Public Health England

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Cancer in Thames Valley

September 2017

Public Health England Local Knowledge and Intelligence Service, South East

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Contents

Foreword

In July 2015, an Independent Cancer Taskforce published “Achieving world class cancer outcomes: a strategy for England 2015-2020”, which proposed a strategy to improve outcomes for people affected by cancer[1]. It recommended establishing a network of Cancer Alliances across the country, to bring together partners at sub-regional level (including commissioners, providers and patients) to drive and support improvement and integrate care pathways. The Taskforce estimated that 30,000 lives could be saved each year by 2020 through prevention, earlier diagnosis, better treatment and better care.

This report provides an overview of how cancers affect the health of people in the Thames Valley Cancer Alliance area, with examples across the care pathway from prevention to treatment and care. It is intended to support local discussion and benchmarking.

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This report was produced by PHE’s Local Knowledge and Intelligence Service, South East with writing and analyses by Don Sinclair, Helen Shaw, Isobel Perry, Jo Wall, Jo Watson, Pete Cornish and additional analyses by Rebecca Girdler (Senior Cancer Analyst - National Cancer Registration and Analysis Service). It was based on the “Cancer in the East Midlands” report, which was published by PHE in 2016[2].

Data for this report is based on patient-level information collected by the NHS, as part of the care and support of cancer patients. The data is collated, maintained and quality assured by the National Cancer Registration and Analysis Service, which is part of Public Health England (PHE).

At a glance

Across the Thames Valley Cancer Alliance area

- in 2014, 77,900 people were estimated to be either living with cancer or to be beyond their diagnosis and treatment
- in 2014, over 11,300 new cancer cases were diagnosed
- in 2014, there were almost 4,900 deaths from cancer
- by 2030, there could be 130,100 people living with or beyond a cancer diagnosis
- in the South East of England, incidence of most cancers (except breast and prostate) was higher in more deprived populations

Changes over time

- cancer incidence increased across Thames Valley Cancer Alliance, with large increases in breast, prostate and colorectal cancers
- cancer mortality improved across Thames Valley Cancer Alliance
- survival improved for patients with breast, prostate, colorectal and lung cancers across the South East, although lung cancer survival remained particularly poor
- screening coverage fell across the cancer alliance for cervical cancer and rose for breast cancer, with coverage for all programmes lower in more deprived populations

Areas where action is required to improve outcomes include:

- planning and resources for the expected increases in numbers of new cases of cancer and the numbers of people living with and beyond cancer diagnoses
- increase action to tackle behavioural risk factors to reduce rising incidence
- increase uptake of human papilloma virus vaccine (via the national programme)
- increase uptake of NHS health checks to help individuals identify and modify their risks of some common cancers
- increase uptake of cancer screening, particularly in more deprived populations
- increase the proportion of patients receiving diagnoses of lung and colorectal cancers through managed routes, to increase early stage diagnoses
- improve understanding of the preferences of people coming to the end of their lives and support end-of-life care in the community

Note on methods

- where shown, confidence intervals are set at 95% confidence
- statistical comparisons have been made using comparison of confidence intervals rather than formal tests of significance

Introduction

This report describes how cancers affect the health of people in the Thames Valley Cancer Alliance area. It is intended to support local discussion and benchmarking. It is based on an earlier PHE report for the East Midlands[2].

This report focuses on five types of cancer representing the largest burden of cancer-related ill health (Global Burden of Disease Study[3]) in the South East of England: lung, colorectal, breast, prostate and pancreatic cancers. Liver cancer is included because it has the highest recent increase in burden of ill health[3]. Cervical cancer is also included as it has a national population screening programme (together with breast and colorectal cancers), which is important for early detection and treatment.

Information is presented to show how these cancers affect the health of the population (prevalence, incidence and mortality) and to examine some important parts of the cancer pathway from risk factors and diagnosis to survival or death. Examining variations across the Thames Valley Cancer Alliance area may be useful when planning to improve preventative, diagnostic, treatment or palliative services. Information is presented for Clinical Commissioning Groups (CCGs) in the cancer alliance where possible. Where it is not available at CCG level, data is presented for the local authorities that fit most closely to the CCGs. Some data is only available at South East regional or England levels.

The Thames Valley Cancer Alliance includes the following CCGs:

- NHS Aylesbury Vale
- NHS Bracknell and Ascot
- NHS Chiltern
- NHS Newbury and District
- NHS North and West Reading
- NHS Oxfordshire
- NHS Slough
- NHS South Reading
- NHS Swindon
- NHS Windsor, Ascot and Maidenhead
- NHS Wokingham

The terms “NHS [name]” and “[name] CCG” are used interchangeably throughout this document e.g. “NHS Ashford” or “Ashford CCG”. To improve readability in some parts of this document “&” is used to replace “and” in relevant CCG names, particularly in charts and lists of names.

Numerical values have been rounded throughout this report. In most charts, values have been rounded to zero, or one (occasionally two) decimal places. Some values (particularly larger values) have been expressed to three significant figures.

Cancer prevalence, incidence and mortality

In 2014, there were over 11,300 new cancers diagnosed in Thames Valley Cancer Alliance and almost 4,900 deaths from cancer. Over the past ten years, the incidence of all cancers has increased overall in Thames Valley, though these are not statistically significant in most CCGs. During this period, there has been a statistically significant increase in new cancers diagnosed annually across the South East and England as a whole, while the rate of deaths from cancer has statistically significantly decreased[4].

Nearly two thirds of cancer diagnoses occur in people over 65 and one third in people aged 75 and over[5]. Most types of cancer are more common in older people, and as the population is generally ageing, the actual number of cancer cases will tend to increase.

Cancers cause a high proportion of the burden of ill health in the population. The Global Burden of Disease Study (GBD) estimated the impact of different types of cancer on the population of South East England in terms of Disability Adjusted Life Years (DALYs). DALYs combine years of life lost with years lived in poor health. This report examines the impact of all cancers in the Thames Valley Cancer Alliance (excluding “other and unspecified malignant neoplasm of skin” [C44 in ICD-10]). It also examines the impact of the five cancers estimated by GBD to cause the greatest burden of ill health (measured in DALYs) in the South East. These cancers are shown in Table 1. In addition, this report focuses on cancers for which screening programmes are in operation (female breast, colon and rectum, and cervical cancers) and liver cancer, which has shown the largest increase in burden between 1990 and 2013 (estimated by GBD to be increasing in DALYs by 2% annually).

Table 1 – Cancers causing the greatest burden of ill health in South East England in 2013 (top five), as estimated by the Global Burden of Disease Study

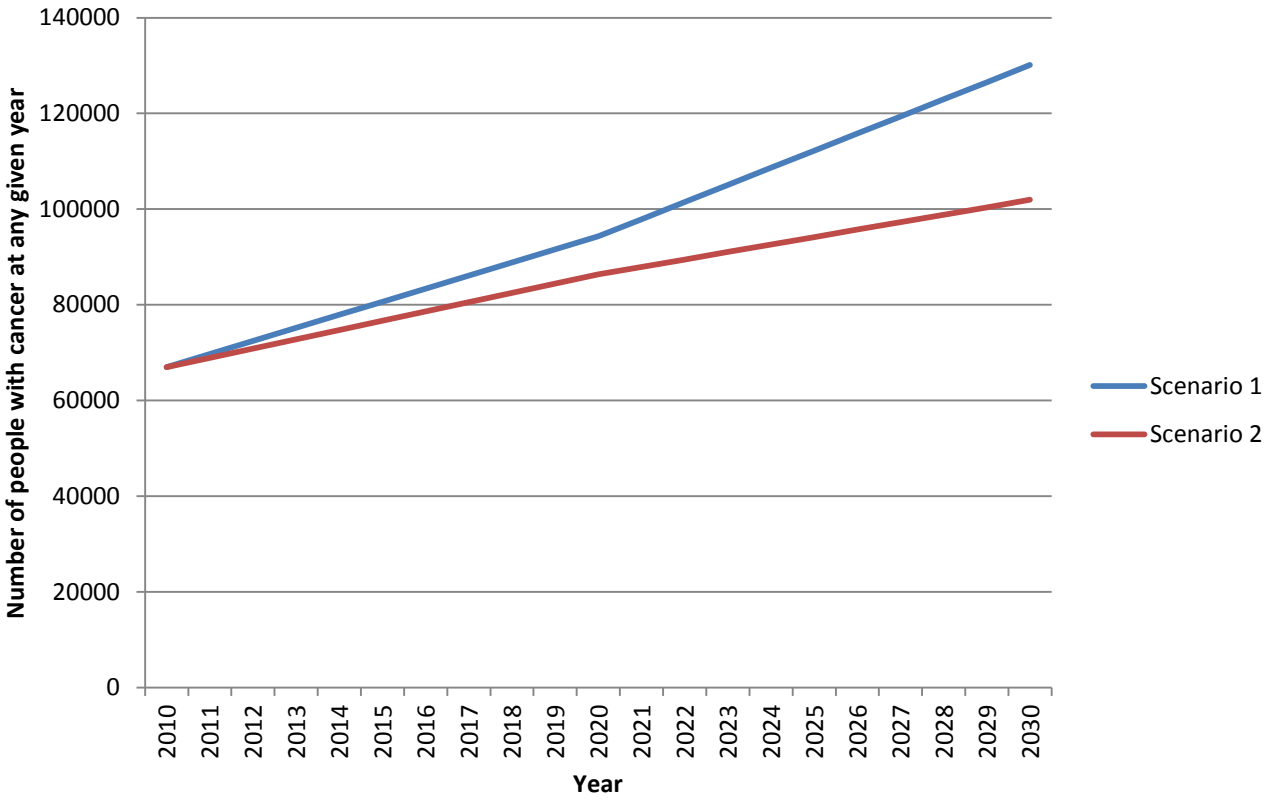
Type of cancer	Percentage total disease burden (DALYs) 2013
Trachea, bronchus & lung	3.30%
Colon & rectum	1.97%
Breast	1.88%
Prostate	1.08%
Pancreatic	0.99%

Prevalence

In 2014 there were estimated to be over 77,900 people in Thames Valley either living with cancer, or beyond their diagnosis and treatment for cancer (prevalence)[6].

The number of people living with and beyond cancer is estimated to increase significantly in the next 20 years. This is partly because of the ageing population and increasing incidence, but also because of increasing survival from cancer. By 2030, it is estimated there will be as many as 130,100 people in Thames Valley living with and beyond cancer, a potential increase of approximately 67% (52,200 cases). This is Scenario 1, illustrated in Figure 1. Scenario 2 shows the expected change in cancer prevalence based only on population growth, assuming that cancer incidence and survival remain unchanged.

Figure 1 – 20 year prevalence and future estimates by scenario: all cancers, all persons Thames Valley Cancer Alliance



Source: Local Cancer Intelligence

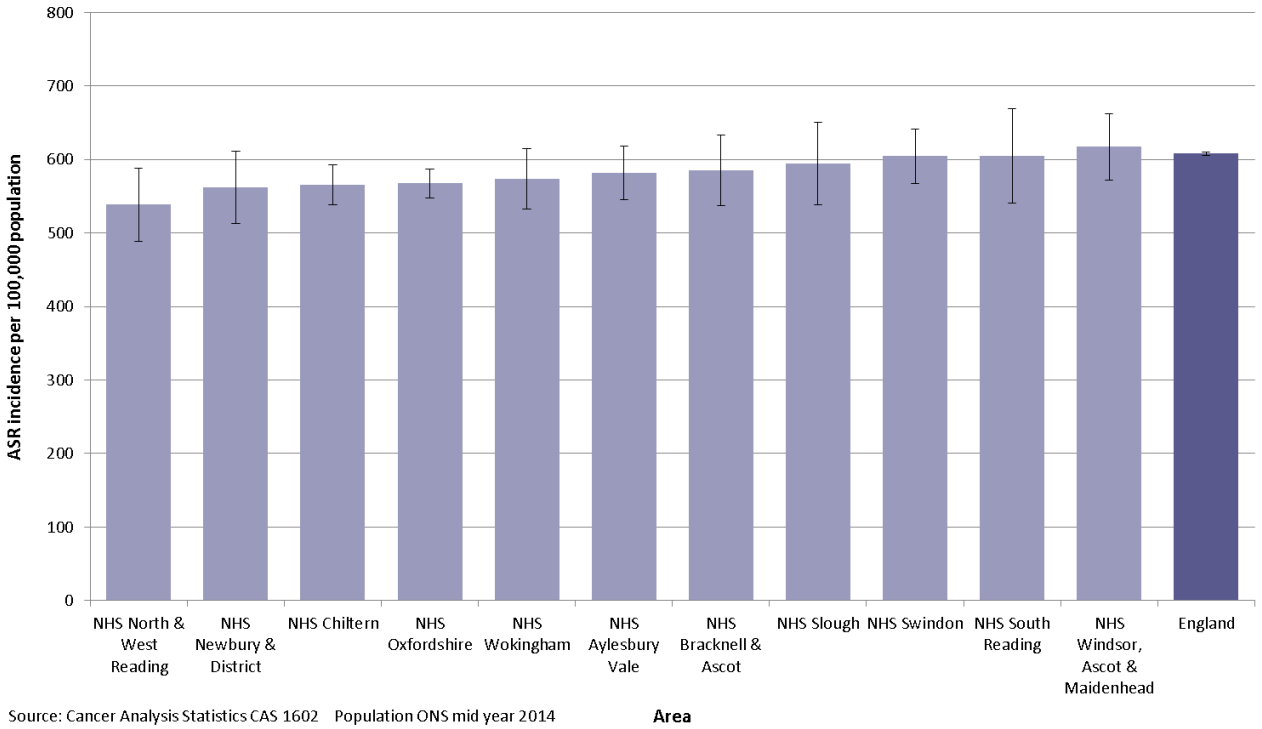
Scenario 1 assumes people will continue to get and survive cancer at increasing rates, in line with recent trends (except for prostate cancer), and the general population will continue to grow and age.
Scenario 2 assumes people will continue to get cancer at the rate they do today, and that survival rates will remain as they are. The estimates are therefore driven only by a growing and ageing population.

Incidence

The age-standardised cancer incidence rate in the South East in 2014 was statistically significantly lower than the England average, at 600 new cancers per 100,000 population compared to 608 in England as a whole[4]. This represents an increase in South East cancer incidence from 566 per 100,000 in 2004 (England's cancer incidence was 573 per 100,000 in 2004).

There was some variation in the incidence of all new cancer cases by clinical commissioning group (CCG) within Thames Valley Cancer Alliance, from 538 cases per 100,000 population in North and West Reading CCG to 617 per 100,000 in Windsor, Ascot and Maidenhead CCG (Figure 2). The rates in Chiltern, North and West Reading, and Oxfordshire CCGs were statistically significantly lower than the average for England, whereas the rates in all other CCGs were similar to the average for England. None of the CCGs within the Thames Valley Cancer Alliance had an incidence which fell in the two highest national quintiles (Figure 3).

Figure 2 – Age-standardised incidence for all cancers by CCG, rate per 100,000 population in Thames Valley Cancer Alliance in 2014, all persons, all ages



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Figure 3 – Age-standardised incidence for all cancers by CCG, rate per 100,000 population in Thames Valley Alliance in 2014 – by national quintiles

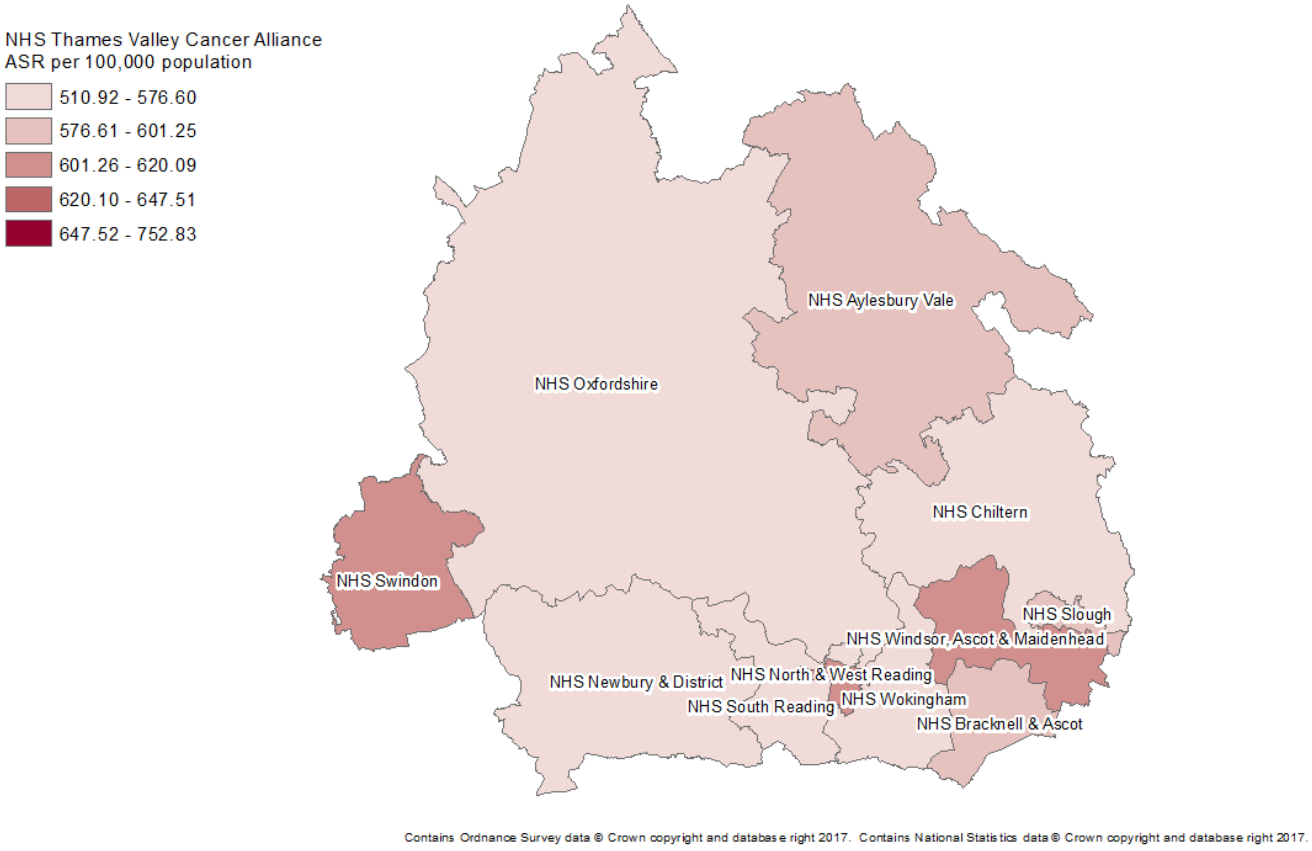
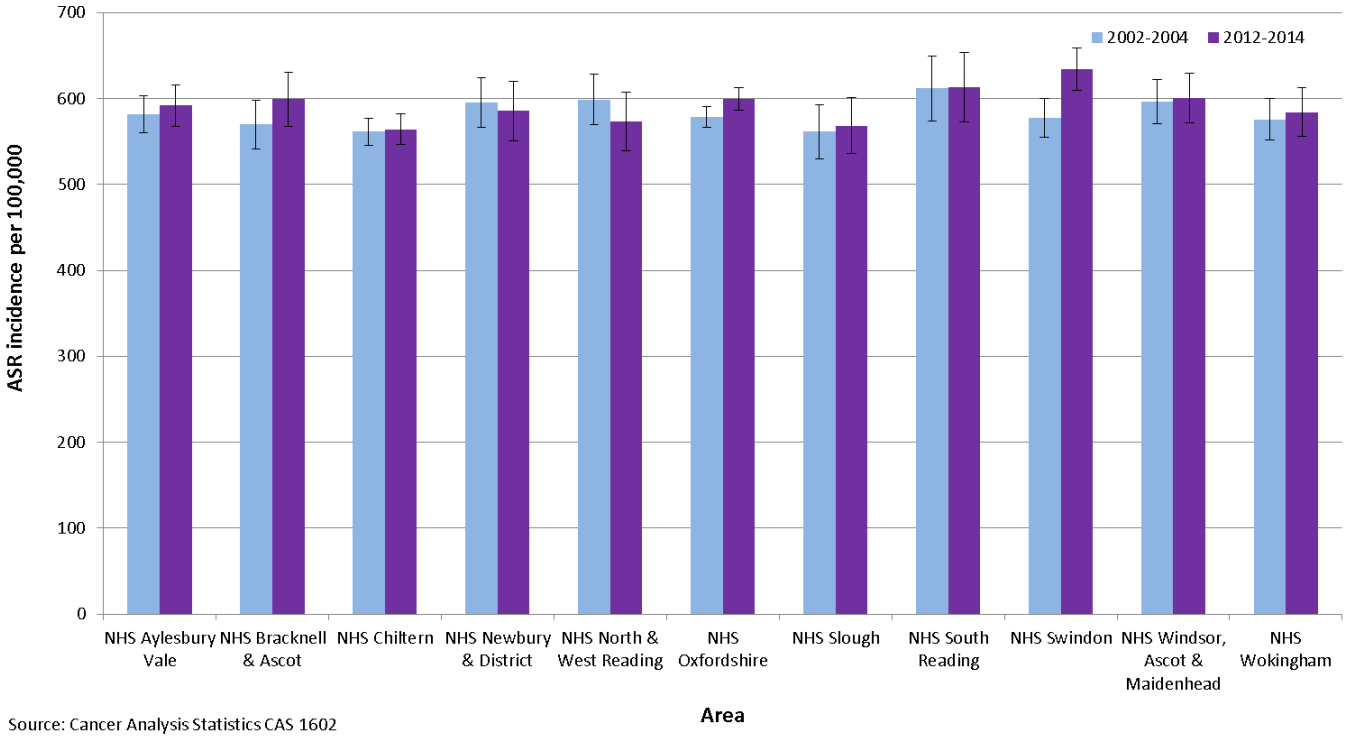


Figure 4 shows the change in all cancer incidence across the CCGs in the Thames Valley Cancer Alliance, comparing the age-standardised incidences (three-year rolling averages) for 2002-2004 and 2012-2014. There have been increases in the incidence rates of all cancers in all CCGs except Newbury and District CCG and North and West Reading CCG where rates have fallen – but these changes are not statistically significant except in Swindon CCG[4].

