.18: Concordance lines for key word *journey* in all articles

live . More than 30,000 people followed the family 's journey on their Facebook page and the tot and her brothers rec 1 |
live . More than 30,000 people followed the family 's journey on their Facebook page and the tot and her brothers rec 2 |
aid it meant everything for him to make the 3,200-mile journey from New Hampshire to the national stadium . In Novembe 3 |
e - it ravaged both his kidneys . But on the harrowing journey back to health , he lost his father (former MLA George 4 |
Centre in Southsea and a spiritual evening at Soul 's Journey in Havant on March 5 . Metro (UK) . February 18 , 201 5 |
er . There are so many of us who have to face a cancer journey . I hope local people will be inspired by this new camp 6 |
my friends Sue , Anita , Gill and Mo , I embarked on a journey that was to change my life forever . We all set out on 7 |
ober . And Pat plans to join in on the last leg of the journey , health permitting . " At the time , we were asking wh 8 |
women undergoing cancer treatment . Speaking about her journey , and starring in the new campaign , Paula said : " It 9 |
ivilege to be the face of this important campaign . My journey was far from easy , I was juggling a job and a four-yea 10 |
husband and two children with getting her through the journey . Sharon says : " As a parent , you just have to keep g 11 |
 . That 's what you do . It 's just been an incredible journey . " Jackie said she first discovered a lump in her brea 12 |
 , I 'm an organiser and I had a big white board for my journey through this and big list to tick off , one by one . Wh 13 |
ived , it made me realise that I was not alone on this journey . " After diagnosis , she underwent a mastectomy and re 14 |
one who was in need . My scars reveal my breast cancer journey and show how far I 've come . I can honestly say I do n 15 |
she decided to publicly share images of her own cancer journey . Valerie , 58 , of Rutherglen , Glasgow , said : " I d 16 |
nst reconstruction surgery . I know everyone 's cancer journey is different but , in a weird way , I was pleasantly su 17 |
and started taking pictures of her early in her cancer journey . He took photos recording everything from her trips to 18 |
ns to continue putting up photos of her reconstruction journey online . Valerie , who was told there was no sign of an 19 |
ositive and as happy as possible throughout this whole journey and I truly believe it helped . I had quite a few setba 20 |
g so positive make me want to try even harder . What a journey , and I still have a long , healthy life ahead of me wi 21 |
t want to tell her over the phone . It was the longest journey of my life . " Jane had a mastectomy and reconstruction 22 |
ncer Awareness Month . The Gazette documented Gayle 's journey as she bravely put her own cancer treatment on hold and 23 |
entish Express . Closure means patients face gruelling journey . A cancer unit has closed at the William Harvey Hospit 24 |
pital leaving chemotherapy patients facing a gruelling journey to Canterbury for treatment . A mobile chemotherapy uni 25 |
way - they would n't have let me go if I 'd had a long journey . I 'm cross the unit has closed . I did n't ask to get 26 |
because they 're not going to be able to sustain that journey . I just think it 's awful . " Debbie Hughes is half-wa 27 |
ing her children alone . Emma kindly shared her cancer journey with us to raise awareness of Breast Cancer Now 's #The 28 |
e having it . " While Katie has shared pictures of her journey to help raise awareness , she says she will be a lot mo 29 |
y 'Paint C Out' , because everyone paints their cancer journey out in their own individualistic way . " It was at one 30 |
more than welcome . I 've been helped during my tough journey through chemo and radiotherapy , and having come out th 31 |
s obliterated by the harsh treatment and she began her journey back to fitness . Her final radiotherapy treatment was 32 |
ges and poorer quality of care throughout their cancer journey . People from these groups have reported instances of b 33 |
as been very different the second time . It has been a journey and I have met so many amazing people along the way . I 34 |
And despite the fact he is in the middle of his cancer journey , Jim shares his daughter 's positive outlook . " It ha 35 |

9.19: Top 30 adjectives (tagged as POS JJ) for national (left) and regional (right) articles

Word	POS	Frequency	Relative Frequency
new	JJ	72	0.12
other	JJ	72	0.12
oesophageal	JJ	49	0.08
early	JJ	48	0.08
clear	JJ	37	0.06
persistent	JJ	35	0.06
medical	JJ	34	0.05
right	JJ	33	0.05
young	JJ	33	0.05
common	JJ	32	0.05
public_health	JJ	31	0.05
different	JJ	30	0.05
good	JJ	29	0.05
important	JJ	28	0.04
likely	JJ	26	0.04
healthy	JJ	26	0.04
terminal	JJ	26	0.04
red	JJ	25	0.04
full	JJ	25	0.04
unexplained	JJ	24	0.04
wrong	JJ	24	0.04
positive	JJ	24	0.04
left	JJ	24	0.04
oesophago-gastric	JJ	23	0.04
little	JJ	23	0.04
lucky	JJ	22	0.04
difficult	JJ	22	0.04
national	JJ	21	0.03
bad	JJ	21	0.03
big	JJ	20	0.03

Word	POS	Frequency	Relative Frequency
clear	JJ	225	0.14
early	JJ	183	0.12
public_health	JJ	178	0.11
other	JJ	162	0.10
new	JJ	156	0.10
oesophageal	JJ	147	0.09
aware	JJ	131	0.08
national	JJ	129	0.08
important	JJ	109	0.07
likely	JJ	104	0.07
key	JJ	89	0.06
oesophago-gastric	JJ	89	0.06
persistent	JJ	88	0.06
common	JJ	87	0.05
great	JJ	85	0.05
big	JJ	78	0.05
good	JJ	76	0.05
medical	JJ	75	0.05
late	JJ	72	0.05
local	JJ	67	0.04
possible	JJ	61	0.04
encouraging	JJ	58	0.04
special	JJ	57	0.04
serious	JJ	55	0.03
treatable	JJ	55	0.03
amazing	JJ	54	0.03
high	JJ	51	0.03
little	JJ	51	0.03
crucial	JJ	47	0.03
clinical	JJ	46	0.03

APPENDIX 10: BCOC PRESS RELEASES

10.1: Oesophago-gastric campaign press release

Press release

'Be Clear on Cancer' campaign highlights links between heartburn and cancer

From:

[Public Health England](#)

First published:

26 January 2015

Part of:

[Public health](#)

New research reveals only 1 in 2 people (55%) would visit their doctor if they had heartburn most days for 3 weeks or more.



A national 'Be Clear on Cancer' campaign is launched today (26 January 2015) urging people to visit their doctor if they have heartburn most days for 3 weeks or more, as this can be a sign of oesophageal or stomach cancer.

The campaign launch coincides with results of a new survey commissioned by Public Health England, which reveals only 1 in 2 people (55%) would visit their doctor if they had heartburn most days for 3 weeks or more.

Early diagnosis of oesophageal or stomach cancer (also known as oesophago-gastric cancers) is crucial and means treatment is more likely to be successful. Around 67% of people diagnosed with oesophago-gastric cancers at the earliest stage survive for at

least 5 years. This figure drops to around 3% for those diagnosed at a late stage.

According to the survey findings, 59% of respondents did not know that heartburn could be a sign of cancer with just 15% saying they were certain that it is a symptom.

Another symptom highlighted by the campaign is that of difficulty swallowing food. Here the survey found that 70% did not know food sticking in the throat could be a sign of cancer, and just 13% of those surveyed said they were sure it is a symptom.

Latest figures released by Public Health England reveal that around 12,900 people in England are diagnosed with oesophago-gastric cancers each year, with approximately 10,200 people dying from these diseases annually. This equates to 28 people dying from either oesophageal or stomach cancer every day.

Oesophago-gastric cancers are the fourth and fifth most common cause of cancer death in men and women respectively.

It has been estimated that around 950 lives could be saved in England each year if our survival rates for oesophago-gastric cancers matched the best in Europe.

The UK, with the Netherlands, has the joint highest incidence rate of oesophageal cancer in males in the European Union and the highest incidence rate of oesophageal cancer in females in the European Union. This may be due to smoking, low consumption of fruit and vegetables over time, rising obesity levels and consuming alcohol on a regular basis.

Of those diagnosed with oesophago-gastric cancers, more than 9 out of 10 people are over the age of 50, making this the target age group for the campaign.

Baroness Gail Rebus, Chair of Penguin Random House UK, lost her husband Philip Gould to oesophageal cancer 3 years ago:

I understand from personal experience the devastating impact that oesophageal cancer can have. I lost my husband Philip Gould to this cancer in 2011 when he was just 61. I personally want to raise awareness of the symptoms and how important it is to go to the doctor if you have them. What we see from the statistics is the earlier the cancer is caught, the better the chances of survival.