Figure 4 – Change in age-standardised incidence of all cancers (three year rolling averages) by CCG in Thames Valley Cancer Alliance, between 2002-2004 and 2012-2014, all persons, all ages



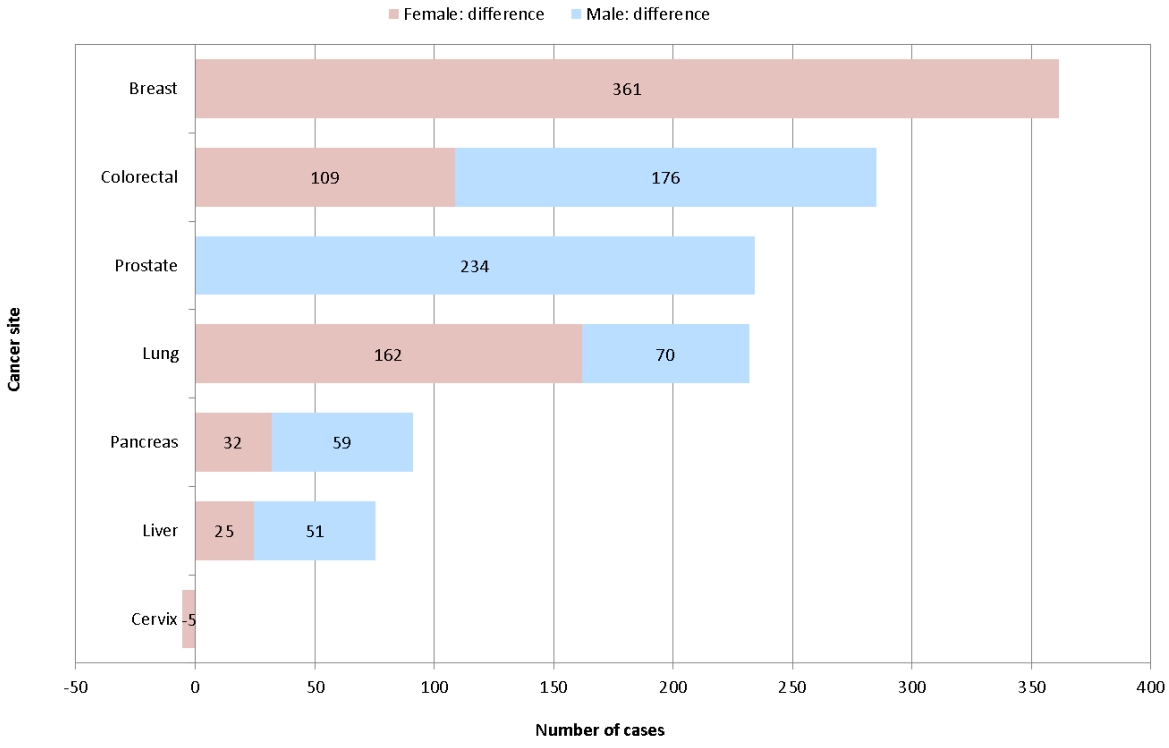
Source: Cancer Analysis Statistics CAS 1602

Figure 5 shows the change in the average annual number of new cases of different types of cancer over the last 10 years in Thames Valley Cancer Alliance by gender[4]. There were increases in the numbers of new diagnoses for most cancer types over this time, but the greatest increase in males was for prostate cancer, with 234 more cases being diagnosed annually on average in the years 2012-2014 than in 2002-2004. This may be due to increased testing for prostate cancer through the PSA blood test. For females, the greatest increase was for breast cancer, with 361 more cases being diagnosed annually on average.

There have been substantial increases in the numbers of lung cancers diagnosed, with females having a larger increase than males. In total, there were an average additional 232 lung cancers diagnosed annually in the years 2012-2014 compared to 2002-2004.

Colorectal cancers have also shown an annual increase of 285 cases over the 10 year period, some of which may be due to the introduction of the Bowel Cancer Screening Programme in England, which began operating in 2006 with full roll out by 2009.

Figure 5 – Change in average annual numbers of new cancer cases by sex and type of cancer, between 2002-2004 and 2012-14, Thames Valley Cancer Alliance



Source: Cancer Analysis Statistics CAS 1602

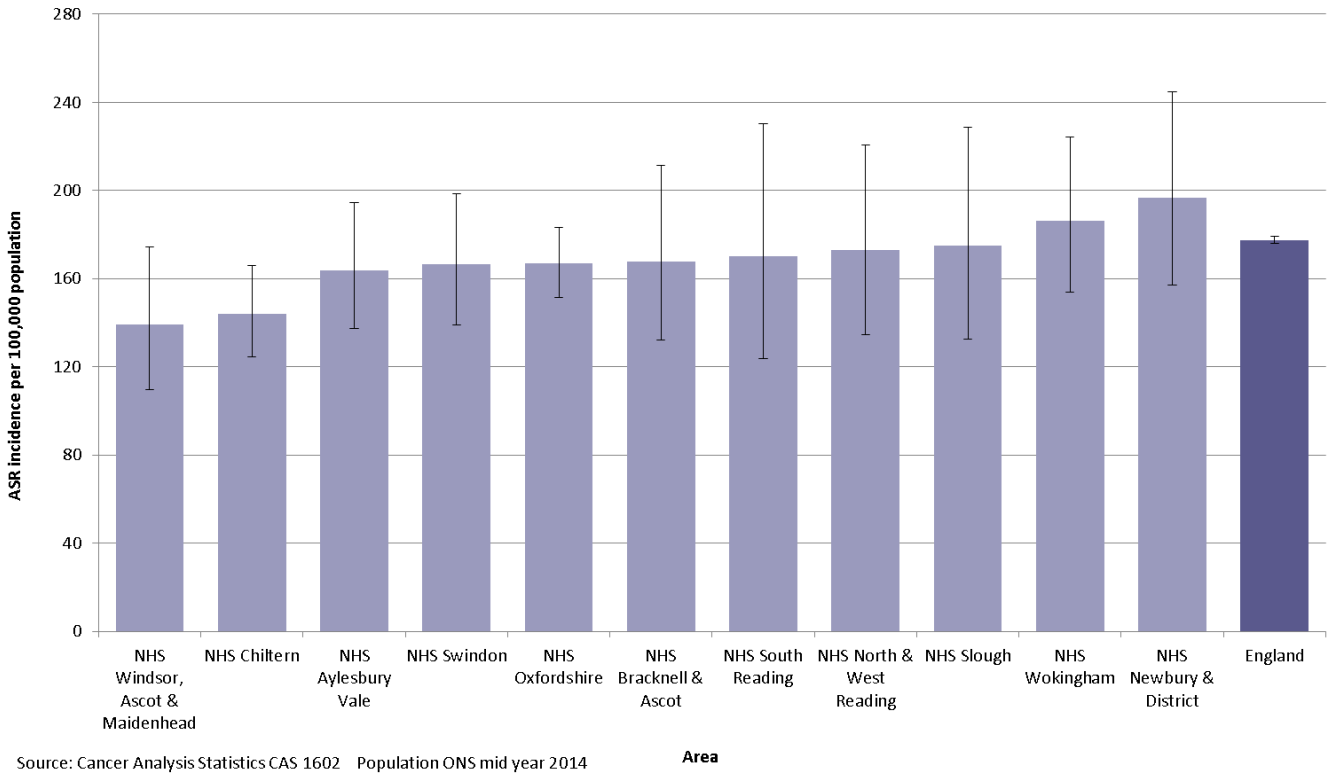
Variations in incidence of selected cancers

Figure 6 to Figure 12 illustrate variations in incidence of some common cancers between CCGs in the Thames Valley Cancer Alliance. The Appendices include maps showing the incidence of some selected cancers by CCG, compared to national quintiles of incidence.

Prostate Cancer

There was variation in the rate of incidence of prostate cancer by CCG within Thames Cancer Alliance, from 139 cases per 100,000 population in Windsor, Ascot and Maidenhead CCG to 197 per 100,000 in Newbury and District CCG (Figure 6). The rates in Windsor, Ascot and Maidenhead CCG and Chiltern CCG were statistically significantly lower than England (178 per 100,000).

Figure 6 – Age-standardised incidence of prostate cancer by CCG in Thames Valley Cancer Alliance in 2014, males, all ages

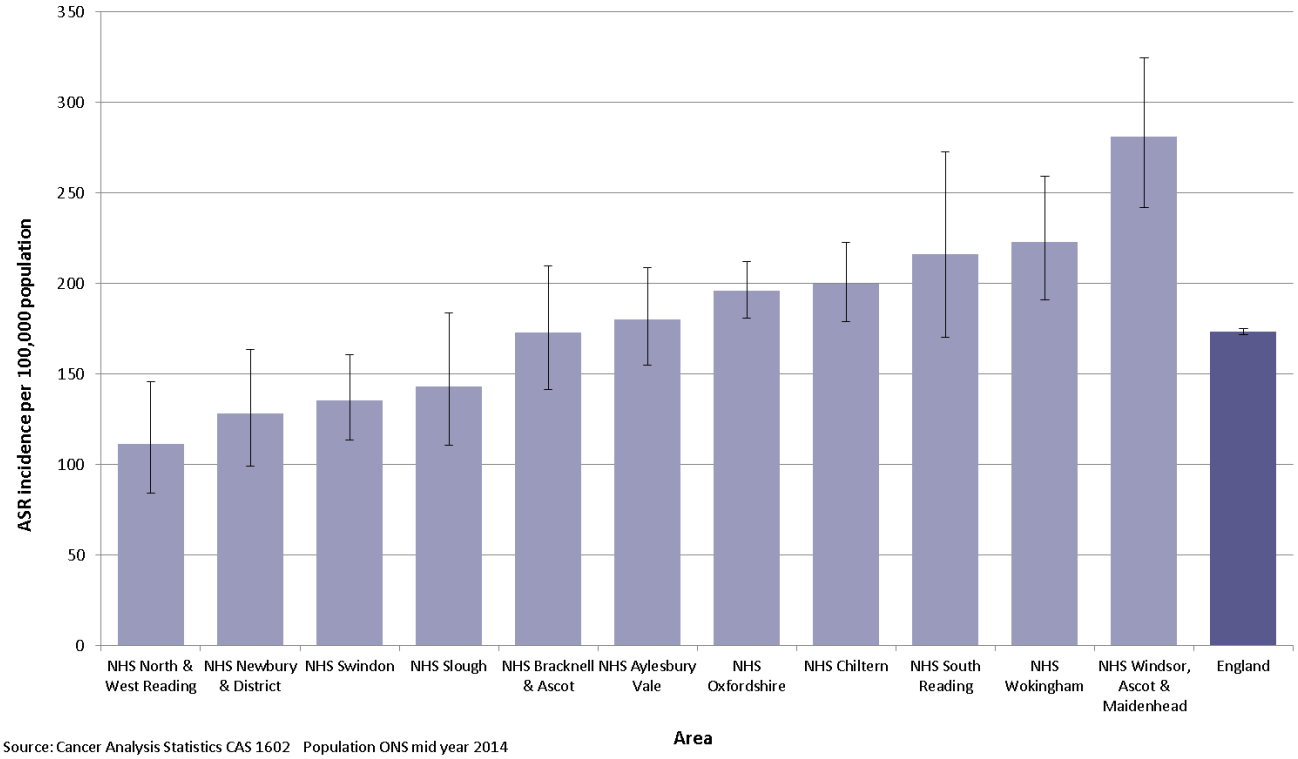


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Female Breast Cancer

There was significant variation in the rate of incidence of female breast cancer by CCG within Thames Valley Cancer Alliance, from 111 cases per 100,000 population in North and West Reading CCG to 281 per 100,000 in Windsor, Ascot and Maidenhead CCG (Figure 7). The rates in North and West Reading, Newbury and District and Swindon CCGs were statistically significantly lower than the average for England (173 per 100,000), whereas the rates in Oxfordshire, Chiltern, Wokingham and Windsor, Ascot and Maidenhead CCGs were statistically significantly higher.

Figure 7 – Age-standardised incidence of breast cancer by CCG in Thames Valley Cancer Alliance in 2014, females, all ages

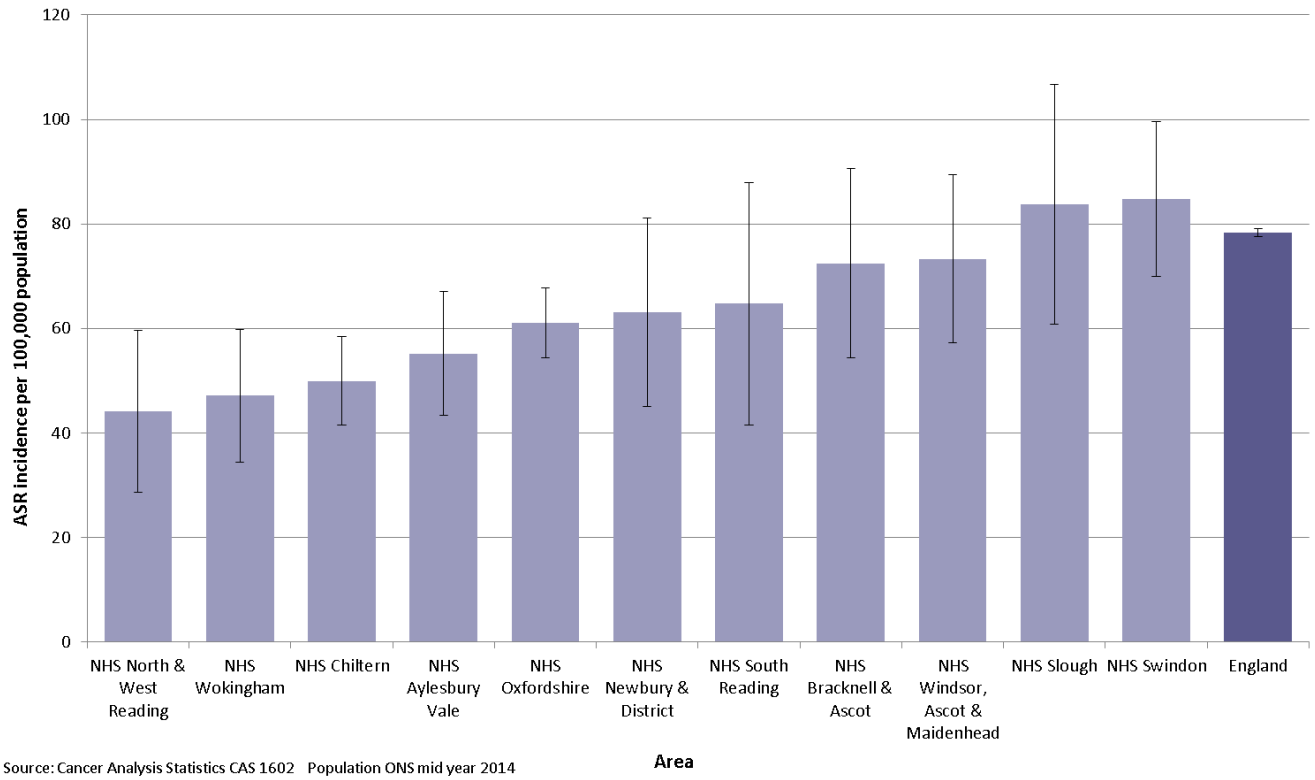


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Lung cancer

There was significant variation in the rate of incidence of trachea, bronchus and lung cancer by CCG within Thames Valley Cancer Alliance, from 44 cases per 100,000 population in North and West Reading CCG to 85 per 100,000 in Swindon CCG (Figure 8). The rates in North and West Reading, Wokingham, Chiltern, Aylesbury Vale, and Oxfordshire were statistically significantly lower than England (78 per 100,000).

Figure 8 – Age-standardised incidence of trachea, bronchus and lung cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages

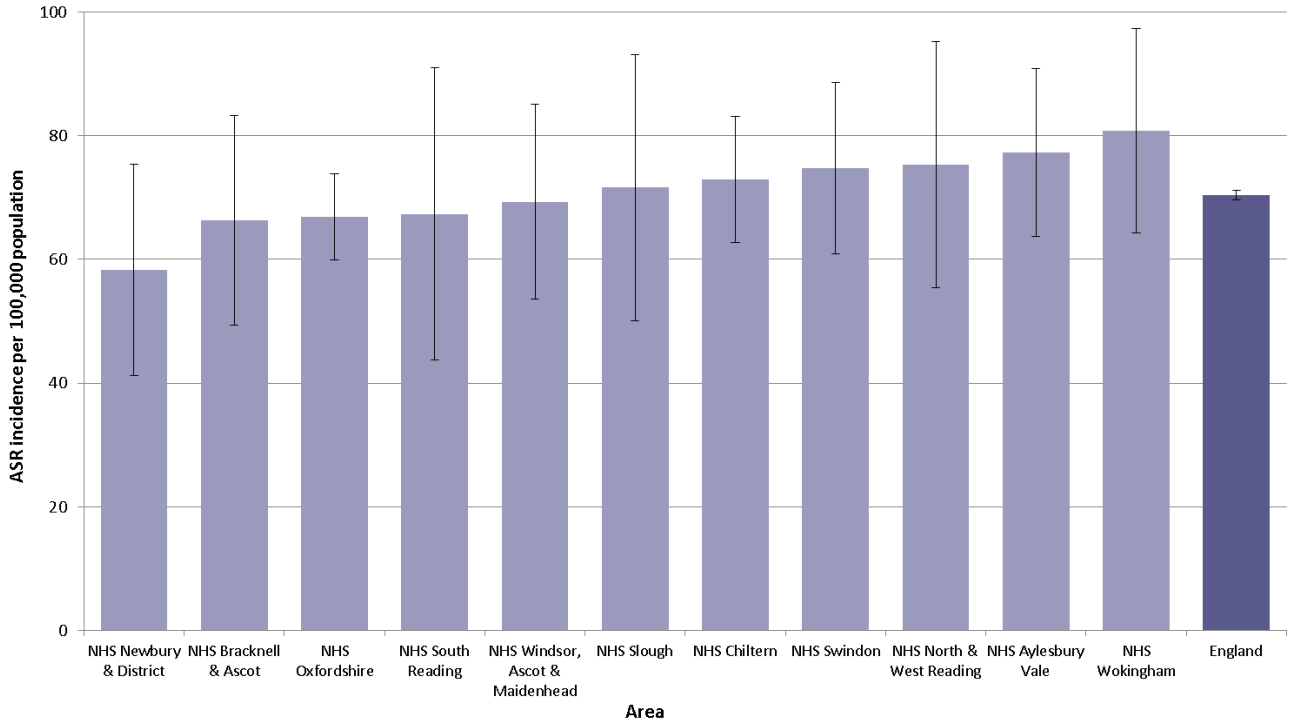


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Colorectal cancer

There was some non-statistically significant variation in the rates of incidence of colorectal cancer by CCG within Thames Valley Cancer Alliance, from 58 cases per 100,000 population in Newbury and District CCG to 81 per 100,000 in Wokingham CCG (Figure 9). No CCGs in Thames Valley had incidence rates that were statistically different from England (70 per 100,000).