Professor Kevin Fenton, National Director of Health and Wellbeing at Public Health England, explains the importance of this awareness activity:

People may be reluctant to visit their doctor about persistent heartburn, thinking that it's something they just have to live with. But heartburn most days for 3 weeks or more could be a sign of cancer. The earlier cancer is diagnosed, the higher the chance of survival. If we're to improve early diagnosis rates, we need to encourage people with symptoms to go to their doctor, which is what this latest Be Clear on Cancer campaign aims to do.

Sean Duffy, National Clinical Director for Cancer at NHS England, said:

Early diagnosis of cancer is absolutely critical to improving survival. Part of this is helping people understand what symptoms to look out for, which is why campaigns like this are so important. Patients with possible early signs and symptoms should visit their GP so where necessary they can be referred for tests, and treatment can start quickly. Early diagnosis is a key focus for us and will form part of the NHS's new 5 year strategy for cancer, currently being developed by an independent taskforce.

Professor Michael Griffin, Professor of Surgery, Northern Oesophago-gastric Unit, said:

Around 10,200 people in England die from either oesophageal or stomach cancer each year. Earlier diagnosis makes curative treatment possible and could potentially save hundreds of lives. Cancer campaigns like this, which encourage people to speak to their doctor if they have heartburn most days for 3 weeks or more, are vital. You won't be wasting your doctor's time. You will either get reassurance that it isn't cancer, or if it is, you will have a better chance of successful treatment.

The 4-week campaign will see adverts running nationally throughout England on TV, radio and in the press with events taking place at a number of shopping centres across the country. For further information about the signs and symptoms of oesophageal and stomach cancers, please visit [nhs.uk/ogcancer](https://www.nhs.uk/ogcancer).

Ends

Notes to editors

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this

through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health. Website:www.gov.uk/phe. Twitter: @PHE_uk, Facebook:www.facebook.com/PublicHealthEngland

Be Clear on Cancer campaigns are run by Public Health England, in partnership with the Department of Health and NHS England.

The Be Clear on Cancer campaign is part of the National Awareness and Early Diagnosis Initiative, run in partnership with Cancer Research UK, to improve England's cancer survival rates.

The Government's priorities for cancer as set out in 'Improving outcomes: a strategy for cancer (January 2011)' includes the ambition to save an additional 5,000 lives per year by 2014 to 2015. One of the actions is to raise public awareness of the symptoms of cancer and encourage earlier presentation to primary care.

The campaign ran as a regional pilot in the North East and North Cumbria from February to March 2014. Results revealed:

- There was a significant uplift post-campaign in spontaneous awareness of oesophageal cancer symptoms (ie heartburn and food sticking), and 63% agreed the advertising had told them something new
- a 52% increase in the number of urgent referrals made by GPs to specialists for suspected upper gastrointestinal cancers compared with the same period in the previous year

Oesophageal and stomach cancer symptoms

Heartburn most days for 3 weeks or more could be a sign of oesophageal or stomach cancer. Other symptoms of oesophageal or stomach cancer may include:

- food feels like it's sticking in your throat when you swallow
- indigestion on and off for 3 weeks or more
- losing weight for no obvious reason
- trapped wind and frequent burping
- feeling full very quickly when eating
- feeling bloated after eating
- nausea or vomiting
- pain or discomfort in your upper tummy area

Quotes

Lord Darzi, Professor of Surgery at Imperial College London and former Labour Minister said:

It is important that patients go to their doctor if they have long-standing heartburn. Persistent heartburn is a symptom of oesophageal and stomach cancers so it should not be ignored.

Persistent heartburn can also be a symptom of Barrett's Oesophagus, a condition where the cells of the oesophagus grow abnormally. Barrett's Oesophagus can be a pre-cursor to oesophageal cancer, so if we can diagnose this condition earlier, we can also potentially prevent some oesophageal cancers too.

People may be reluctant to visit their doctor about persistent heartburn, thinking that it isn't anything serious. However earlier diagnosis means treatment is more likely to be successful and could potentially save hundreds of lives: that's why I welcome this national Be Clear on Cancer campaign.

Mike Pringle, President of the Royal College of General Practitioners, said:

If we are to counter the depressing 5-year survival rates for oesophago-gastric cancer patients, we need more people with these cancers to be diagnosed earlier. We therefore urge people who have symptoms, particularly heartburn most days for 3 weeks or more, or the feeling of food sticking, to visit their GP. Be Clear on Cancer campaigns give the potential for more diagnoses and better outcomes for cancer. And even if the heartburn or symptom isn't cancer, if it is persistent, it needs to be addressed.