Figure 9 – Age-standardised incidence of colorectal cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages

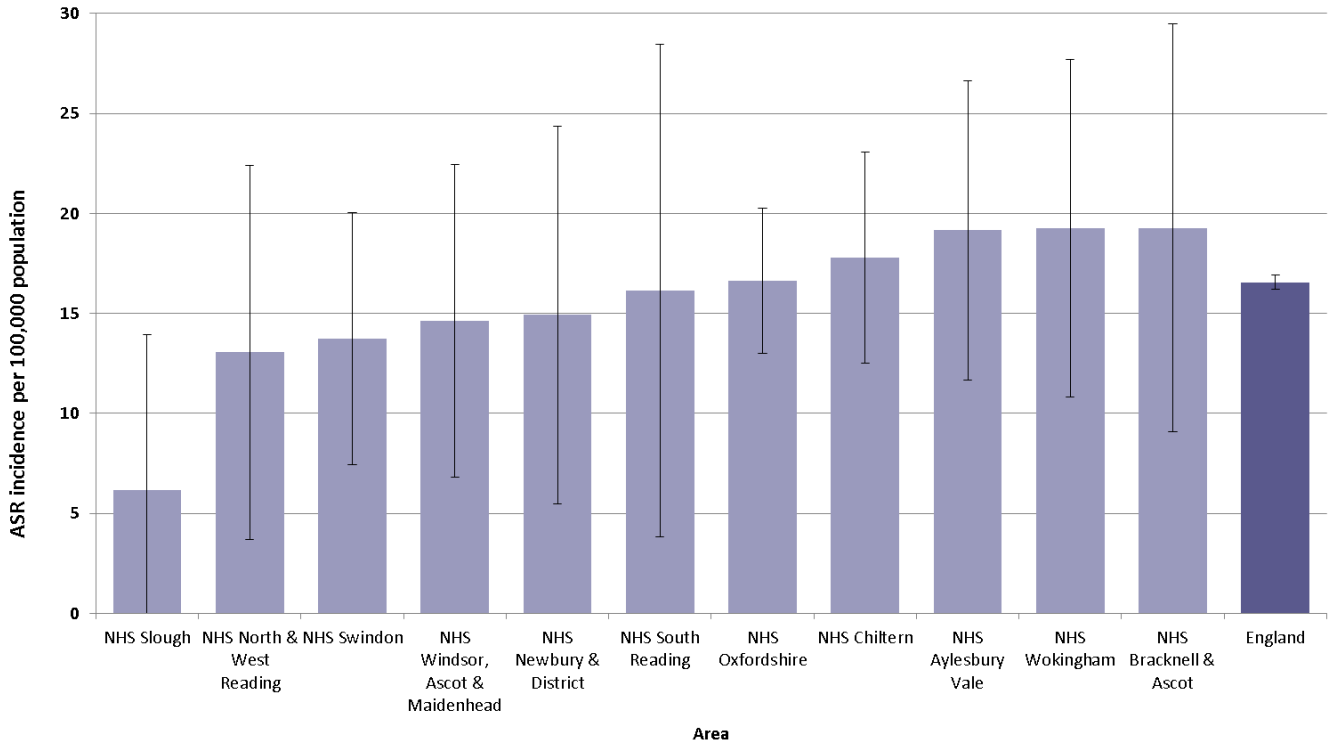


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Pancreas

There was some non-statistically significant variation in the rate of incidence of pancreatic cancer by CCG within Thames Valley Cancer Alliance, from 6 cases per 100,000 population in Slough CCG to 19 per 100,000 in Bracknell and Ascot CCG (Figure 10). Only Slough CCG had an incidence rate statistically significantly different from England (17 per 100,000) – significantly lower at 6 per 100,000.

Figure 10 – Age-standardised incidence of pancreatic cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages

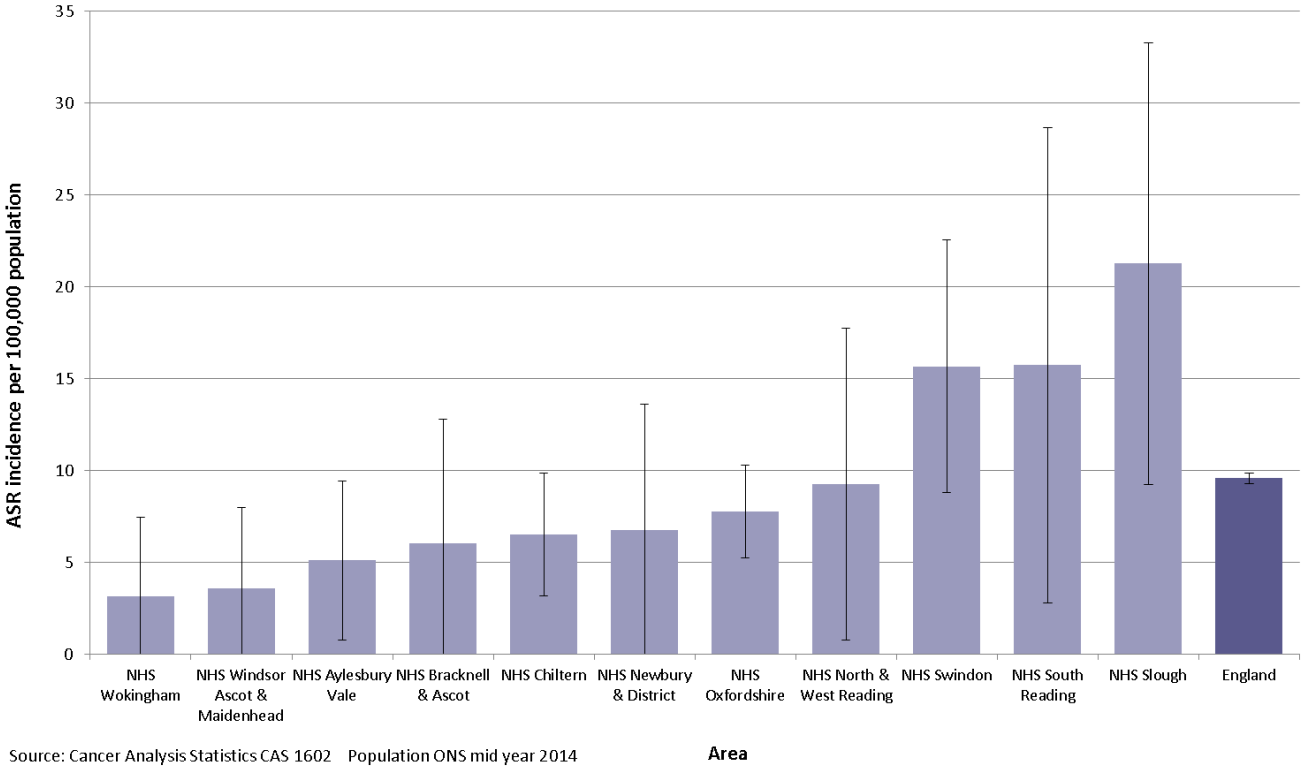


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Liver cancer

There was some statistically significant variation in the rate of incidence of liver cancer between CCGs within Thames Valley Cancer Alliance, from 3 cases per 100,000 population in Wokingham CCG to 21 per 100,000 in Slough CCG (Figure 11). The rates in Wokingham CCG and in Windsor, Ascot and Maidenhead CCG were statistically significantly lower than England (10 per 100,000).

Figure 11 – Age-standardised incidence of liver cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages

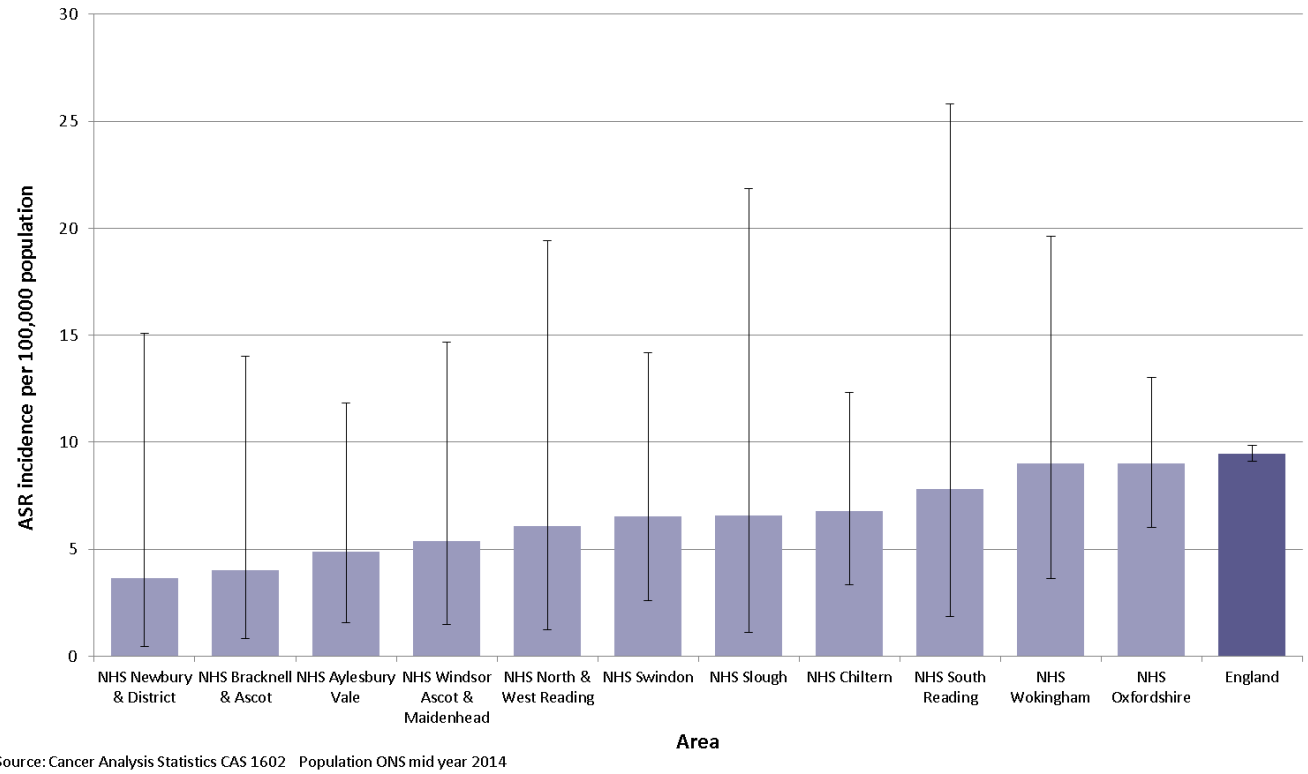


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Cervical cancer

There was some non-statistically significant variation in the rate of incidence of cervical cancer by CCG within Thames Valley Cancer Alliance, from 4 cases per 100,000 population in Newbury and District CCG to 9 per 100,000 in Oxfordshire CCG (Figure 12). No CCGs in Thames Valley had incidence rates that were statistically different from England (9 per 100,000).

Figure 12 – Age-standardised incidence of cervical cancer by CCG in Thames Valley Cancer Alliance in 2014, females, all ages



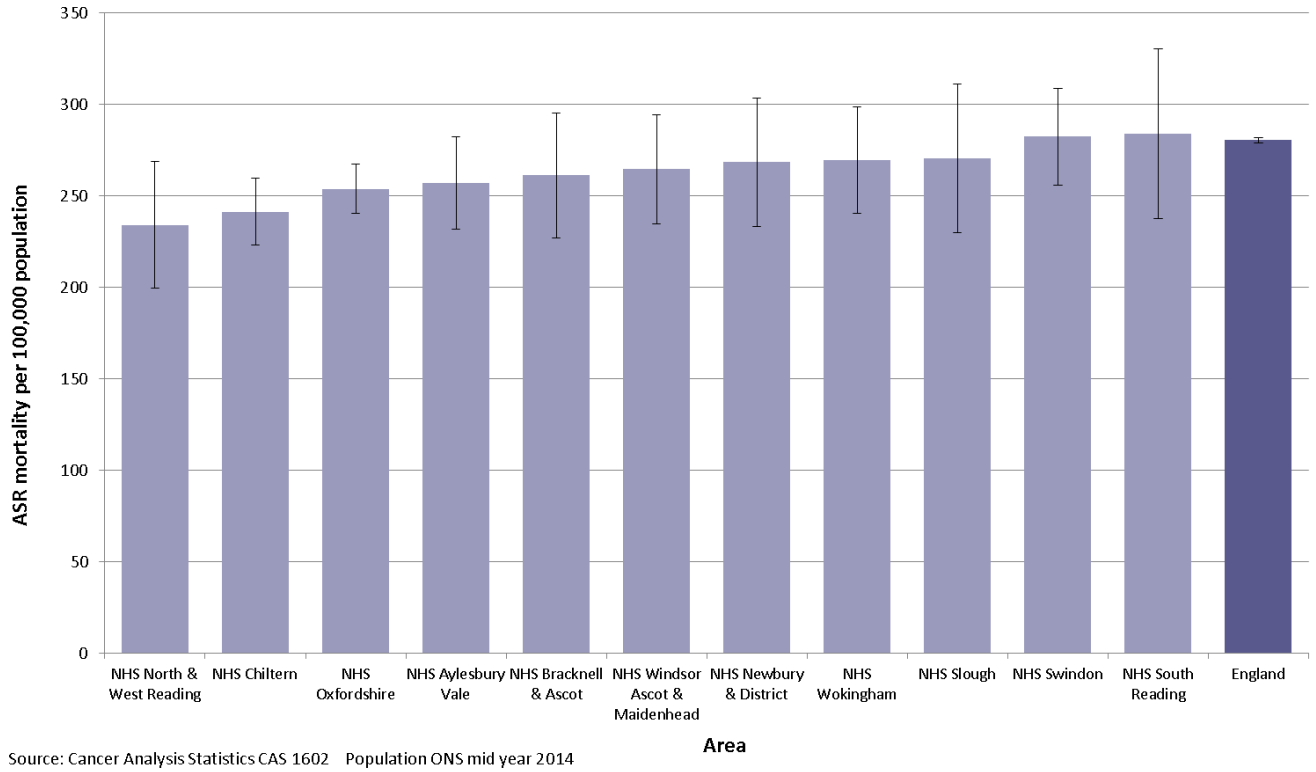
Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Mortality

The age-standardised mortality rate for all cancers in the South East was 265 deaths per 100,000 population in 2014, which was statistically significantly lower than the England average of 281 per 100,000[4]. This represents a decrease in South East cancer mortality rate from 279 per 100,000 in 2004 (England's cancer mortality rate was 312 per 100,000 in 2004).

The mortality rate for all cancers in 2014 varied across the CCGs within Thames Valley Cancer Alliance, from 234 deaths per 100,000 population in North and West Reading CCG to 284 deaths per 100,000 population in South Reading CCG (Figure 13). The mortality rates in North and West Reading, Chiltern and Oxfordshire CCGs were statistically significantly lower than England, whereas the mortality rates in the other areas were not statistically significantly different to England (281 deaths per 100,000 population). Mortality rates by CCG across Thames Valley spanned the lower three of the national quintiles (Figure 14).

Figure 13 – Age-standardised mortality for all cancers by CCG, rate per 100,000 population in Thames Valley Cancer Alliance in 2014, all persons, all ages



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Figure 14 – Age-standardised mortality for all cancers by CCG, rate per 100,000 population in Thames Valley Cancer Alliance in 2014 – by national quintiles

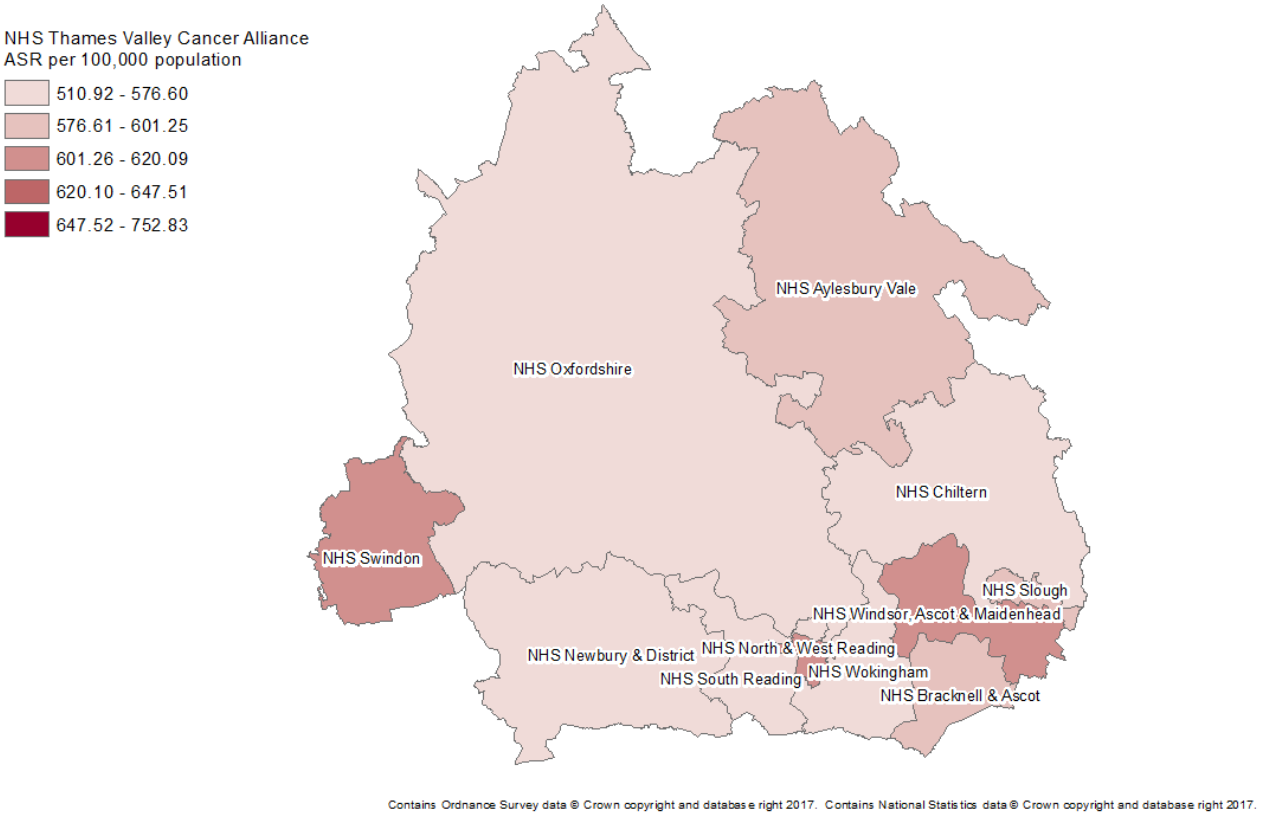
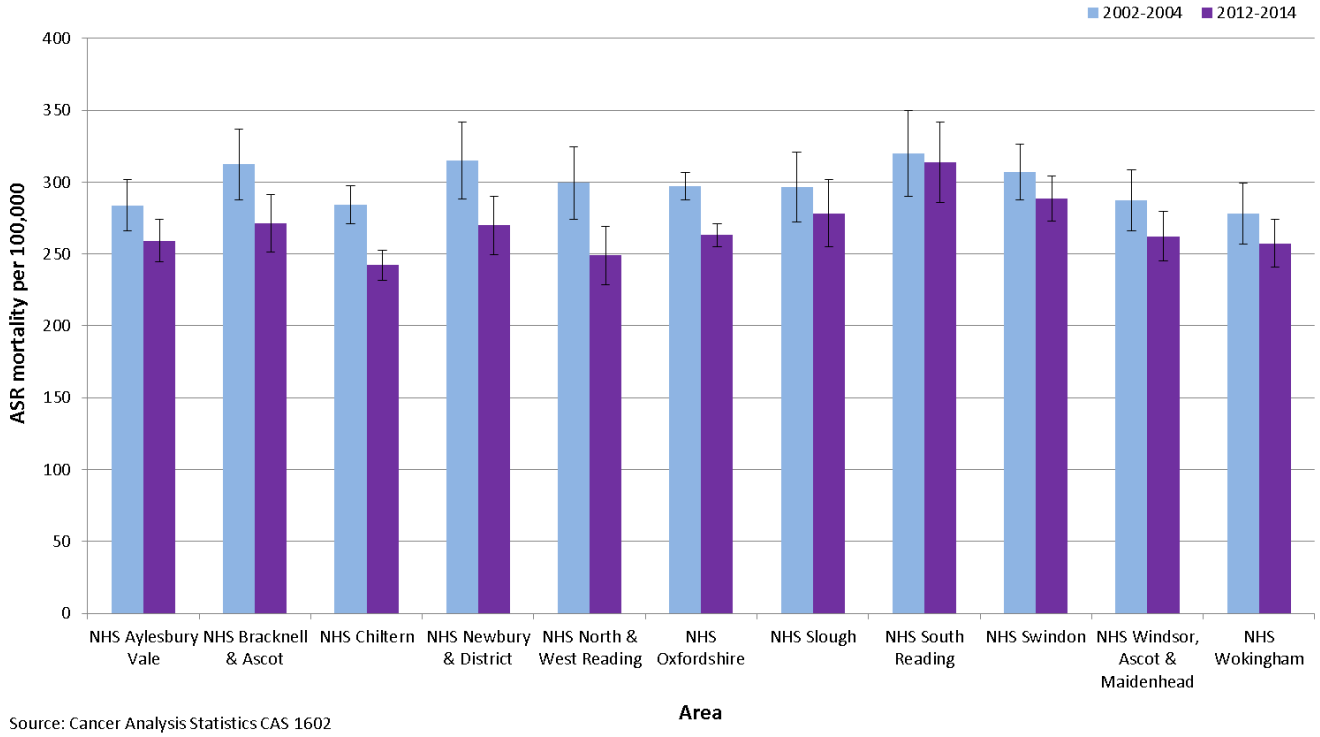


Figure 15 shows the change in all cancer mortality across the CCGs in the Thames Valley Cancer Alliance, comparing the age-standardised rates (three-year rolling averages) for 2002-2004 and 2012-2014. There have been decreases in the cancer mortality rates in each CCG[4], but these were only statistically significant in Chiltern, North and West Reading, and Oxfordshire CCGs.