Richard Hardwick, Consultant Surgeon and President-Elect of the Association of Upper Gastrointestinal Surgeons (AUGIS), said:

Combined, oesophago-gastric cancers are the fifth most common cancers diagnosed in England, yet many patients are still waiting too long before they report any symptoms.

It is important that people are able to recognise the signs of oesophageal and gastric cancers early. We want the best outcome for patients and if we catch the cancer early patients are more likely to be suitable for treatments that have the potential to cure them from the disease.

The Be Clear on Cancer campaign is a good public health initiative. It is imperative that anyone who has long-standing untreated heartburn symptoms, develop problems swallowing,

experience unexplained weight loss, or persistent pains in their upper abdomen goes to see their doctor.

Dr Anjan Dhar, Upper GI Cancer Lead Clinician, Co Durham & Darlington Foundation Trust said:

In order to improve the early diagnosis of oesophageal and stomach cancers, it is important that patients go to their doctor if they have long-standing untreated heartburn symptoms or if they develop problems swallowing food. We welcome this national Be Clear on Cancer campaign because it is only by raising awareness of the symptoms of these cancers, that we will improve outcomes for patients and their families.

Alan Moss, Chairman from Action against Heartburn said:

Every year in England around 12,900 people in England are diagnosed with oesophago-gastric cancers. Despite this, there sadly continues to be lack of public awareness of the symptoms. This lack of understanding can lead to people being diagnosed at a later stage and therefore dying unnecessarily as treatment options become more limited. The significance of long-term persistent heartburn and its relationship to Barrett's Oesophagus, which can be a precursor to cancer, is very important for early diagnosis. We very much welcome this national Be Clear on Cancer campaign as it will help raise awareness of the key signs: this is critical if we're to improve early diagnosis of the disease.

For further information, images or interviews, please contact:

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10.2: Blood in pee campaign press release

Press release

Be Clear on Cancer: ‘blood in pee’ campaign returns

From:

[Public Health England](#)

First published:

16 February 2016

Successful Be Clear on Cancer campaign returns for a second time to highlight blood in pee as a key symptom for bladder and kidney cancers.



Public Health England today (16 February 2016) launches a nationwide ‘Be Clear on Cancer’ campaign with the aim of raising awareness of a key symptom for both bladder and kidney cancers – blood in pee.

Around 17,450 people in England are diagnosed with bladder or kidney cancer every year and around 7,600 people die annually. Blood in pee is a symptom in over half of bladder cancers and almost a fifth of kidney cancers, so being aware of this is crucial.

The Be Clear on Cancer ‘blood in pee’ campaign ran nationally in 2013 and 2014. Analysis of diagnoses during the 2013 campaign period shows a statistically significant increase in the number of bladder and kidney cancers diagnosed at pre-cancerous and early stage, and a reduction in late stage diagnoses for bladder cancer. This early detection has been equated to the prevention of around 70 bladder cancer deaths and about 25 kidney cancer deaths. While it is not possible to link these findings to the campaign in isolation, the findings suggest that it is highly likely that the campaign has made an impact.

Early diagnosis of bladder and kidney cancer increases the chances of survival. For those diagnosed at the earliest stage (stage 1), the likelihood of surviving 5 years or more can be as high as 84% for kidney cancer and 77% for bladder cancer. However for those diagnosed at a late stage (stage 4), survival is as low as only 10% for kidney cancer and 9% for bladder cancer.

The campaign is aimed at men and women aged 50 and over, as between 90 to 97% of bladder and kidney cancer diagnoses are in people in this age group. It encourages anyone who notices blood in their pee, even if it's 'just the once', to visit their GP to get it checked out. Given that people may not spot blood in their pee unless they check, this year's campaign also promotes a 'look before you flush' message, particularly to women, who may be less likely to do so.

Dr Jenny Harries, Regional Director, for South of England, Public Health England said:

Evidence shows that Be Clear on Cancer campaigns really do make a difference. The rise in the number of bladder and kidney cancers being picked up early is important; it is this early detection that saves lives.

It's vital that we all do our bit to raise awareness that blood in pee could be an early sign of bladder or kidney cancer, and encourage anyone with this symptom to go to their GP. We know that people don't always immediately visit their doctor if they spot blood in pee, which can be for a number of reasons. Some might ignore the symptoms, especially if it only happens once, or may pass the symptom off as cystitis. If you do notice blood in your pee, don't wait for it to happen again before getting it checked out, visit your GP straight away.

BBC journalist and radio presenter, and kidney cancer survivor, Nicholas Owen, commented:

I was extremely lucky because my tumour was found early. Early diagnosis saves lives, so everyone should look out for key symptoms, like blood in your pee. Don't delay, the sooner you speak to your GP, the sooner you know what you're dealing with.

Ian Lavender, actor and star of Dad's Army who is a bladder cancer survivor, said:

I'm supporting this year's 'blood in pee' campaign as a survivor of bladder cancer. It's a simple message 'look before you flush' and

make sure you go and see your GP if you notice blood in your pee. Spread the word, someone you know might have this symptom and reminding them to get it checked could save their life - it saved mine, and I'm 70 and still happy to be working.

The nationwide Be Clear on Cancer 'blood in pee' campaign will begin on Tuesday 16 February and run for 6 weeks. Read more [information about the signs and symptoms of bladder and kidney cancers](#).

Background information

1. Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health. Website: www.gov.uk/phe. Twitter: [@PHE_uk](https://twitter.com/PHE_uk), Facebook: www.facebook.com/PublicHealthEngland
2. Be Clear on Cancer campaigns are run by Public Health England in partnership with the Department of Health and NHS England.
3. The Be Clear on Cancer campaign is part of the National Awareness and Early Diagnosis Initiative, run in partnership with Cancer Research UK, to improve England's cancer survival rates.
4. Early diagnosis of cancer is a major priority for this government in helping us to improve cancer survival. Be Clear on Cancer campaigns, which aim to raise public awareness of the symptoms of cancer and encourage earlier presentation, form an integral part of the Public Health England Marketing Plan for 2014 to 2017, which was published in July 2014.
5. Pictures of celebrity supporters, Ian Lavender (bladder cancer survivor) and Nicholas Owen (kidney cancer survivor) are [available on dropbox](#).
6. Interview opportunity with Professor Yvonne Doyle, PHE regional director, London or Dr Jenny Harries, PHE regional director, South of England available upon request. Interviews also available with HCPs featuring in the advertising and case studies.

7. The campaign includes national TV, radio, digital and out of home advertising (posters in public washrooms) together with face to face events in venues such as shopping centres
8. Three local pilots initially tested the 'blood in pee' campaign in early 2012. This was followed by a regional pilot from January to March 2013. The campaign went national, across England, for the first time in October 2013 and was repeated the following October.
9. Results from the first national 'blood in pee' campaign in 2013 showed that the number of bladder, kidney and urological cancer diagnoses resulting from an urgent GP referral for suspected urological cancers increased by 8.2%, 22% and 14% respectively in October to December 2013, compared to the same months in 2012.
10. Results from the 'blood in pee' activity to date indicate that Be Clear on Cancer is successfully changing levels of public awareness. There are also early indications that clinical outcomes are improving too. Following the second national campaign:
 - Six in 10 of those aware of the cancer advertising spontaneously mentioned 'blood in pee' as a cancer symptom (62% up from 31% pre campaign)
 - There was a 34% increase in the number of urgent GP referrals for suspected urological cancers when comparing October to December 2014 with October to December 2012
11. Blood in your pee is a key symptom of both bladder and kidney cancers. Other bladder cancer symptoms include:
 - cystitis (a urinary tract infection) that is difficult to treat or comes back quickly after treatment
 - pain when peeingOther kidney cancer symptoms include:
 - a pain in the side, below the ribs, that doesn't go away
 - weight loss
12. Smokers have a much higher risk of these cancers. Other things that increase the risk of bladder and/or kidney cancer include:
 - being overweight or obese
 - some jobs, because of exposure to certain chemicals
 - other medical conditions, such as kidney failure
 - a family history of cancer
13. Additional spokespeople quotes:

Media Medic, Dr Rosemary Leonard, commented:

We know that people are concerned about wasting their GP's time. But, if you have had blood in your pee, even if it's 'just the once', you must see your GP to get it checked out. It can be a symptom of many other conditions, and though many of these are not that serious, such as cystitis, even that should be checked out by a doctor, as it can be a sign of cancer. So it's really important that if you notice anything unusual that you come in and see us. We want to see you! You aren't wasting our time, it could save your life.