Figure 15 – Change in age-standardised mortality for all cancers (three year rolling averages) by CCG in Thames Valley Cancer Alliance, between 2002-2004 and 2012-2014, all persons, all ages



Source: Cancer Analysis Statistics CAS 1602

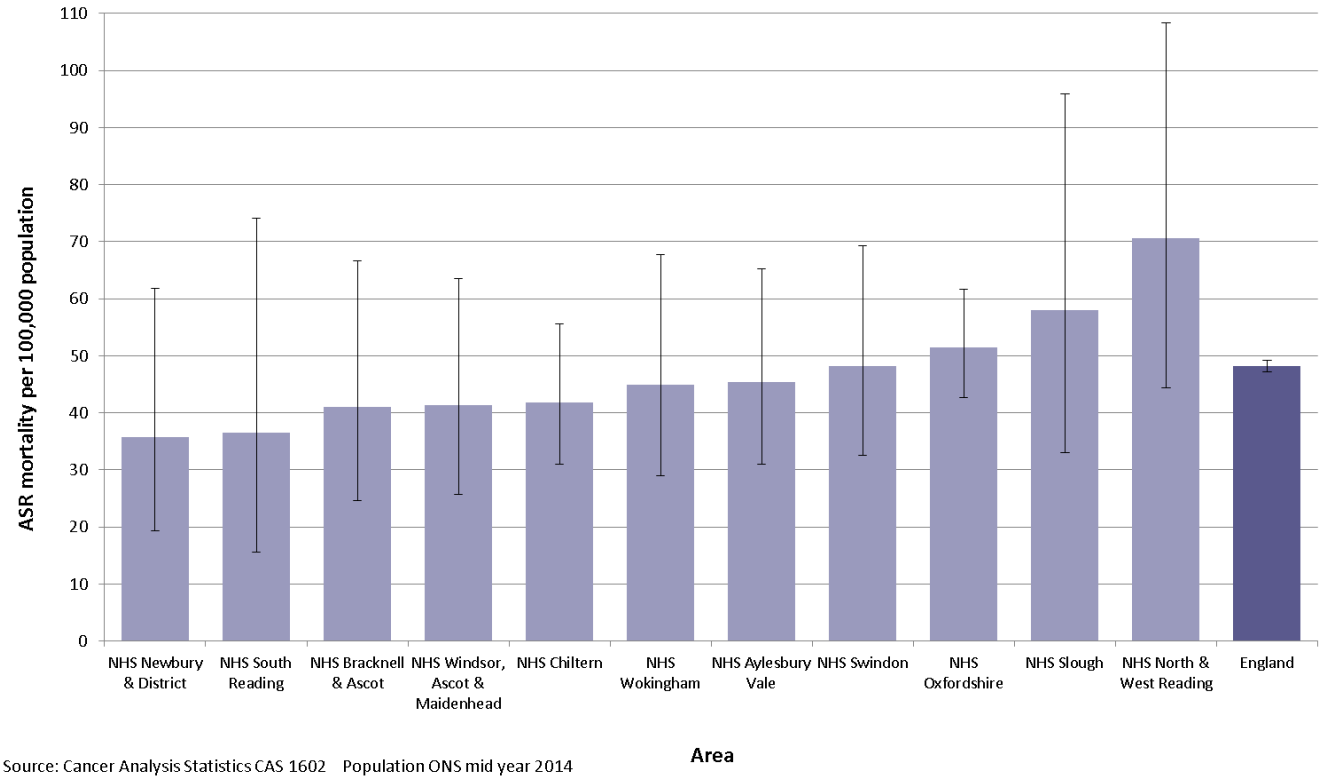
Variations in mortality from selected cancers

Figure 16 to Figure 22 illustrate variations in mortality of some common cancers between CCGs in the Thames Valley Cancer Alliance. The Appendices include maps showing the mortality of selected cancers by CCG, compared to national quintiles of mortality.

Prostate cancer

The mortality rate for prostate cancer in 2014 showed some non-statistically significant variation across the CCGs within Thames Valley Cancer Alliance, from 36 deaths per 100,000 population in Newbury and District CCG to 71 deaths per 100,000 population in North and West Reading CCG (Figure 16). Although there was some variation across the alliance, no CCGs in Thames Valley had mortality rates for prostate cancer that were statistically significantly different from England (48 deaths per 100,000 population).

Figure 16 – Age-standardised mortality rate of prostate cancer by CCG in Thames Valley Cancer Alliance in 2014, males, all ages

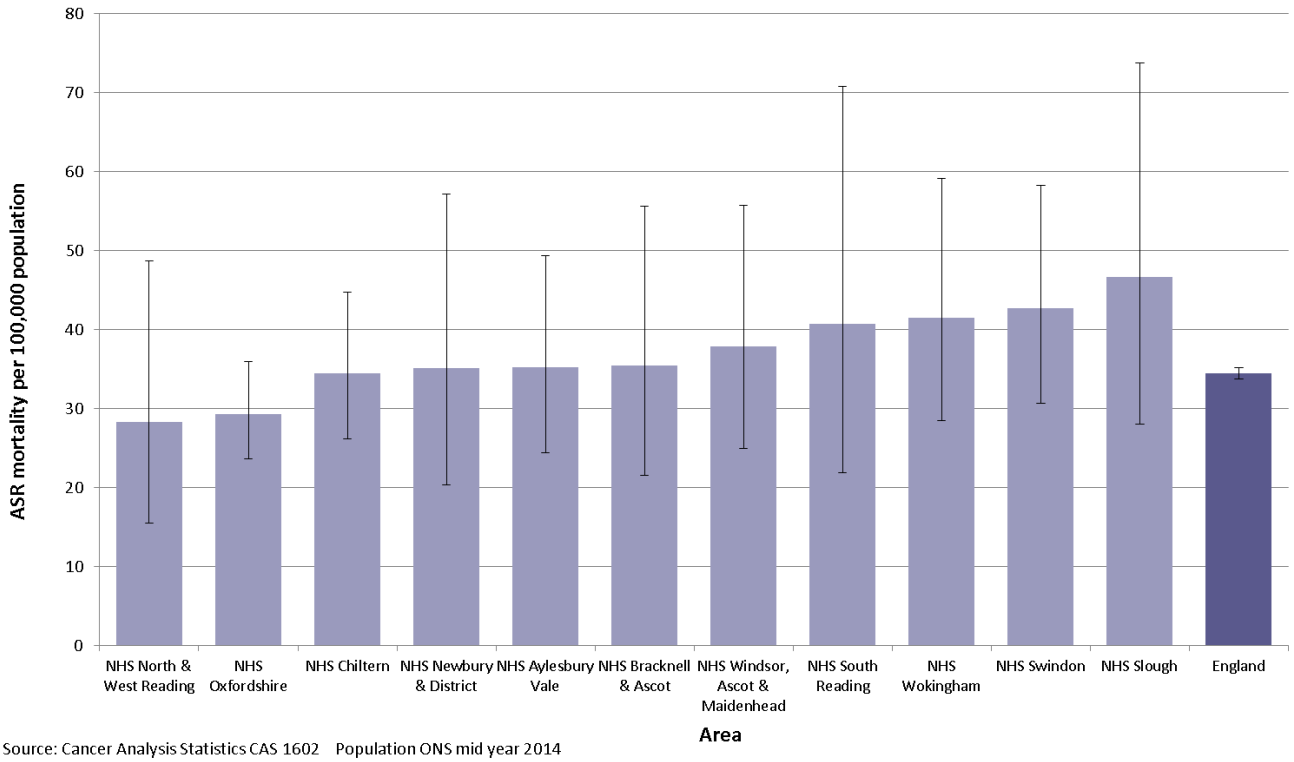


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Female Breast Cancer

The mortality rate for female breast cancer in 2014 showed some non-statistically significant variation across the CCGs within Thames Valley Cancer Alliance, from 28 deaths per 100,000 population in North and West Reading CCG to 47 deaths per 100,000 population in Slough CCG (Figure 17). Although there was some variation across the alliance, no CCGs in Thames Valley had mortality rates for female breast cancer that were statistically significantly different from England (34 deaths per 100,000 population).

Figure 17 – Age-standardised mortality rate of breast cancer by CCG in Thames Valley Cancer Alliance in 2014, females, all ages

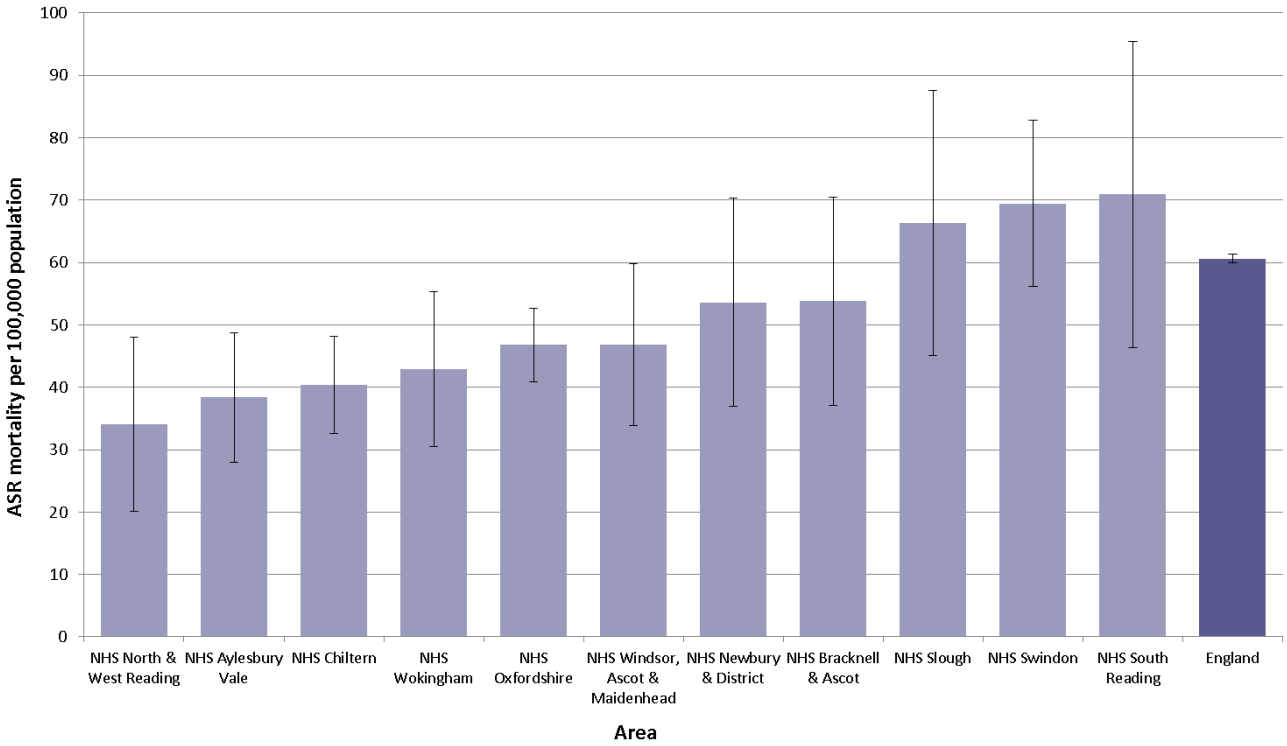


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Lung cancer

The mortality rate for trachea, bronchus and lung cancers in 2014 varied significantly across the CCGs within Thames Valley Cancer Alliance, from 34 deaths per 100,000 population in North and West Reading CCG to 71 deaths per 100,000 population in South Reading CCG (Figure 18). The mortality rates for North and West Reading, Aylesbury Vale, Chiltern, Wokingham, Oxfordshire, and Windsor, Ascot and Maidenhead CCGs were statistically significantly lower than England (61 deaths per 100,000 population).

Figure 18 – Age-standardised mortality rate of trachea, bronchus and lung cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages

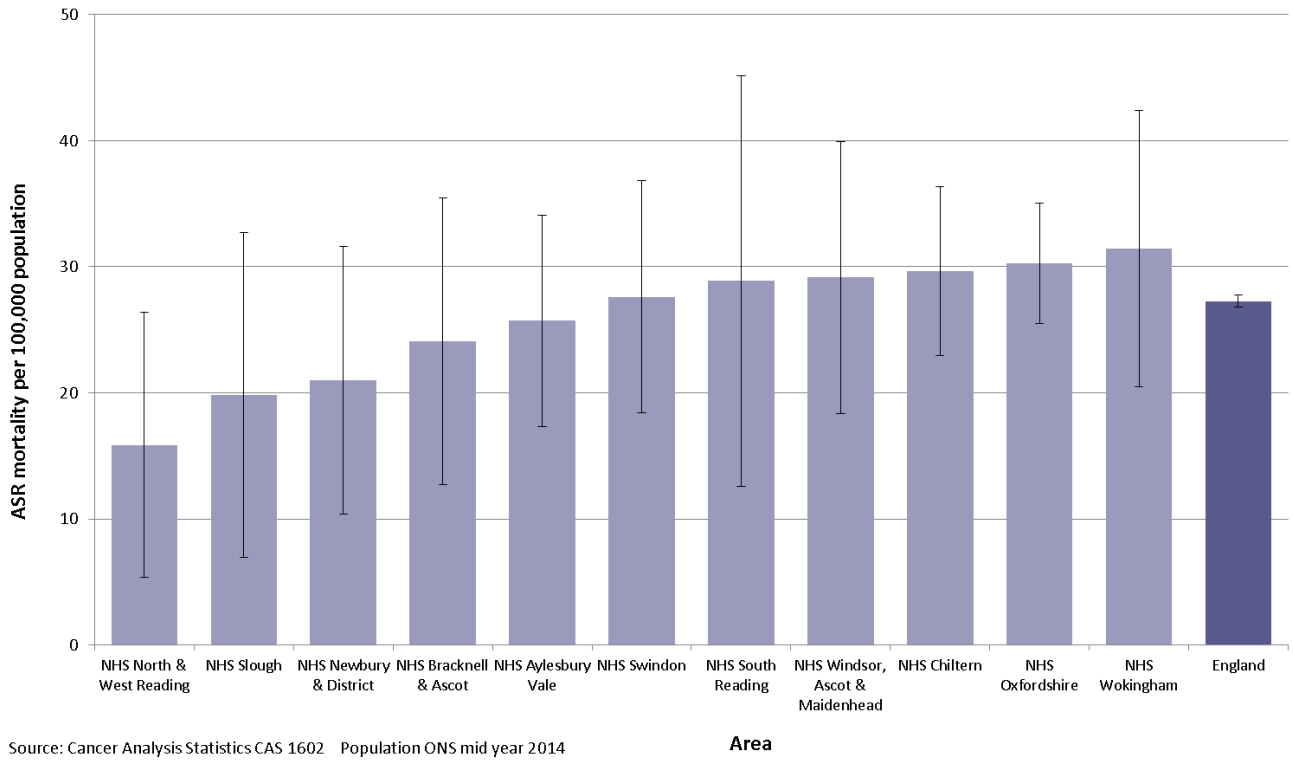


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Colorectal cancer

The mortality rate for colorectal cancer in 2014 showed some variation across the CCGs within Thames Valley Cancer Alliance, from 16 deaths per 100,000 population in North West Reading CCG to 31 deaths per 100,000 population in Wokingham CCG (Figure 19). Only North and West Reading CCG had a mortality rate for colorectal cancer that was statistically different to the average for England (27 deaths per 100,000 population).

Figure 19 – Age-standardised mortality rate of colorectal cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages

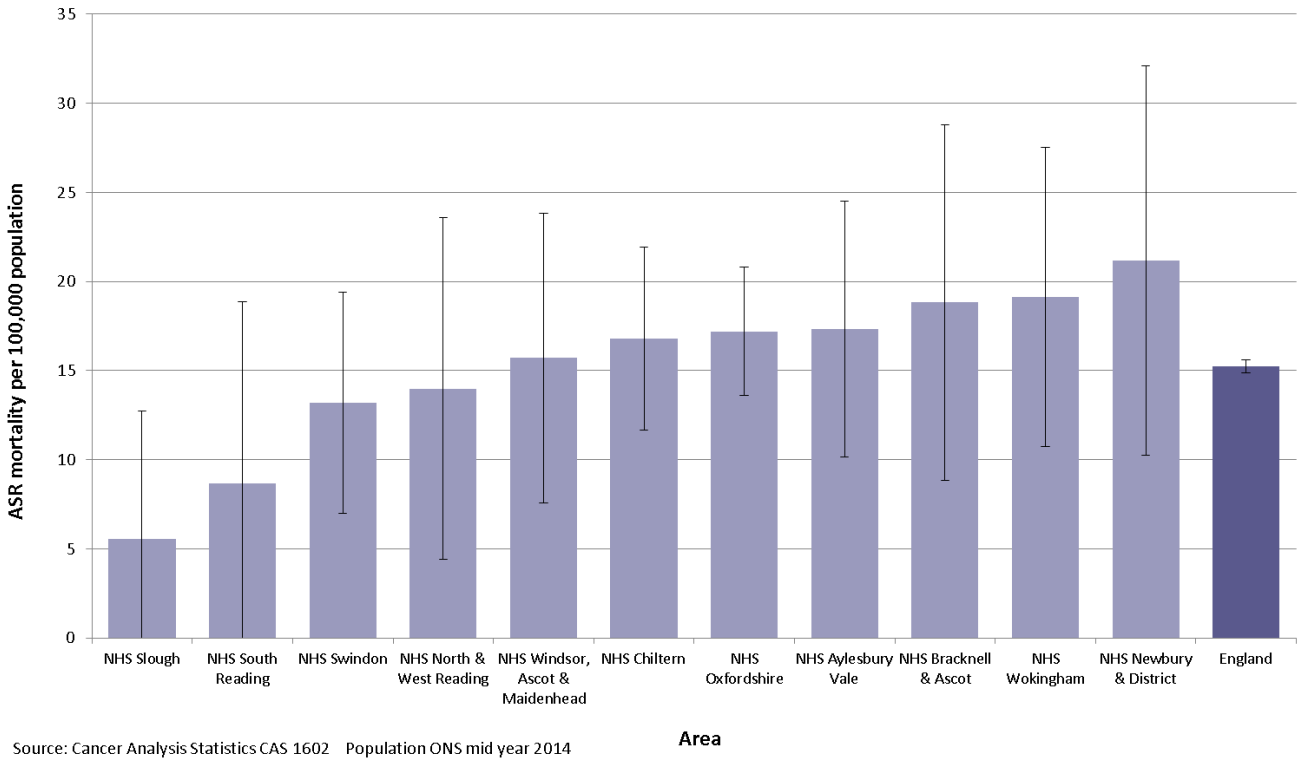


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Pancreatic cancer

The mortality rate for pancreatic cancer in 2014 across the CCGs within Thames Valley Cancer Alliance ranged from 6 deaths per 100,000 population in Slough CCG to 21 deaths per 100,000 population in Newbury and District CCG (Figure 20). Only Slough CCG had a mortality rate for pancreatic cancer that was statistically significantly lower than England (15 deaths per 100,000 population).

Figure 20 – Age-standardised mortality rate of pancreatic cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages

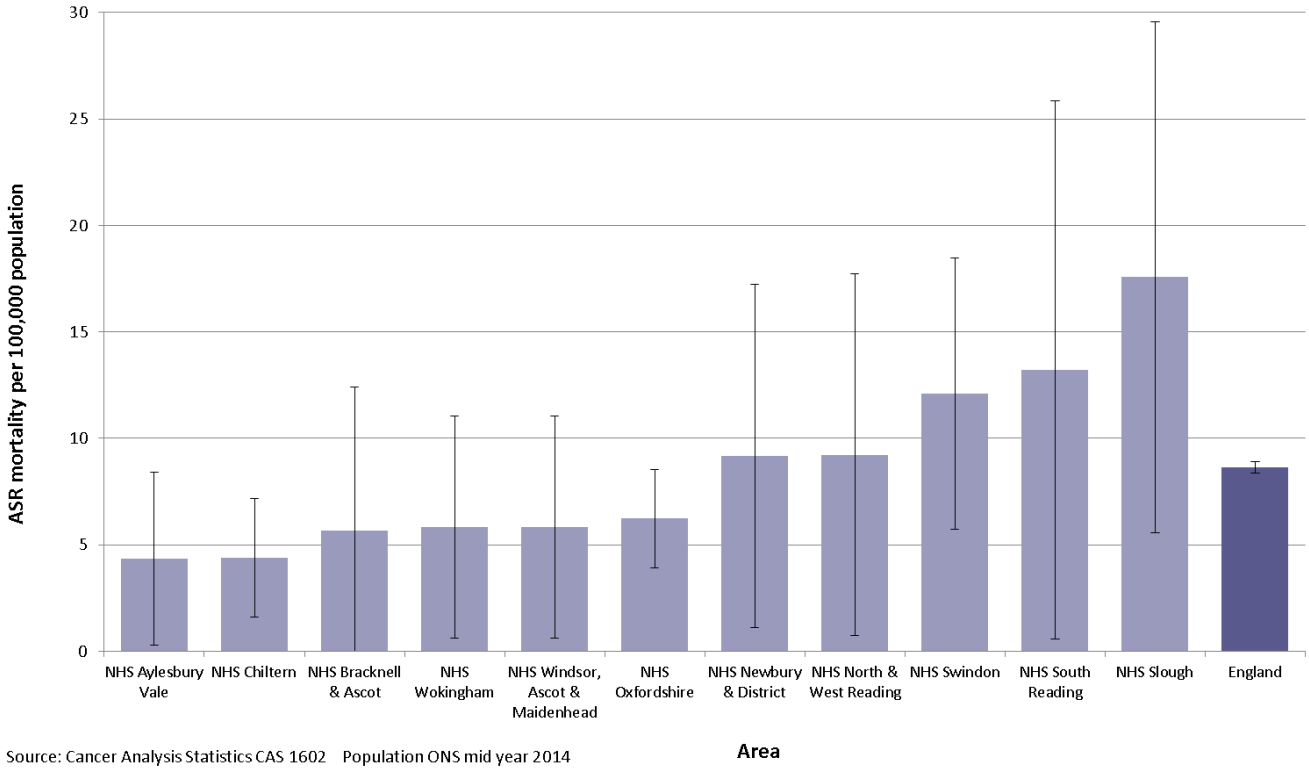


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Liver cancer

The mortality rate for liver cancer in 2014 within Thames Valley Cancer Alliance ranged from 4 deaths per 100,000 population in Aylesbury CCG to 18 deaths per 100,000 population in Slough CCG (Figure 21). Only Chiltern CCG had a mortality rate for liver cancer that was statistically significantly different to the average for England (9 deaths per 100,000 population) – statistically significantly lower at 3 deaths per 100,000.