Nikhil Vasdev, Consultant Urological Surgeon, commented:

The blood in pee campaign highlights the importance of seeking medical advice if this symptom arises. Bladder and kidney cancers can cause blood in the pee; hence, it is crucial to raise the importance of this symptom. The key is to get a diagnosis and if either bladder or kidney cancer diagnosed in time, in order to ensure that patients have prompt treatment which can offer improved patient outcomes from the perspective of immediate cure and hopefully improve long term outcomes as well.

Public Health England press office

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10.3: Breast cancer in women over 70 campaign press release

Press release

Public Health England launches nationwide breast cancer campaign

From:

[Public Health England](#)

First published:

13 July 2015

Low awareness of non-lump breast cancer symptoms is putting the health of women over 70 at risk.



Public Health England (PHE) today (13 July 2015) launches a nationwide 'Be Clear on Cancer' campaign aimed at women aged 70 and over to drive awareness of the risk of breast cancer amongst this age group and to increase their knowledge of lesser-known breast cancer symptoms.

Around 13,400 women aged 70 and over are diagnosed with breast cancer each year, accounting for a third of all breast cancer cases. Approximately 30% of all women diagnosed with breast cancer report a symptom other than a lump. However, research shows that when asked to name symptoms of breast cancer, only half of women over 70 (48%) could name a symptom aside from a lump.

Despite older women being at an increased risk of breast cancer, they are also more likely to delay going to their GP with breast cancer symptoms. This year's campaign activity will reinforce the message 'don't assume you're past it', urging older women to visit their doctor straight away if they notice any unusual or persistent

changes to their breasts such as a lump or a change to a nipple or to the skin or the shape of a breast.

The campaign first launched nationally in early 2014 and research shows that it successfully raised awareness that the risk of breast cancer increases with age. Promising results show a 25% increase in the number of breast cancers diagnosed in women aged 70 and over following an urgent GP referral for suspected breast cancer during the campaign period compared with the same period 2 years earlier.

Breast cancer is the most common cancer in women in England, with around 41,200 women diagnosed every year. National figures show that around 9,500 women die from breast cancer each year and over half of these are women aged 70 and over (5,400). This equates to around 15 women aged 70 and over dying from breast cancer in England every day.

Early diagnosis of breast cancer is crucial and means treatment is more likely to be successful. If breast cancer is diagnosed at the earliest stage in women aged 70 and over, 93% will live for at least another 5 years. This figure drops to just 13% for those diagnosed at the most advanced stage.

Professor Dame Sally Davies, Chief Medical Officer, comments:

You are never too old to get breast cancer. It is not always a lump and women should look out for any changes in the shape of the breast, a change to a nipple or to the skin.

Spotting the signs of cancer early is very important so if women are concerned about any breast cancer symptoms they should contact their GP straight away.

Virginia Wade, OBE, British former professional tennis player is supporting the campaign and comments:

I've just turned 70, which makes this campaign really relevant to me and women like me. The statistics speak for themselves, 1 in 3 women who get breast cancer are over 70.

Breast cancer is the most common cancer in women in England. Sadly, everyone knows someone who has been touched by breast cancer, which is why I'm supporting this campaign. I want to say to all women over 70: don't assume you're past it. If you notice any changes to your breasts, tell your doctor. We're not just talking about a lump - symptoms of breast cancer could also be changes to your breast shape, size, skin or nipple.

Family and friends - please do encourage loved ones to seek medical help if they say they have symptoms or have noticed any changes. Some women feel they are too old for certain things, but unfortunately breast cancer isn't one of them.

Diana Moran, health writer and international fitness expert comments:

I know first-hand the effects that breast cancer can have. I was 47 when I was diagnosed with breast cancer and my advice hasn't changed - get to know your breasts and recognise if there are any changes. The older you get, the more important it is to be aware of your body. You'll be as surprised as I was to hear that 1 in 3 women who are diagnosed with breast cancer are over 70.

If you do notice a change in your breasts, whether it's a lump, discharge or a skin change, go and see your GP as soon as you can. The chances are that it's nothing serious! But it might be something that needs attention and if diagnosed earlier, treatment can be a lot more successful.

Dr Ann Hoskins, PHE Deputy Director, Health and Wellbeing says:

This campaign aims to target women aged 70 and over, as we know that many women of this age group are unaware of the risk breast cancer poses to them. They also tend to have lower knowledge of the symptoms of breast cancer, and are not necessarily looking at or feeling their breasts so are less likely to detect change.

This campaign emphasises that a lump is not the only sign of breast cancer and women should tell their GP if they notice any changes to their breasts. Other possible signs of breast cancer include nipple changes and changes to the skin of the breast.

Dr Jenny Harries, PHE Regional Director, South of England notes:

We welcome the Be Clear on Cancer campaign returning this year. When comparing figures for the first campaign in 2014 with the same period 2 years earlier, there was a 25% increase in the number of breast cancers diagnosed via an urgent GP referral.

Around 5,400 women aged 70 and over still die from breast cancer in England each year, so it is absolutely vital that women are properly informed of their risk. It has been estimated that across all age groups around 2,000 deaths from breast cancer

could be avoided each year in England if survival rates matched the best in Europe. This latest Be Clear on Cancer campaign has an important role to play in helping increase symptom awareness levels and earlier diagnosis.

Media Medic, Dr Dawn Harper comments:

Breast cancer affects women of all ages, but it's the number of those over 70 being diagnosed and the fact that some women delay visiting their GP which is worrying. It is extremely important to seek medical advice if you have any concerns about unusual changes to your breasts and encourage others to do so too. Anyone that visits us will not be wasting our time, as GPs it's what we're there for. If you do have breast cancer, the earlier it is found treatment is more likely to be successful and can lead to a better outcome.

Mr Steven Thrush, consultant breast surgeon, Worcestershire Acute NHS Trusts:

Over the last 12 months I have performed surgery on women who have been prompted to get their symptoms checked because of the Be Clear on Cancer campaign. As a surgeon, I am delighted with this, because the earlier we can diagnose cancer, the more treatment options we can offer our patients.

Sean Duffy, National Clinical Director for Cancer at NHS England, said:

Early diagnosis of cancer is absolutely critical to improving survival. Part of this is helping people understand what symptoms to look out for, which is why campaigns like this are so important.

Patients with possible early signs and symptoms should visit their GP so where necessary they can be referred for tests, and treatment can start quickly. Early diagnosis is a key focus for us and will form part of the NHS's new plan for cancer, currently being developed by an independent taskforce.

Richard Sutton, breast cancer surgeon at Royal United Hospital Bath, says:

I often hear my patients say how they delayed going to their GP. They may not think their symptom is serious, they may be embarrassed or didn't want to waste the GPs time. Most people are aware that a lump in the breast could be a symptom of cancer, but they don't know that changes to the skin of the breast or the nipple could also be signs of cancer.

As a specialist surgeon it concerns me that the awareness of the importance of these symptoms is even lower amongst older women. The risk of developing breast cancer increases with age, so don't dismiss any persistent or unusual changes to your breasts as a sign of aging, speak to your GP – finding breast cancer early makes it more treatable and could save your life.

The nationwide Be Clear on Cancer 'breast cancer in women over 70' campaign will launch on Monday 13 July and run for 8 weeks. For more information on the signs and symptoms of breast cancer please visit nhs.uk/breastcancer70.

Background

- PHE exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health. www.gov.uk/phe. Follow us on Twitter: [@PHE_uk](https://twitter.com/PHE_uk) or Facebook: www.facebook.com/PublicHealthEngland.
- Be Clear on Cancer campaigns are run by PHE, in partnership with the Department of Health and NHS England.
- The Be Clear on Cancer campaign is part of the National Awareness and Early Diagnosis Initiative, run in partnership with Cancer Research UK, to improve England's cancer survival rates.
- Early diagnosis of cancer is a major priority for this Government in helping us to improve cancer survival. Be Clear on Cancer campaigns, which aim to raise public awareness of the symptoms of cancer and encourage earlier presentation, form an integral part of the PHE Marketing Plan for 2014 to 2017 which was published in July 2014.
- Possible signs of breast cancer include:
 - a lump or thickening in your breast or armpit
 - changes to the skin of your breast
 - changes in the shape or size of your breast
 - nipple changes
 - nipple discharge
 - pain in your breast
 - any other unusual or persistent changes to your breasts