Figure 21 – Age-standardised mortality rate of liver cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages

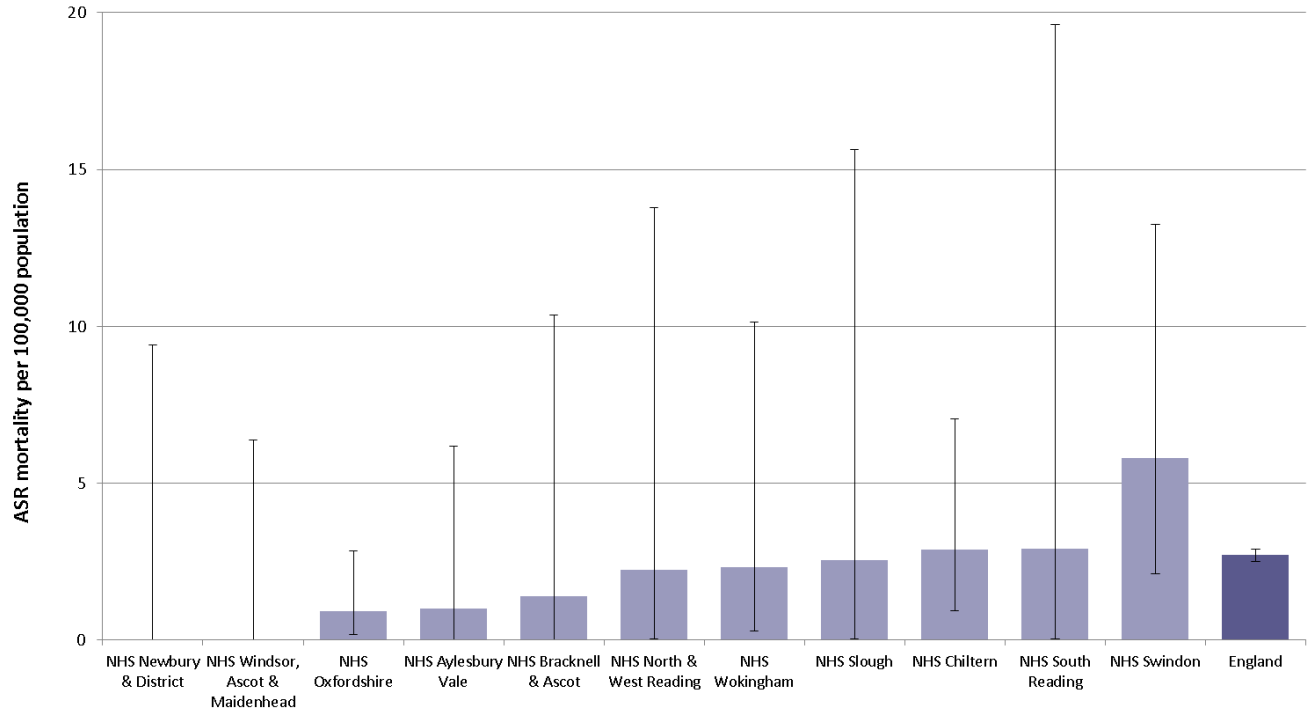


Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Cervical cancer

The mortality rate for cervical cancer in 2014 showed some non-statistically significant variation across the CCGs within Thames Valley Cancer Alliance, from 0 deaths per 100,000 population in Newbury and District, and Windsor, Ascot and Maidenhead CCGs to 6 deaths per 100,000 population in Swindon CCG (Figure 22). None of the CCGs in Thames Valley Cancer Alliance had mortality rates that were significantly different to the England average (3 deaths per 100,000 population).

Figure 22 – Age-standardised mortality rate of cervical cancer by CCG in Thames Valley Cancer Alliance, females, all ages



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

Incidence and mortality by deprivation

For some cancer types, incidence and mortality rates are strongly associated with the level of socio-economic deprivation experienced by residents in an area[7]. Often this is because some important risk factors vary with socio-economic deprivation. For example, levels of smoking tend to be higher in more deprived populations, and consequently levels of smoking-related illnesses are typically higher in these populations. Furthermore, people from more deprived populations may be less likely to seek early medical attention when they have symptoms. This can delay their diagnoses and reduce their chances of survival. Figure 23 and Figure 24 show incidence and mortality rates in the most deprived and least deprived quintiles (the most deprived and least deprived fifths of areas) across the South East of England for men and women. These charts include the cancers that demonstrated statistically significant differences in incidence or mortality between the most and least deprived quintiles of the population. Of note:

- for males, incidence rates of lung and liver cancer were statistically significantly higher in the **most deprived** quintile in the South East compared to the least deprived quintile

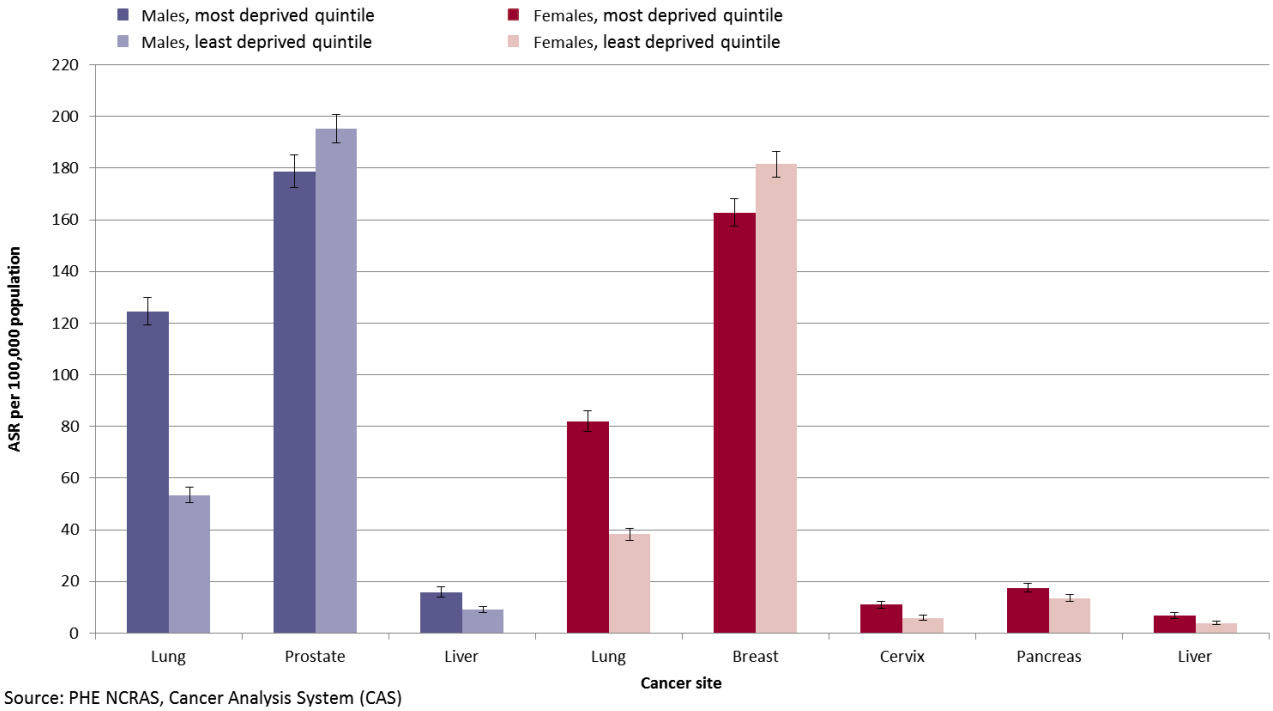
- for females, incidence rates of lung, cervix, pancreatic and liver cancers were statistically significantly higher in the **most deprived** quintile in the South East compared to the least deprived quintile

- incidence rates of prostate and breast cancers were statistically significantly higher in the **least deprived** quintile in the South East compared to the most deprived quintile

- in males, mortality rates for lung, colorectal and liver cancers were statistically significantly higher in the **most deprived** quintile in the South East compared to the least deprived quintile

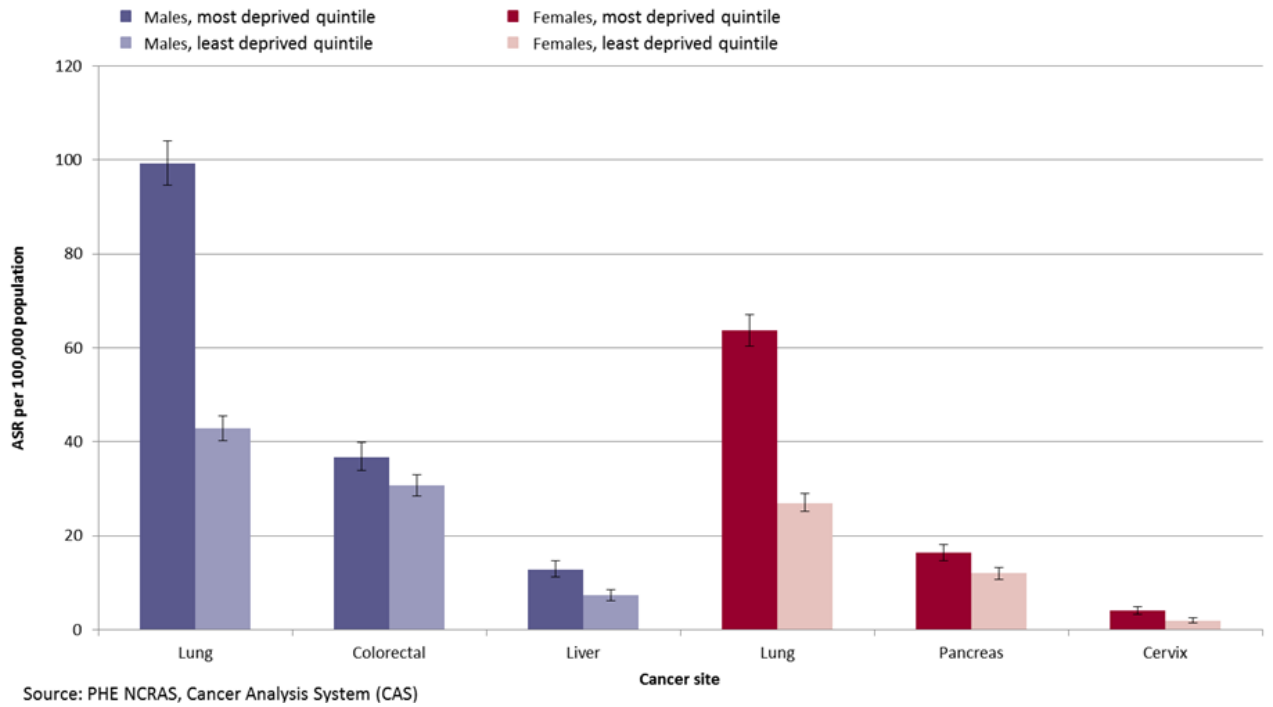
- in females, mortality rates for lung, pancreatic and cervical cancers were statistically significantly higher in the **most deprived** quintile in the South East compared to the least deprived quintile

Figure 23 – Age-standardised incidence rates of cancer in most and least deprived groups, within-region quintiles (IMD 2015) by cancer type, males and females, South East England, 2012-2014



Source: PHE NCRAS, Cancer Analysis System (CAS)

Figure 24 – Age-standardised cancer mortality rates in most deprived and least deprived groups – within-region quintiles – (IMD 2015) by cancer type, males and females, South East England, 2012-2014

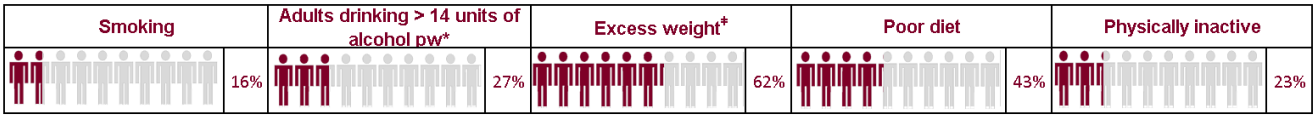


Source: PHE NCRAS, Cancer Analysis System (CAS)

Lifestyle risk factors

Figure 25 shows the prevalence in the Thames Valley Cancer Alliance of some important lifestyle risk factors including smoking[7], drinking alcohol at an "increasing and higher risk" level[8], excess weight[9], eating fewer than five portions of fruit and vegetables a day (poor diet)[10] and physical inactivity[11]. These risk factors are significantly associated with an increased risk of cancer as well as other long term conditions.

Figure 25 – Prevalence of risk factors in Thames Valley Cancer Alliance



*South East figure, ‡2012 - 2014

Smoking is the biggest preventable cause of cancer, accounting for more than one in four UK cancer deaths and nearly one in five cancer cases. Smoking causes more than four in five cases of lung cancer and increases the risk of fifteen other cancers (see Appendix 1, Table 2)[12]. In 2014, 16% of adults were current smokers in the Thames Valley Cancer Alliance[7]. Figure 26 shows smoking prevalence data from the Quality and Outcomes Framework (QOF) by CCG.

Alcohol is one of the most well-established causes of cancer[13], yet awareness of this link among the general population has been found to be poor[14]. It has been classified as a Group 1 carcinogen since 1988[15]. Cancers of the mouth, oesophagus, colon and rectum, liver, larynx and breast have all been shown to be related to alcohol[16]. In 2014, the Health Survey for England found that 20% of adults drank more than 14 units per week (increasing or higher risk drinking)[16]. Local authority estimates of alcohol consumption are not currently available, but across the South East, about 27% of adults drank more than 14 units of alcohol per week[8]. Figure 27 shows the age-standardised incidence of alcohol related cancers, and Figure 28 shows alcohol-related hospital admissions by local authority across Thames Valley.

It is thought that more than one in twenty cancers in the UK are linked to excess weight (being overweight or obese)[17]. Many types of cancer are more frequent in people who have excess weight, including two of the most common – breast and colorectal cancers, and three of the most difficult to treat – pancreatic, oesophageal and gallbladder cancers[17]. In 2012-2014, in Thames Valley 62% of adults were classed as having excess weight[9], similar to the England average (65%). Figure 29 shows the prevalence of excess weight among adults for local authorities in Thames Valley.

An estimated 5% of cancer cases in the UK are attributed to eating too little fruit and vegetables. Upper aero-digestive tract cancers (oral cavity and pharynx, oesophageal, and larynx) and colorectal cancer are most likely to be linked to inadequate fruit and vegetables intake. A further 3% of cases are attributed to eating any red meat and processed meat, with a further 2% to eating too little fibre and less than 1% to eating too much salt[18]. In 2014, 43% of the population of the Thames Valley Cancer Alliance did not eat the recommended five portions of fruit and vegetables a day[10], although this is better than the national average (approximately 46.5% in 2014). (Note: this is the inverse of the Public Health Outcomes Framework indicator "Proportion of the adult population meeting the recommended '5-a-day' on a 'usual day' (adults)".) Figure 30 shows the proportion of adults by CCG in the Thames Valley Cancer Alliance, who reported they did not eat the recommended five portions of fruit and vegetables a day.

In 'The European Health Report', in 2012 the World Health Organization estimated that eliminating physical inactivity would result in 22% to 33% less colon cancer and 5% to 12% less breast cancer[17]. In 2014 in Thames Valley Cancer Alliance, 23% of adults were classed as inactive[11], similar to the national average. The map in Figure 31 shows the proportion of adults who were classified as physically inactive by CCG.

Health Checks

The NHS Health Check programme is a national prevention programme to identify people at risk of developing vascular diseases (heart disease, stroke, diabetes, kidney disease or vascular dementia).

People in England aged between 40 to 74 years are invited for an NHS Health Check once every five years if they do not already have a diagnosis of vascular disease. The checks assess individuals' risks of developing vascular disease and provide personalised advice on how to reduce it. It is estimated that one in five people taking up an NHS Health Check will be at risk of developing a vascular disease in the near future.

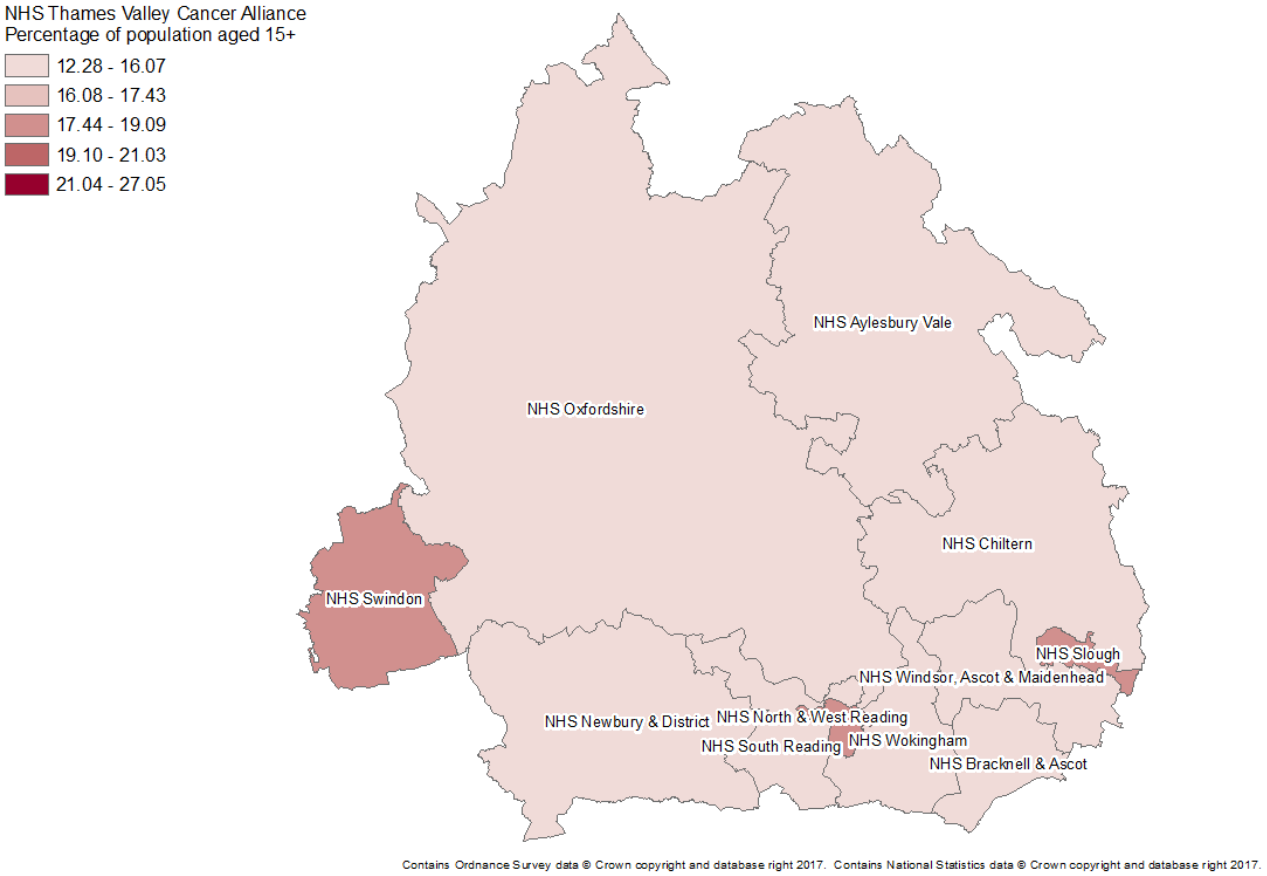
The risk factors for vascular disease are similar to the risk factors for many cancers. If the health checks programme can encourage people to quit smoking, reduce alcohol consumption and maintain a healthy weight through exercise and a healthy diet, it could help reduce cancer incidence.

Between 2013/14 and 2016/17, 32% of the eligible population had received a health check in the South East, lower than the national average of 36%. However in Thames Valley local authorities, between 21 – 41 % of the eligible population had received an NHS Health Check during this period[19].

Smoking

In 2014, the overall smoking prevalence reported in QOF[7] in the Thames Valley Cancer Alliance was 16% (persons aged 15+). QOF reported smoking prevalence varied between CCGs in the cancer alliance (see Figure 26), with the majority of CCGS being in the lowest quintile of CCGs in England. Swindon, Slough, and South Reading CCGs were in the middle national quintile. This data from QOF is not directly comparable with smoking prevalence derived from population surveys, but was used to compare CCGs across the cancer alliance. In 2016, the smoking prevalence for the South East in persons aged 18+ (Annual Population Survey) was 14.6%, which was statistically significantly lower than the England average (15.5%)[20]. In Thames Valley cancer alliance, only Slough had a smoking prevalence statistically significantly higher than the England or South East averages.

Figure 26 – Smoking prevalence (%) from QOF in people (aged 15+) by CCG in Thames Valley Cancer Alliance, 2014/15 – national quintiles

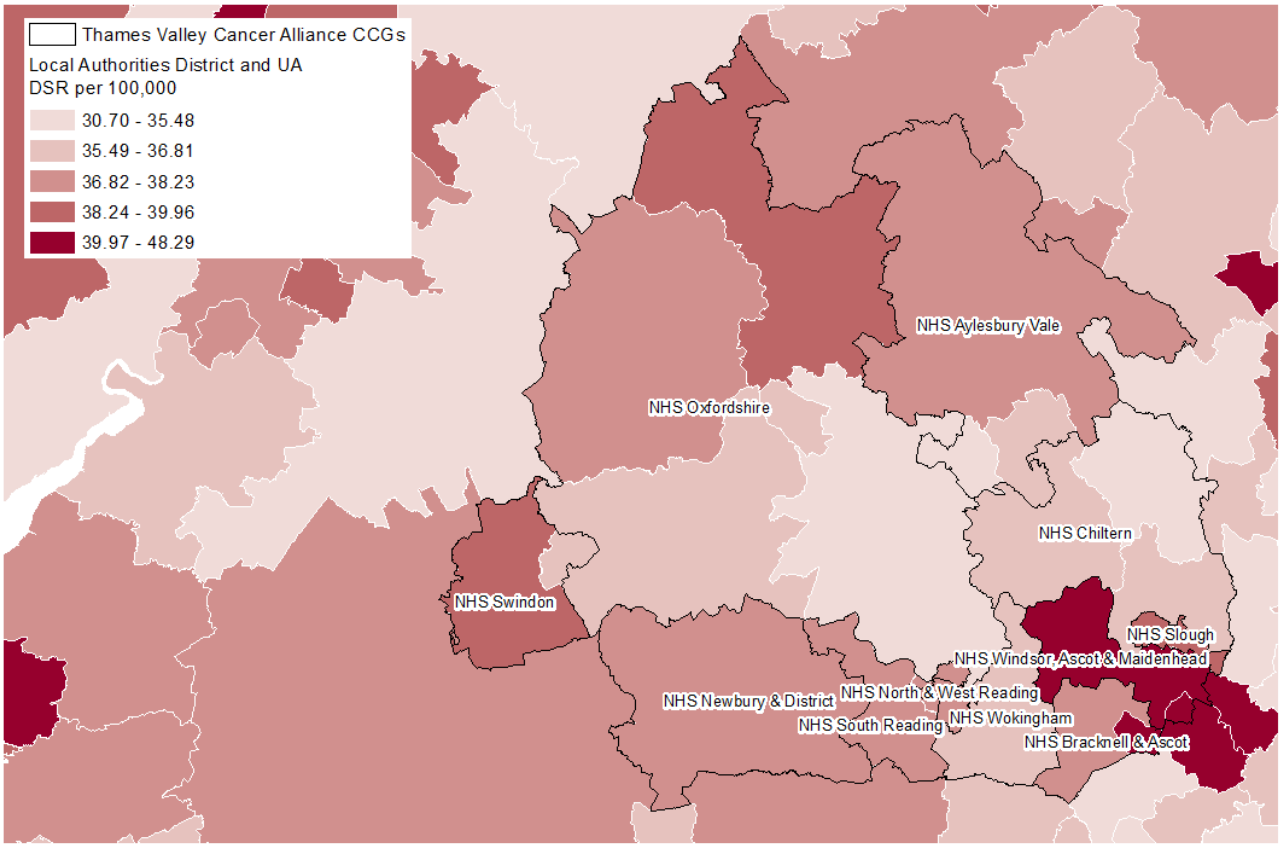


Alcohol

Over 2013-15 there were estimated to be almost 9,500 new cases[a] of alcohol-related cancers across the South East[21]. This represents a directly standardised South East incidence rate of approximately 37 new cases per 100,000 per year, which is statistically significantly lower than the rate for England (38 per 100,000).

Figure 27 shows how the incidence rates of alcohol-related cancers varied between lower tier local authorities (county districts and unitary authorities) in Thames Valley (as the data is not currently available for CCGs). No districts in Thames Valley had incidence rates statistically significantly different from England (or from each other), but Windsor and Maidenhead had an incidence rate of 40.3 per 100,000 (in the highest national quintile). Swindon had an incidence rate of 39.8 per 100,000, Cherwell 38.7 and Slough 38.3 per 100,000 (the second highest national quintile). South Oxfordshire and Chiltern were in the lowest national quintile.

Figure 27 – Incidence of alcohol-related cancers per 100,000 population (directly standardised rates) by local authority in Thames Valley, 2013-15 with CCG overlay – national quintiles

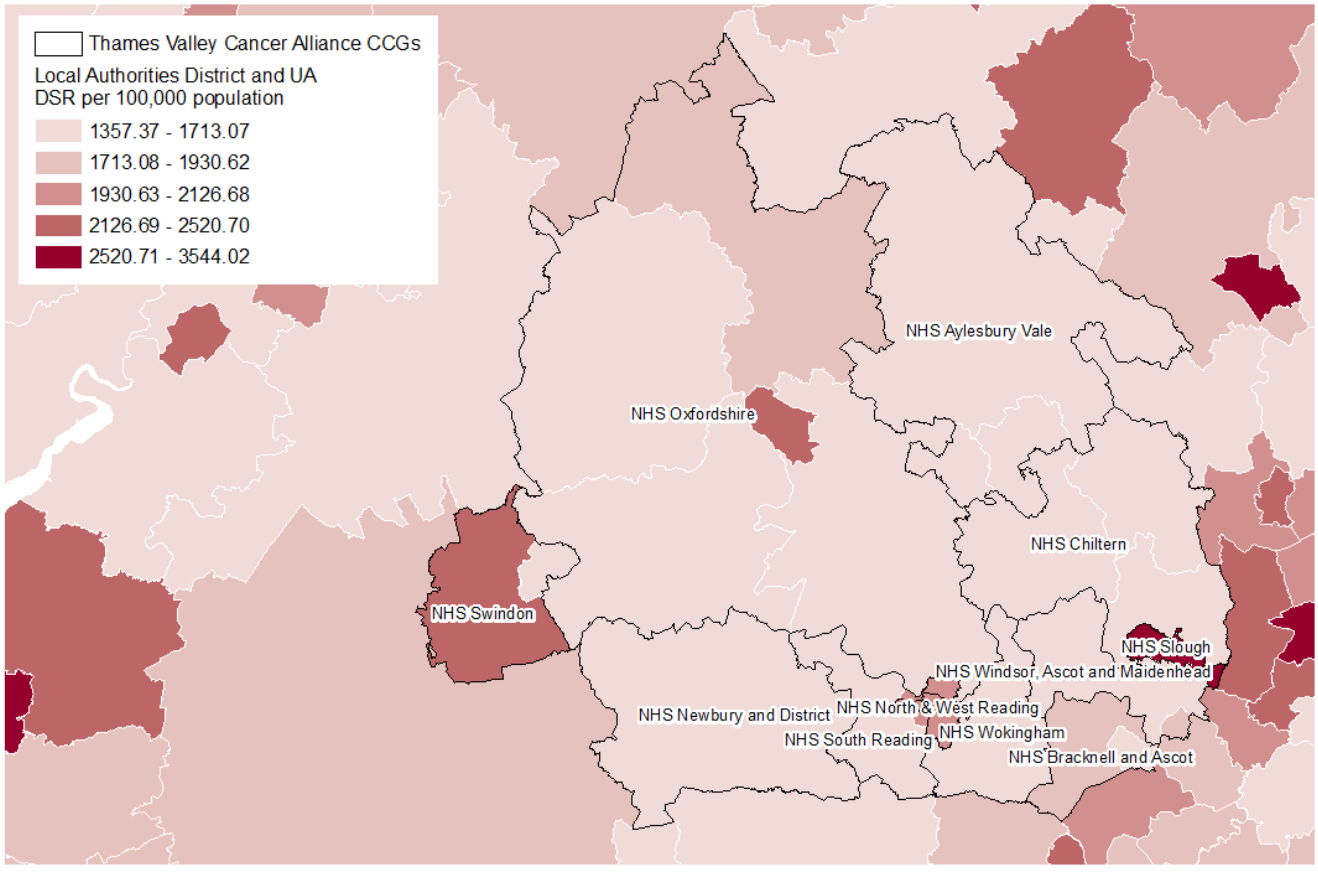


Alcohol attributable fractions applied to cancer incidence per 100,000 in the population (for cancer of the mouth, oesophagus, colorectal, liver, larynx and breast) – three year aggregate figure

In 2015/16, there were approximately 153,000 hospital admissions for alcohol-related conditions (broad definition)[a] across the South East[21]. This represents a directly standardised annual rate of 1,768 per 100,000, which was statistically significantly lower than the England rate (2,179 per 100,000).

In Thames Valley, only Slough had a statistically significantly higher rate of admission than the England average (2,365 per 100,000). Oxford (2,157 per 100,000) and Swindon (2,201 per 100,000) were similar to the England average), while all other local authorities were significantly lower (ranging from 2,078 per 100,000 in Reading to 1,408 per 100,000 in Wokingham). This is reflected in Figure 28 which shows local authorities in Thames Valley in all five national quintiles.

Figure 28 – Alcohol-related hospital admissions (broad definition), all persons (DSR) by local authority in Thames Valley with CCG overlay, 2015/16 – national quintiles



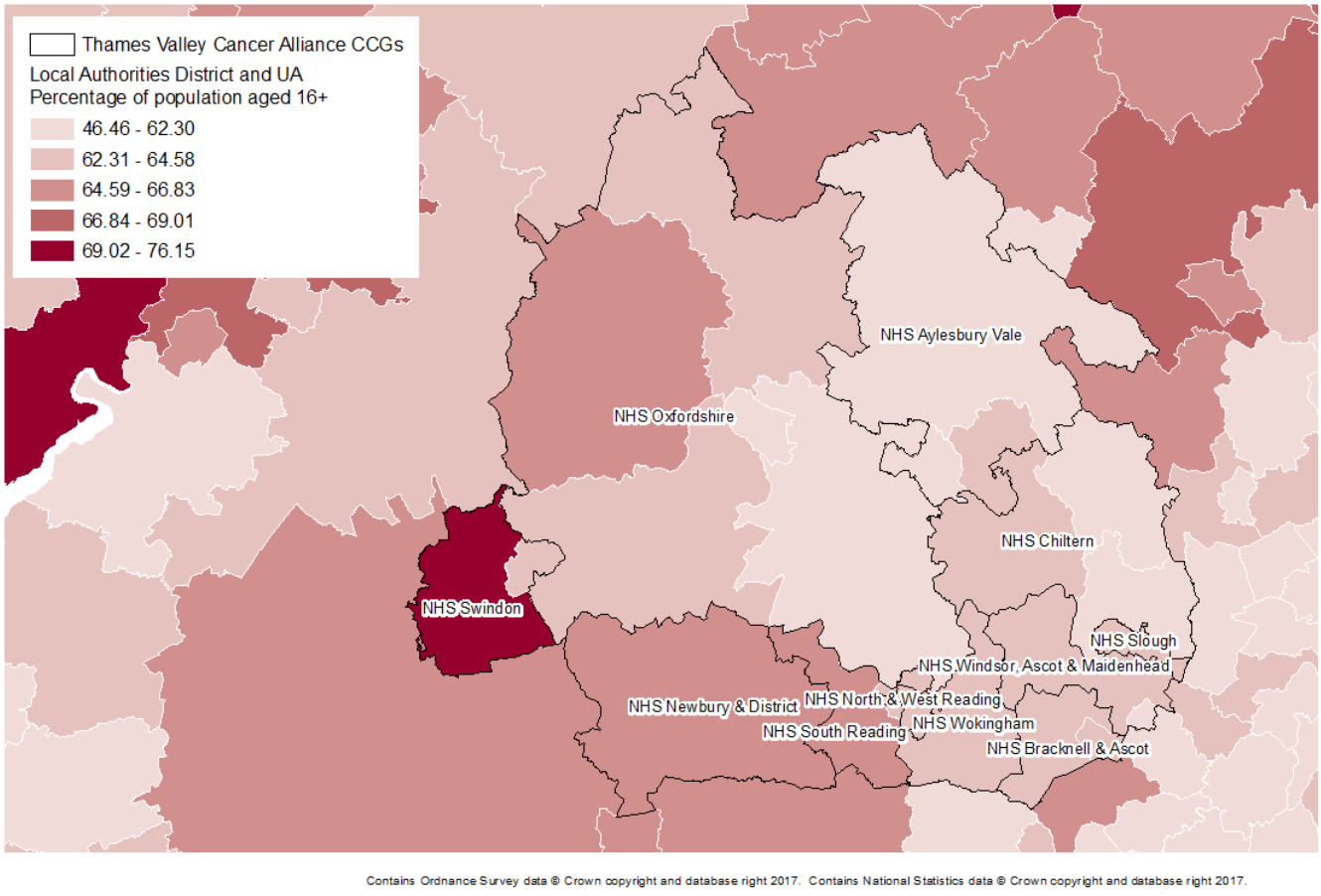
Broad Definition - Admissions to hospital where the primary diagnosis or any of the secondary diagnoses are an alcohol-attributable code

Excess weight

In 2012-2014, 62% of adults in the Thames Valley Cancer Alliance area, and 63% in the South East, were classed as having excess weight[9].

In the Thames Valley area during 2013-15, Swindon had a significantly higher proportion of adults (71%) with excess weight than the average for England (65%). Aylesbury Vale (62%), South Buckinghamshire (61%), South Oxfordshire (60%), Chiltern (59%) and Oxford (52%) had statistically significantly lower proportions, while other local authorities in the area were similar to the regional average. Oxford had the lowest proportion of adults with excess weight in the South East[19]. This is reflected in Figure 29 which shows local authorities in Thames Valley in all five national quintiles.

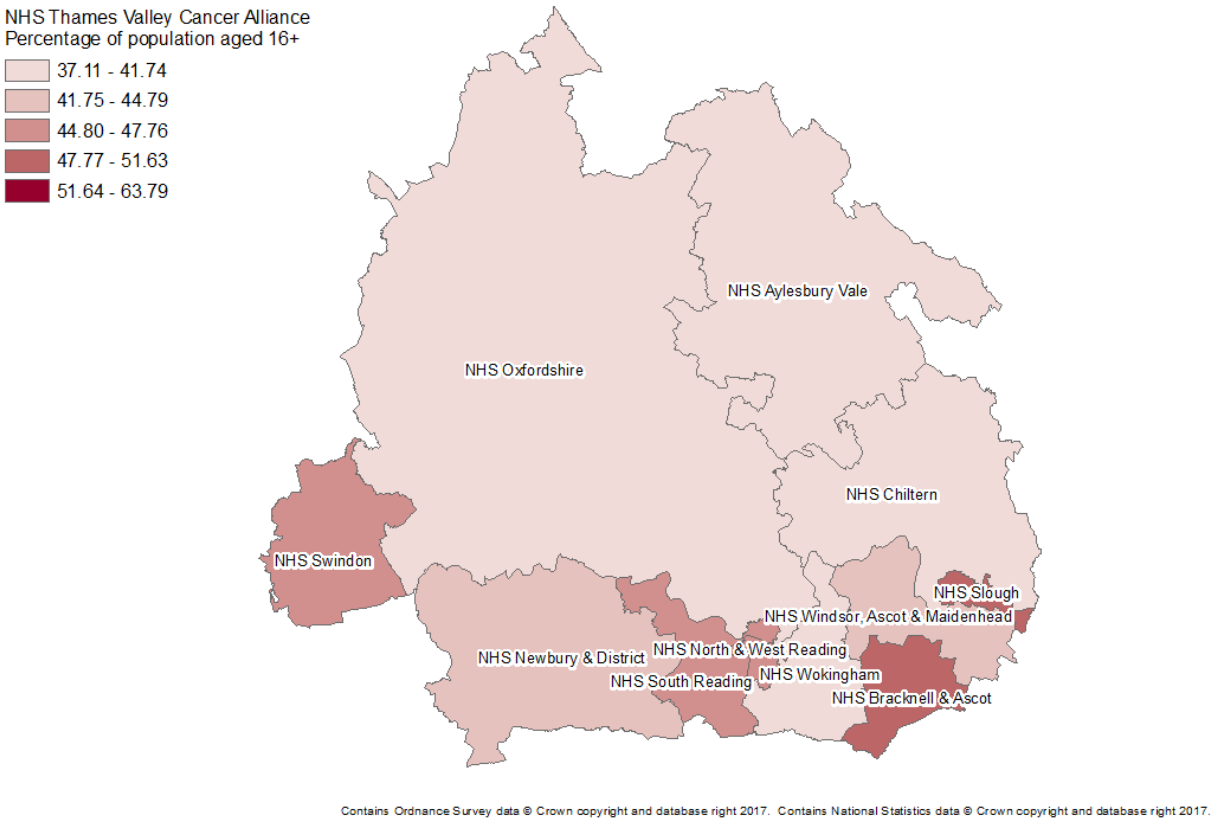
Figure 29 – Percentage of the population (aged 16+) with excess weight by local authority in Thames Valley, 2013-15 with CCG overlay – national quintiles



Poor diet

In 2014, 43% of adults in the Thames Valley Cancer Alliance reported they had NOT eaten the recommended five portions of fruit and vegetables on a usual day[10]. This is better than the England average (46.5%). CCG-level data from 2014 (Figure 30) shows that Slough, and Bracknell and Ascot CCGs had the lowest consumption of fruit and vegetables (second worst national quintile) and Oxfordshire, Aylesbury Vale, Chiltern and Wokingham CCGs had the highest consumption (best national quintile).

Figure 30 – Percentage of the adult population (aged 16+) NOT achieving the recommended "5-a-day" consumption of fruit and vegetables, by CCG in Thames Valley Cancer Alliance in 2014 – national quintiles

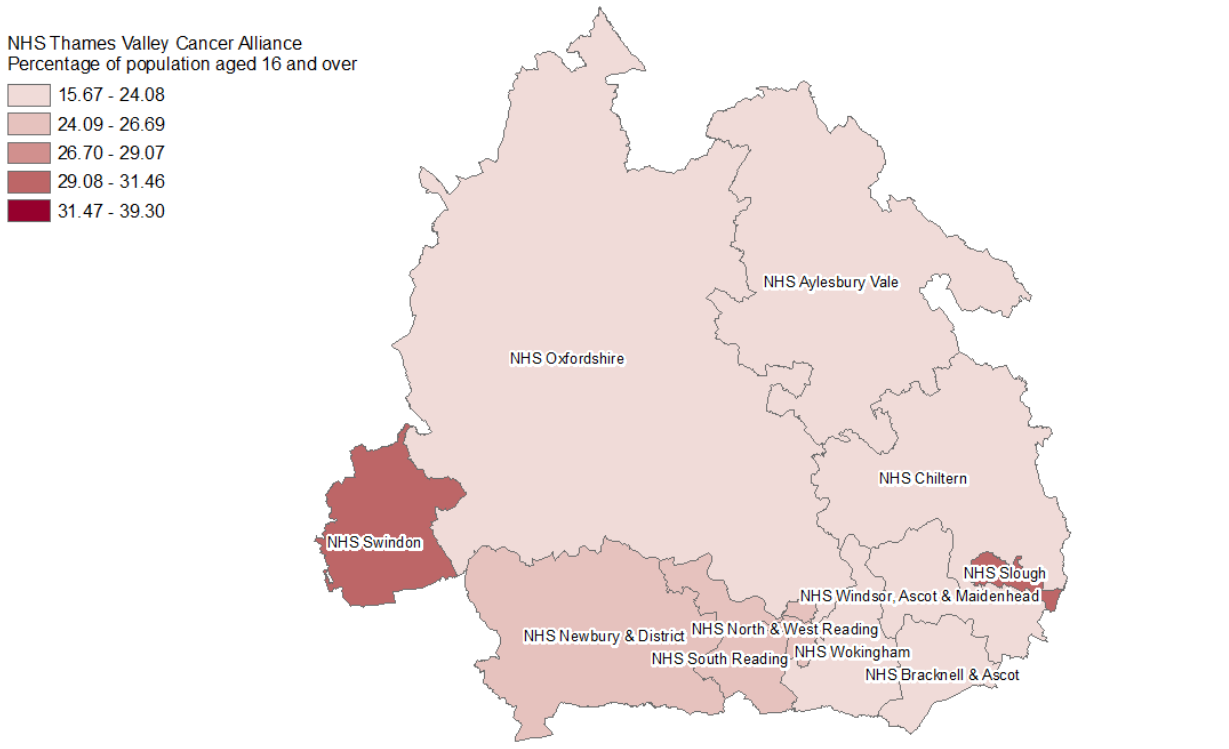


Looking at 2015 data for the local authorities in the Thames Valley Cancer Alliance, only Slough had statistically significantly lower consumption of fruit and vegetables than England.

Physical inactivity

In 2014, 23% of adults were classed as inactive in Thames Valley Cancer Alliance[11]. Levels of physical inactivity varied between the CCGs (see Figure 31). Swindon CCG and Slough CCG had the highest proportions of physically inactive adults and were in the second highest quintile nationally. Newbury and District, South Reading, and North and West Reading CCGs were in the second lowest national quintile while all other CCGs were in the lowest.