- When asked to name symptoms of breast cancer, only half (48%) of women aged 70 and over could name a symptom that isn't a lump. Knowledge of other breast cancer symptoms is higher amongst those aged 40 to 69, with 73% able to name at least one non-lump symptom.
- The campaign will use a mixture of TV, press, digital and out of home advertising. Leaflets will also be distributed through outlets such as GP surgeries.
- The Be Clear on Cancer 'breast cancer in women over 70' campaign was piloted regionally in the Midlands at the beginning of 2013 and first ran nationally from 3 February to 16 March 2014. When comparing February to April 2012 with February to April 2014, the results for women aged 70 and over show a statistically significant 25% increase in the number of breast cancers diagnosed via an urgent GP referral for suspected breast cancer.
- Additional breast cancer facts:
 - The UK has 5th highest incidence and 11th highest mortality rate in the EU. It has been estimated that around 2,000 deaths from breast cancer could be avoided in England each year if survival matched the best in Europe.
 - The key risk factor in breast cancer is sex: more than 99% of all breast cancers are diagnosed in women. Age is also an important risk factor, with around 1 in 3 cases being diagnosed in women aged 70 or older.
 - Being overweight is the biggest lifestyle risk for female breast cancer, accounting for nearly 1 in 10 cases.

Additional quotes:

- Sara Hiom, Director of Early Diagnosis and Cancer Intelligence, Cancer Research UK, says:
This campaign highlights 2 important facts that aren't well known - that breast cancer isn't just about lumps, and that older women are most at risk. We hope these latest Be Clear on Cancer adverts will encourage women, especially older ones, to tell their GP about any unusual or persistent changes to their breasts, be that a lump, or something else like discharge, or a change to the skin or nipple. An early diagnosis, regardless of age, usually makes breast cancer more treatable.
- Samia al Qadhi, Chief Executive of Breast Cancer Care, says:
The sooner breast cancer is diagnosed, the more effective treatment may be, so we welcome this vital campaign to raise

awareness among women over 70. Many women don't realise that the risk of developing the disease actually increases with age and many older women don't feel confident about checking for symptoms. Knowing your breasts and regularly looking for unusual changes can help spot cancer early, so it's crucial that information and support is provided. The more women we can reach with Be Clear on Cancer, the better.

- Actress Barbara Windsor, said:
It is great to be supporting a campaign which brings to attention the subject of breast cancer in the over 70s. Breast cancer can often be seen as something which is more common in younger women, but as the campaign highlights, 1 in 3 women diagnosed with breast cancer in England each year are aged 70 or over. I'm in my 70s and my advice has always been, and will, never change – be breast aware and tell your doctor if you're concerned about any potential signs of breast cancer. The more we can get the message out there to each other, the more women could be saved.

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APPENDIX 11: EMAIL RESPONSE FROM NEXIS

From: Customer Support – LexisNexis <Support@lexisnexis.eu>

Sent: 29 February 2016 08:10

To: Neil Cook <NCook2@uclan.ac.uk>

Subject: AW: Upload date

Hello Neil,

Thanks for your email.

We acquire and loose rights on multiple publications every day. We do keep track of new and old publication but I'm afraid we can't keep track of the articles added or removed from our database.

Moreover, any correction in an article requested a new upload date, as the old article is overwritten, which makes the tracking more difficult.

Let us know if you have additional questions.

Best Regards,

Philomène Moumi Coulon
Customer Support Consultant
Business Information Solutions
LexisNexis

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Von: Neil Cook [<mailto:NCook2@uclan.ac.uk>]

Gesendet: Samstag, 27. Februar 2016 05:36

An: Customer Support – LexisNexis

Betreff: Upload date

Hi,

I have been doing a search over the past few weeks using the following:

“breast cancer” OR “breast carcinoma” OR “breast malignancy” OR “cancer of the breast” OR “Be Clear on Cancer” OR “Don’t assume you’re past it” in UK newspapers between the dates of 06/01/2015 and 07/13/2015. Until today, I have always had 2002 results, however today the number has increased to 2038. I have tried to identify which of these articles have been added recently, but cannot find a way to identify this information. I have also tried adding the following to the search: LOAD-DATE<(2016). This has explained only 7 articles leaving around 30 unaccounted for – please can you tell me how I can identify these articles?

Many thanks

Neil

APPENDIX 12: EXPLORATORY GOOGLE SEARCH

A Google search was undertaken on 2nd February 2018 using the terms “CCG” and “press release”. All links in the first ten pages of the results were accessed and the news and press release archives searched for references to *BCOC*. All stories or press releases were obtained and read. None of them utilised the same headline as the national campaign press releases.