Figure 31 – Percentage of physically inactive adults (aged 16+), by CCG in Thames Valley Cancer Alliance in 2014 – national quintiles



Looking at 2015 data for the local authorities in Thames Valley Cancer Alliance, Slough (31%) and Reading (30%) had similar proportions of inactive adults to the England average (29%). All other local authorities had statistically significantly lower levels of inactivity, with Wokingham (21%) and Bracknell Forest (20%) among the lowest in the South East.

Screening

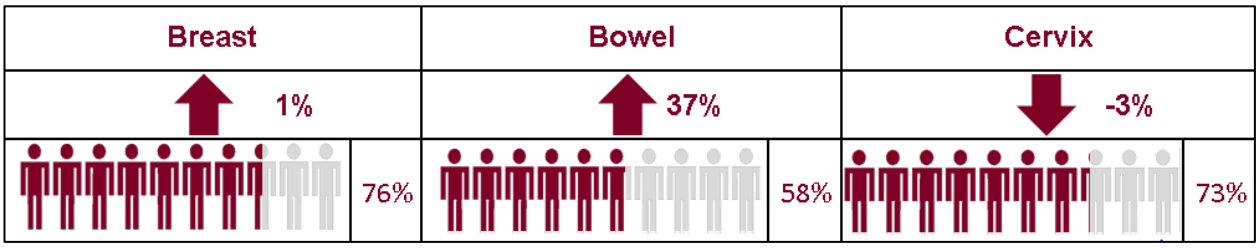
Screening coverage and uptake

Screening *coverage* describes the proportion of the eligible population who receive screening over a given period of time. It is a measure of the effectiveness of delivering a population screening programme. Screening *uptake* describes the proportion of people invited for screening who then receive screening over a given period of time. It is a measure of the effectiveness of the process of invitation (in encouraging people to take up the offer of a test) and the actual delivery of the screening test.

In the Thames Valley Cancer Alliance in 2015/16 (the latest available CCG level data), 76% of eligible women had received breast cancer screening in the last three years (higher than the England average of 73%), 58% of the eligible population had received bowel cancer screening in the last two-and-a-half years (higher than the England average of 58%), and 73% of eligible women had received age-appropriate cervical screening (within the last three-and-a-half or five and a half years depending on age)[22] (see Figure 32), which was similar to the England average of 73%.

In the Thames Valley Cancer Alliance, coverage of breast cancer screening increased by about 1% between 2009/10 and 2015/16 (compared to a national increase of about 0.7%). Coverage of the bowel screening programme has improved by 37% since 2009/10, and remained fairly constant since 2012/13. However, this increase is partly due to the roll out of the programme not being complete until the end of 2009. The proportion of eligible women receiving age-appropriate cervical screening decreased by 3% between 2009/10 and 2015/16. This is in line with national trends.

Figure 32 – Screening coverage in Thames Valley Cancer Alliance in 2015/16 and change in screening coverage 2009/10 to 2015/16

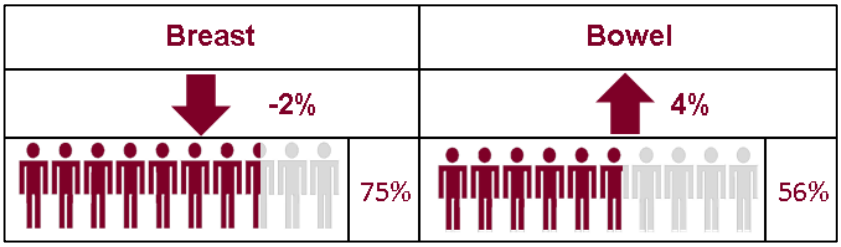


Source: PHE Cancer Service Profiles data extracted May 2017

Breast screening coverage = % of eligible women aged 53-70 screened adequately in past 3 years[a]
Bowel cancer screening coverage = % of eligible people aged 60-69 screened adequately in past 2.5 years[b]
Cervical cancer screening coverage = % of women screened adequately in the previous 42 months (if aged 24-49) or 66 months (if aged 50-64)

In the Thames Valley Cancer Alliance, uptake of breast cancer screening was 75% in 2015/16 – a fall of 2% since 2009/10. The uptake of bowel cancer screening in 2015/16 was 56%, a rise of 4% since 2009/10 (see Figure 33).

Figure 33 – Screening uptake in Thames Valley Cancer Alliance in 2015/16 and change in screening uptake 2009/10 to 2015/16



Source: PHE Cancer Service Profiles data extracted May 2017

Breast screening uptake = % of invited women aged 50 to 70 screened adequately within 6 months of invitation
Bowel cancer screening uptake = % of invited people aged 60-69 screened adequately within 6 months of invitation

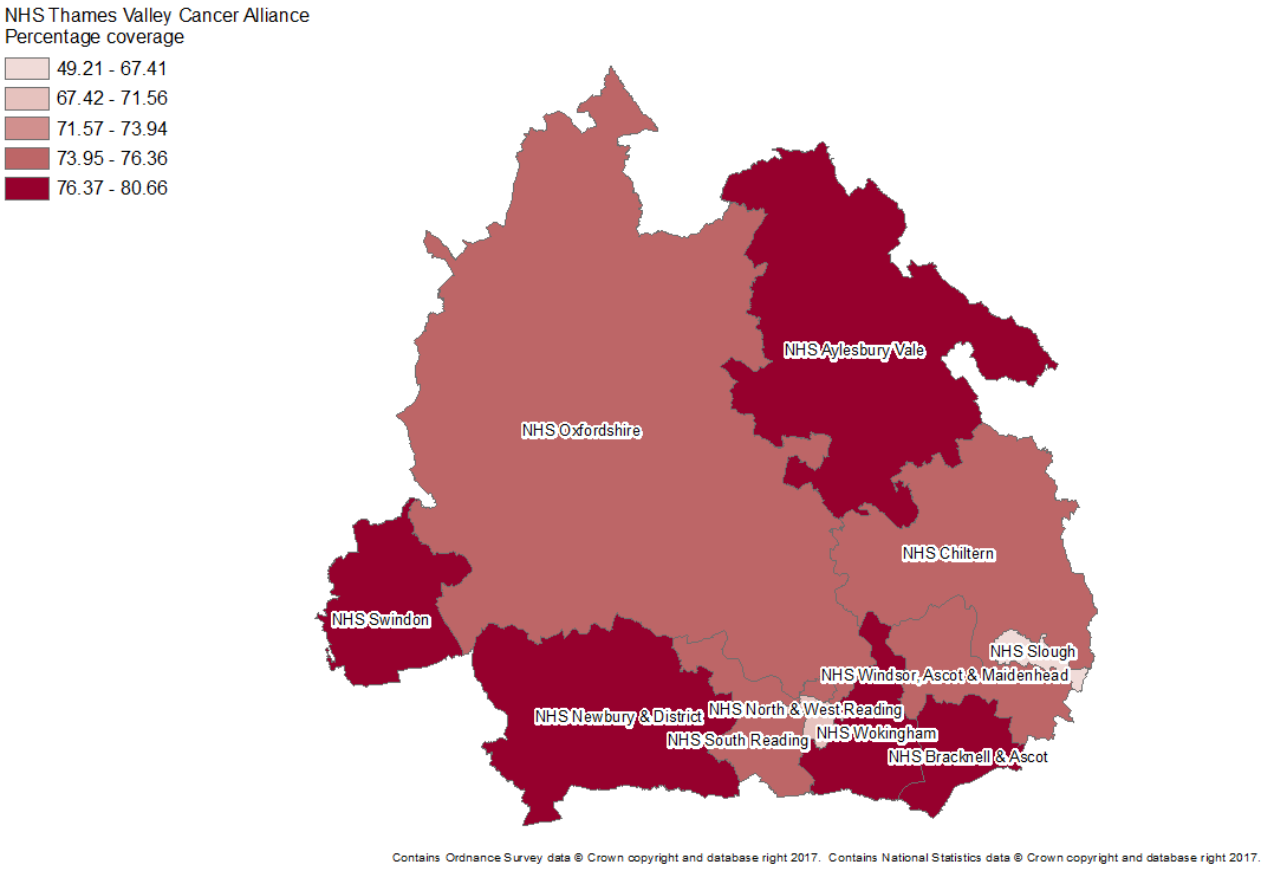
[a] http://www.cancerresearchuk.org/sites/default/files/cstream-node/screen_breast_cov_upt.pdf
[b] http://www.cancerresearchuk.org/sites/default/files/cstream-node/screen_bowel_cov_upt.pdf

Breast cancer screening

Over 2015/16, screening coverage for breast cancer (females aged 50-70) was statistically significantly higher than the England average (73%) for all CCGs in the alliance, except South Reading CCG (68%) and Slough CCG (67%)[22].

Figure 34 shows how CCGs in Thames Valley Cancer Alliance were distributed across the national quintiles for breast cancer screening coverage.

Figure 34 – Percentage of eligible women (aged 50-70) screened for breast cancer in last 36 months (3 year coverage), by CCG in Thames Valley Cancer Alliance, 2015/16 – national quintiles

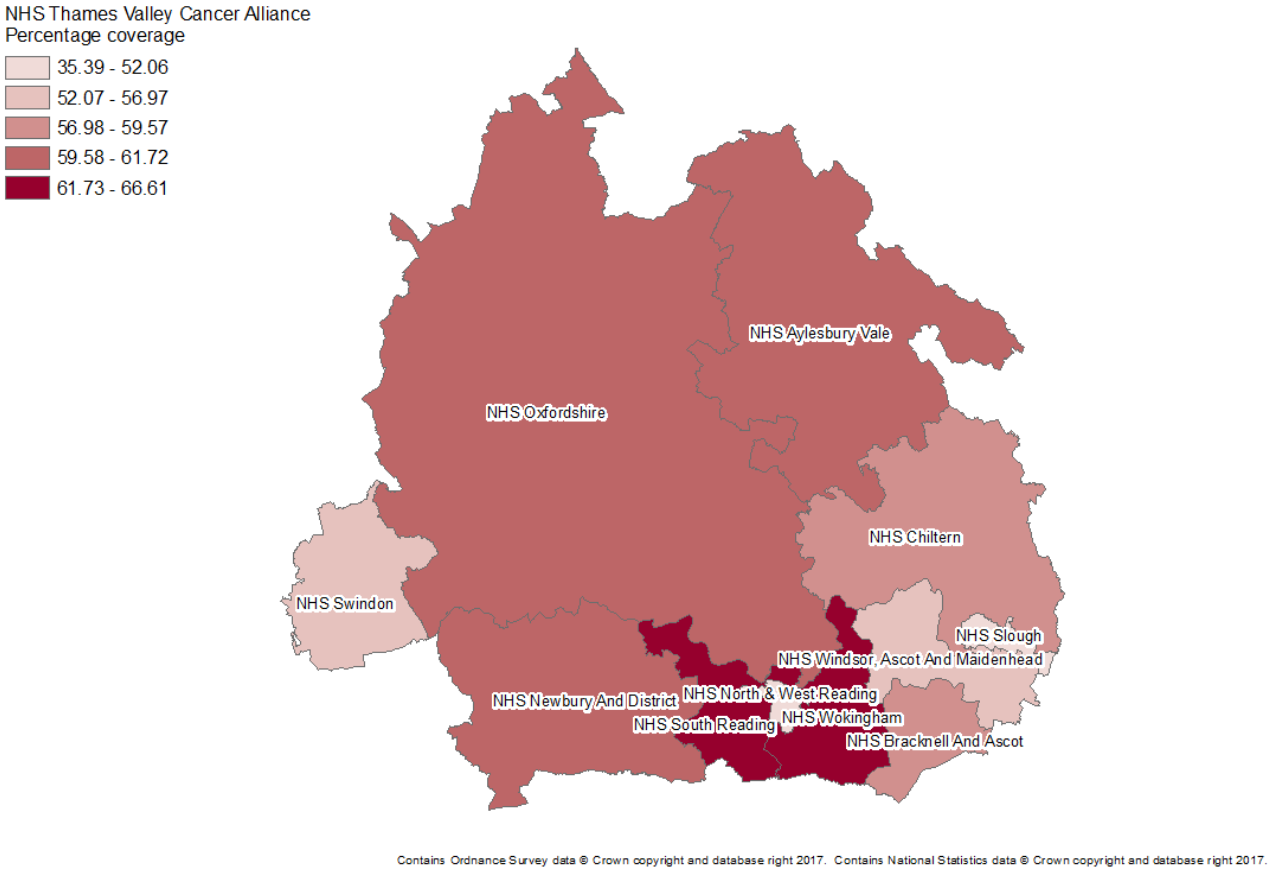


Bowel cancer screening

Over 2015/16 screening coverage for bowel cancer (persons aged 60-69) was statistically significantly lower than the England average (58%) in Slough (41%), South Reading (50%), Swindon (56%), and Windsor, Ascot and Maidenhead (55%) CCGs. Aylesbury Vale, Chiltern, Newbury and District, North and West Reading, Oxfordshire and Wokingham CCGs all had coverages rates statistically significantly higher than the England average, while Bracknell and Ascot CCG was statistically similar to the England average[22].

Figure 35 shows how CCGs in Thames Valley Cancer Alliance were distributed across the national quintiles for bowel cancer screening coverage.

Figure 35 – Percentage of eligible population (aged 60-69) screened for bowel cancer in last 30 months (2.5 year coverage), by CCG in Thames Valley Cancer Alliance, 2015/16 – national quintiles

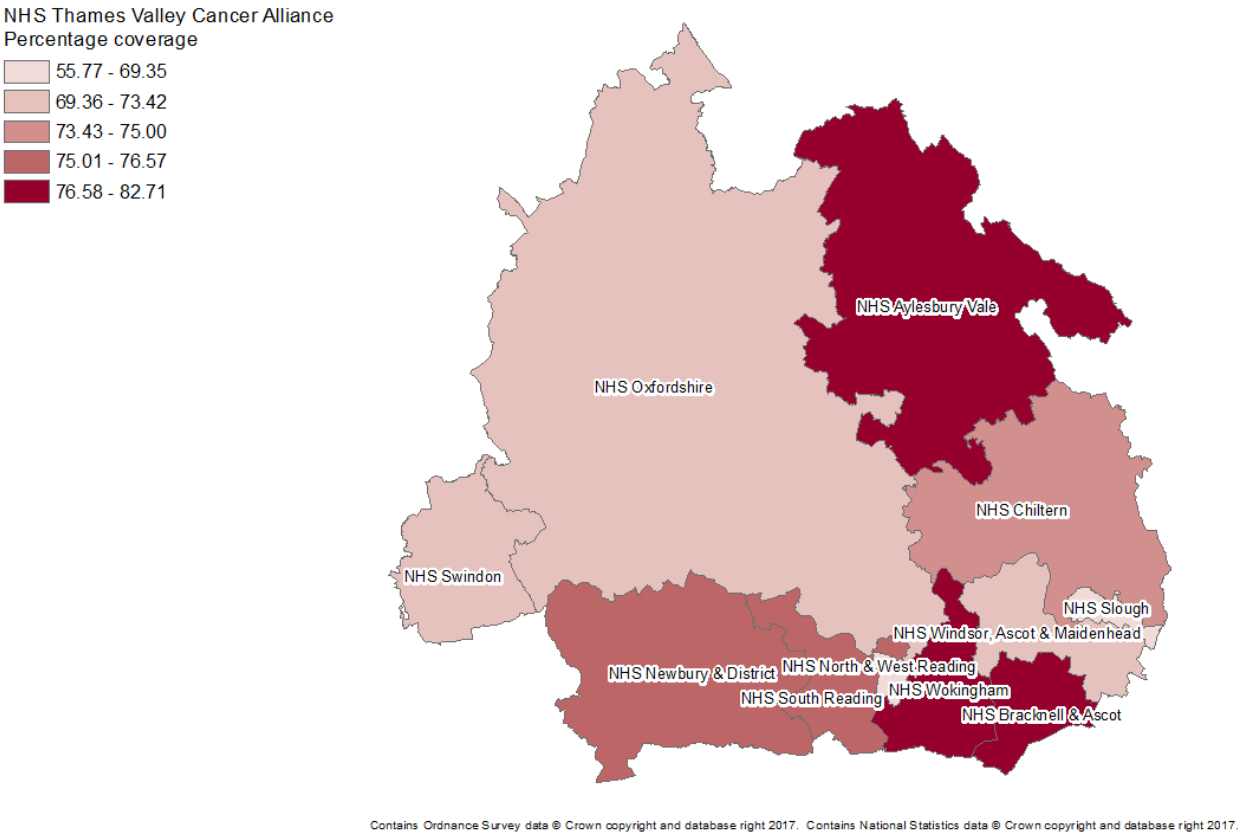


Cervical cancer screening

Over 2015/16 screening coverage for cervical cancer was statistically significantly lower in Slough (66%) and South Reading (66%) CCGs than the England average (73%). Aylesbury Vale (77%), Bracknell and Ascot (77%), Wokingham (77%), Chiltern (75%), Newbury and District (76%), and North and West Reading (76%) all had rates statistically significantly higher than the England average [22].

Figure 36 shows how CCGs in Thames Valley Cancer Alliance were distributed across the national quintiles for cervical cancer screening coverage. The highest coverage was in Aylesbury Vale CCG (77%) and the lowest in South Reading CCG (66%).

Figure 36 – Percentage of eligible women (aged 25-64) screened for cervical cancer within target period (coverage), by CCG in Thames Valley Cancer Alliance, 2015/16 – national quintiles



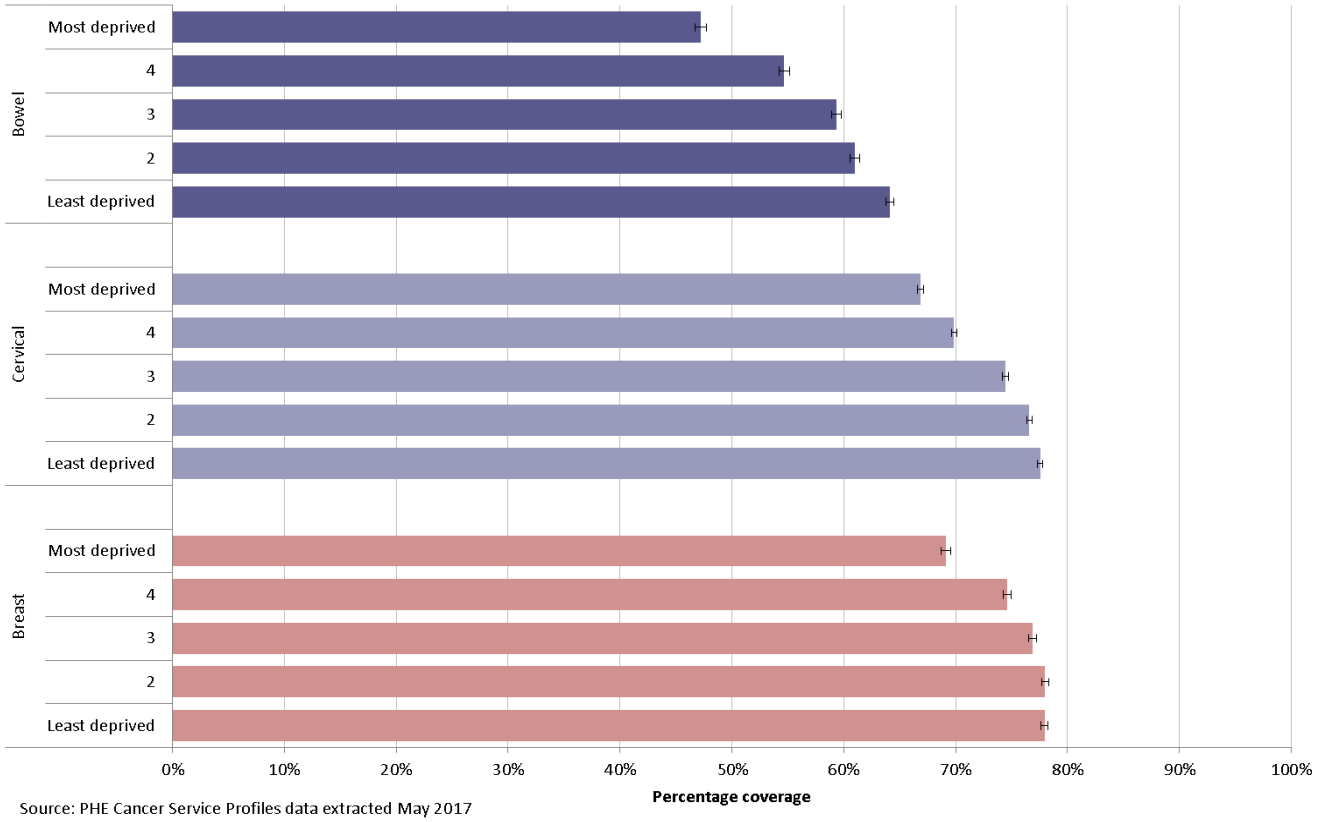
Screening coverage by deprivation

Figure 37 shows screening coverage for the three cancer screening programmes by deprivation quintile of GP practices within the Thames Valley Cancer Alliance[22]. There was statistically significant variation by deprivation quintile for all screening programmes, with people living in the most deprived quintiles being significantly less likely to receive screening than those living in the least deprived quintiles.

In 2015/16, breast cancer screening showed the smallest absolute difference by deprivation, with a 8.8% gap in coverage between those registered with GP practices in the most and least deprived areas. Bowel cancer showed the greatest difference with a 16.9% gap in coverage between the most and least deprived. The gap for cervical cancer screening was 10.7%.

There may be other factors which influence cancer screening uptake, including ethnic and cultural differences between populations. However this data is not currently systematically available.

Figure 37 - Breast, cervical and bowel screening coverage by deprivation quintile of GP practice within Thames Valley Cancer Alliance, 2015/16 – local quintiles



Source: PHE Cancer Service Profiles data extracted May 2017

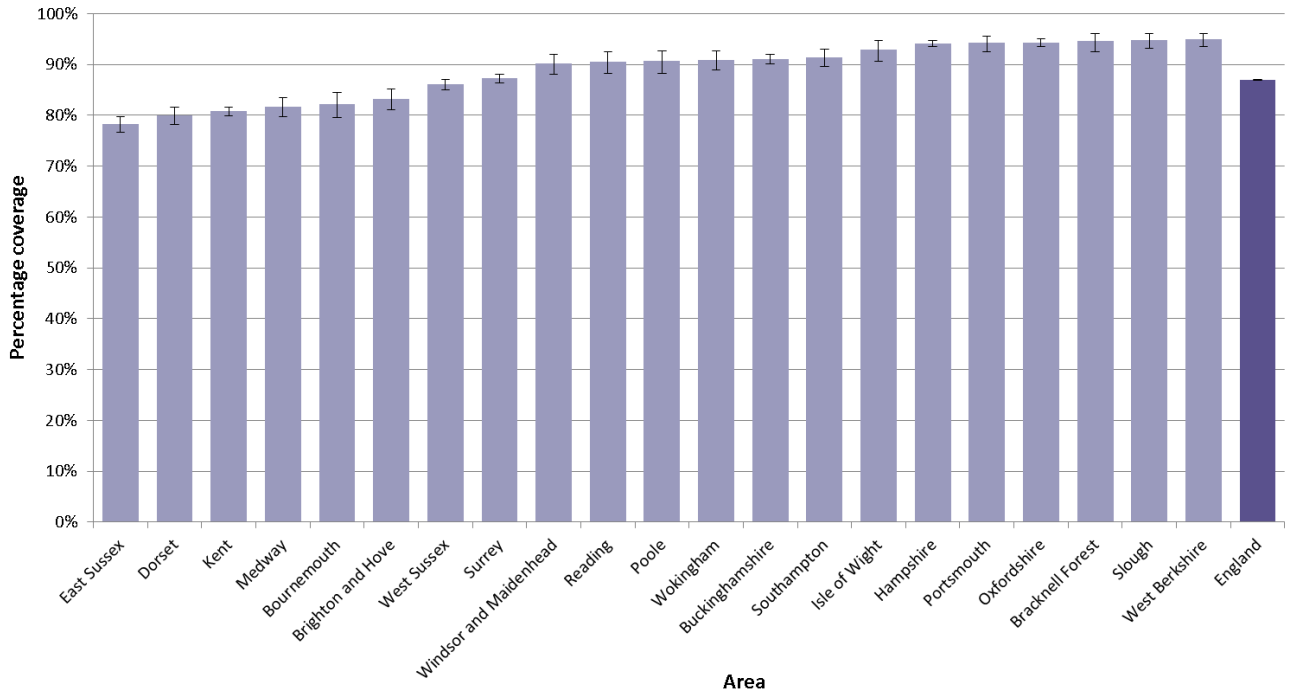
Human Papilloma Virus (HPV) vaccination

The HPV vaccine protects against the two high-risk HPV types (types 16 and 18) that cause over 70% of cervical cancers. Vaccination coverage is the best indicator of the protection a population will have against vaccine preventable diseases.

In the UK, all 12-13 year old girls (school year eight) are offered HPV vaccination through the national HPV immunisation programme. Reduction in the prevalence of vaccine type HPV infection in young women is necessary to achieve a reduction in cervical cancer incidence. A recent study shows that there has been a reduction in the prevalence of HPV 16/18 in sexually active young women in England following the introduction of the immunisation programme[23].

In 2015/16 across the South East region, 88% of girls aged 12 to 13 received at least one dose of HPV vaccine through the national programme. This is statistically significantly better than the England average (87%). However, there was significant variation by local authority across the region (see Figure 38 - Proportion of 12-13 year olds girls who have received one dose of the HPV vaccination, by upper tier local authority, South East, 2015/16). The lowest uptake was in East Sussex, which at 78% was statistically significantly lower than national and regional averages. The highest uptake was in West Berkshire, which at 95% was statistically significantly higher than both national and regional averages. The uptake of one dose of HPV vaccine was statistically significantly higher than the averages for England and the South East in all areas of the Thames Valley Cancer Alliance.

Figure 38 - Proportion of 12-13 year olds girls who have received one dose of the HPV vaccination, by upper tier local authority, South East, 2015/16



Source: PHE ImmForm

How are patients diagnosed?

Figure 39 to Figure 42 show the proportions of patients in Thames Valley Cancer Alliance by broad route of diagnosis for breast, colorectal, lung and prostate cancers (sourced from PHE NCRAS routes to diagnosis 2006-2013 workbooks)[24]. This is important, because nationally the route of diagnosis is associated with whether cancers are diagnosed at an early stage and therefore more likely to be successfully treated.

Cancers were detected through:

- screening (where a screening programme is available for that cancer type)
- the two week wait route – urgent referral for a suspected cancer
- a GP referral other than two week wait
- an emergency presentation
- other routes such as: other outpatient, inpatient elective, registration from death certificates and unknown routes – these are not presented here as they constitute a small proportion of routes to diagnosis for these types of cancer

For this report, presentation by the two-week wait route and by GP referrals have been merged into “Managed routes”, as some of the numbers of referrals from individual CCGs are small. Route to diagnosis data is therefore presented for screening (where national screening programmes are available), managed routes or emergency presentations.

These figures also show for each type of cancer and route of diagnosis:

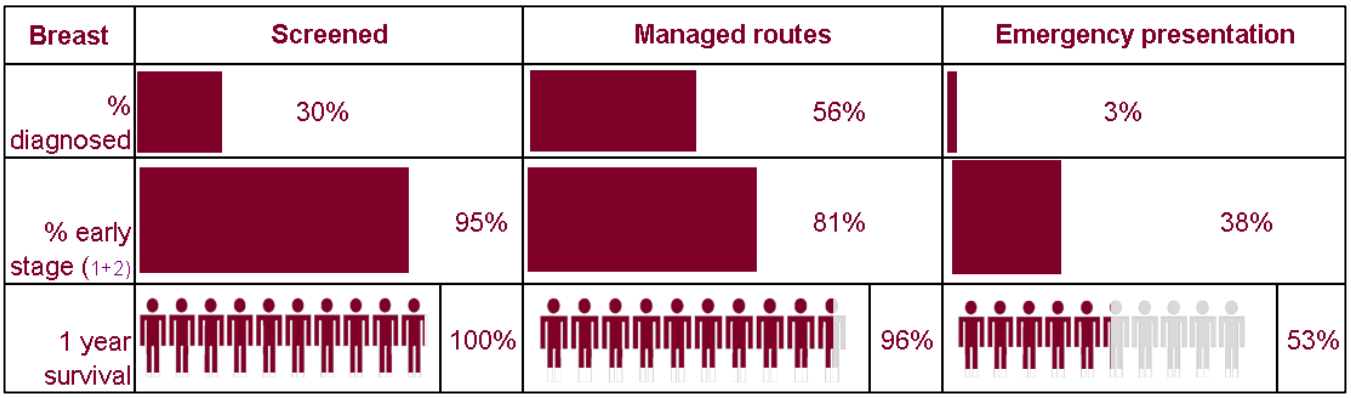
- the proportions of patients in England whose diseases were diagnosed at stage one or two in 2013
- the one-year survival in England (over 2006-2013)[24]

Breast cancer

In 2006-2013 in Thames Valley Cancer Alliance, 30% of breast cancer patients were diagnosed through screening, 56% through managed routes (two week wait or GP referral) and 3% through emergency presentations.

In England, one-year survival of breast cancer patients diagnosed through screening and managed routes over 2006-2013 was very good, at 100% and 96% respectively. This reflects the high proportions diagnosed with early stages of disease (95% and 81%, respectively) through these routes in 2013. Breast cancer patients diagnosed through the emergency route had a much lower one-year survival (53%), reflecting the lower proportion of early stage disease at diagnosis (38%)[25]. See Figure 39.

Figure 39 - Proportion of diagnoses of breast cancer by route for CCGs in Thames Valley Cancer Alliance, 2006-2013 showing proportion of cases diagnosed by route at stage 1 or 2 disease, England 2013 and one-year survival in England, 2006-2013



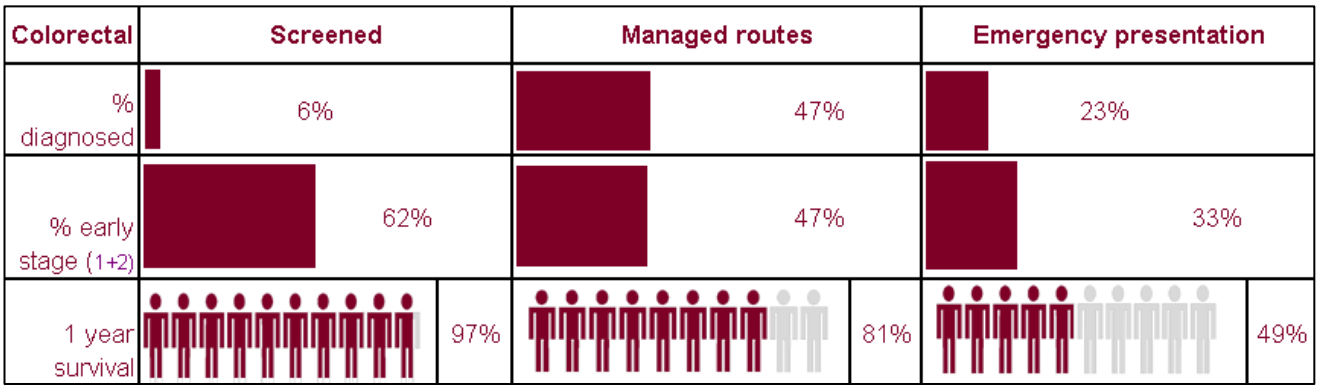
Source: PHE NCRAS Routes to Diagnosis by stage 2012-13 workbook and PHE NCRAS Route to Diagnosis 2006-2013 workbook

Colorectal cancer

In 2006-2013 in Thames Valley Cancer Alliance, 6% of colorectal cancer patients were diagnosed through screening, 47% through managed routes (two week wait or GP referral) and 23% through emergency presentations.

In England, one-year survival of colorectal cancer patients diagnosed through screening and managed routes over 2006-2013 were 97% and 81% respectively. This reflects the proportions of patients diagnosed with early stages of disease (62% and 47%, respectively) through these routes in 2013. Colorectal cancer patients diagnosed through the emergency route had a much lower one-year survival (49%), reflecting the lower proportion of early stage disease at diagnosis (33%)[25]. See Figure 40.

Figure 40 – Proportion of diagnoses of colorectal cancer by route for CCGs in Thames Valley Cancer Alliance, 2006-2013, proportion of cases diagnosed by route at stage 1 or 2 disease, England 2013 and one-year survival in England, 2006-2013



Source: PHE NCRAS Routes to Diagnosis by stage 2012-13 workbook and PHE NCRAS Route to Diagnosis 2006-2013 workbook

Lung cancer

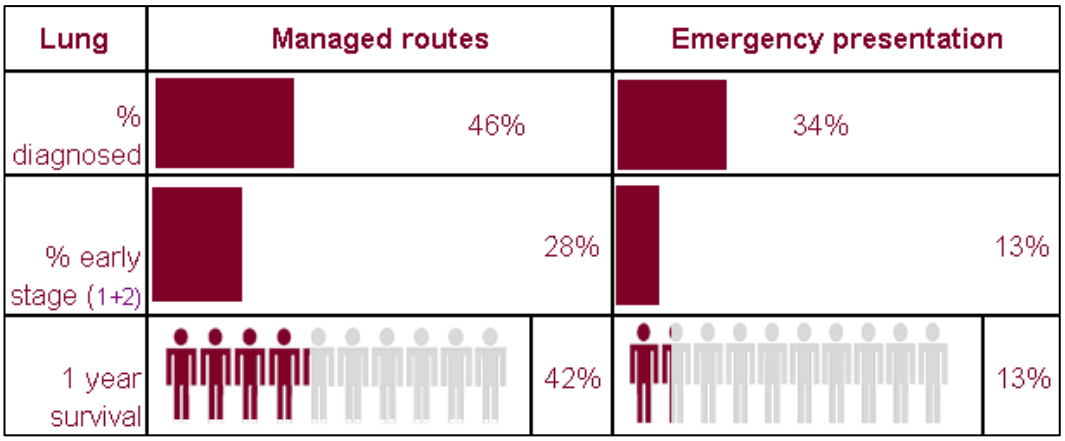
In 2006-2013 in Thames Valley Cancer Alliance, 46% of lung cancer patients were diagnosed through managed routes (two week wait or GP referral) and 34% through emergency presentations.

In England, one-year survival of lung cancer patients diagnosed through managed routes over 2006-2013 was only 42%. This reflects the low proportion of patients diagnosed with early stages of disease (28%) in 2013. Lung cancer patients who were diagnosed through the emergency route had a much lower one-year survival (13%), reflecting the much lower proportion of early stage disease at diagnosis (13%)[25]. See Figure 41.

The low proportions of patients diagnosed at early stage – particularly for emergency presentation – suggest that raising awareness of the symptoms of lung cancer among members of at-risk groups and encouraging them to visit their GP is essential for earlier diagnosis of the disease.

Encouraging at-risk groups to take up their health checks may also increase contact between at-risk individuals and primary care that could lead to more early stage disease being identified through managed routes.

Figure 41 – Proportion of diagnoses of lung cancer by route for CCGs in Thames Valley Cancer Alliance, 2006-2013, proportion of cases diagnosed by route at stage 1 or 2 disease, England 2013 and one-year survival in England, 2006-2013



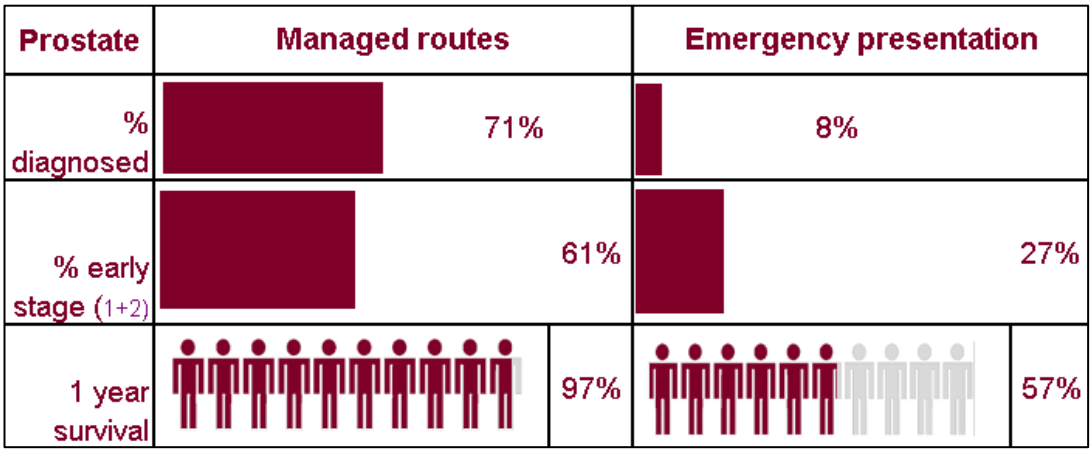
Source: PHE NCRAS Routes to Diagnosis by stage 2012-13 workbook and PHE NCRAS Route to Diagnosis 2006-2013 workbook

Prostate cancer

In 2006-2013 in Thames Valley Cancer Alliance, 71% of prostate cancer patients were diagnosed through managed routes (two week wait or GP referral) and 8% through emergency presentations.

In England, one-year survival of prostate cancer patients diagnosed through managed routes over 2006-2013 was high at 97%. The proportion of patients diagnosed with early stages of disease was 61% in 2013. Prostate cancer patients who were diagnosed through the emergency route had a much lower one-year survival (57%), reflecting the lower proportion of early stage disease at diagnosis (27%)[25]. See Figure 42.

Figure 42 – Proportion of diagnoses of prostate cancer by route for CCGs in Thames Valley Cancer Alliance, 2006-2013, proportion of cases diagnosed by route at stage 1 or 2 disease, England 2013 and one-year survival in England, 2006-2013

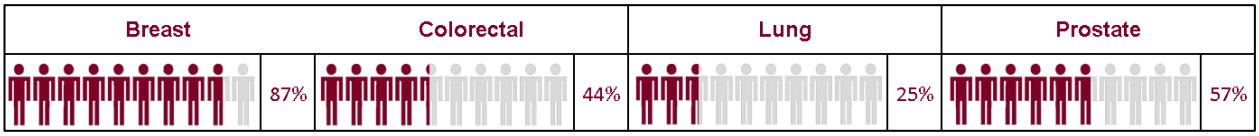


Source: PHE NCRAS Routes to Diagnosis by stage 2012-13 workbook and PHE NCRAS Route to Diagnosis 2006-2013 workbook

Stage of diagnosis

Figure 43 shows the proportion of all cancer patients who were diagnosed at an early stage (stage 1 or 2) by cancer type in Thames Valley Cancer Alliance in 2015. There was considerable variation, with 87% of breast cancer patients diagnosed at an early stage, 57% of prostate cancer patients, 44% of colorectal cancer patients and only 25% of lung cancer patients[26].

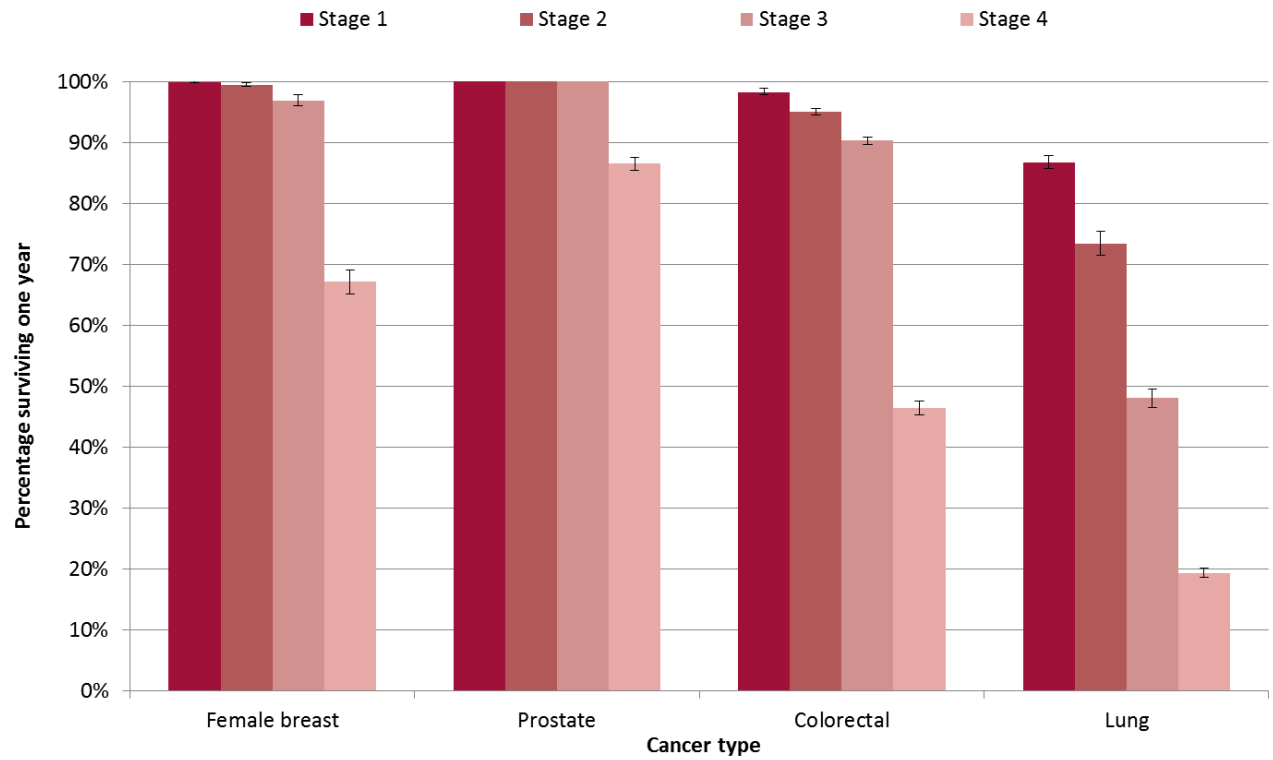
Figure 43 – Proportion of all tumours with stage recorded diagnosed at an early stage (stage 1 or 2) by cancer type, Thames Valley Cancer Alliance in 2015



Source: Cancer Analysis Statistics CAS 1612

Figure 44 shows survival by stage for breast, prostate, colorectal and lung cancers in England in 2012. For these cancer types, one-year survival at stage 1 and stage 2 was statistically significantly higher than survival at stage four[27]. Even for lung cancer, where survival is generally poor, one-year survival with stage one cancers was around 87%. However, one-year survival with stage four lung cancers was less than 20%.

Figure 44 – Relative one-year survival by stage and cancer type, England in 2012

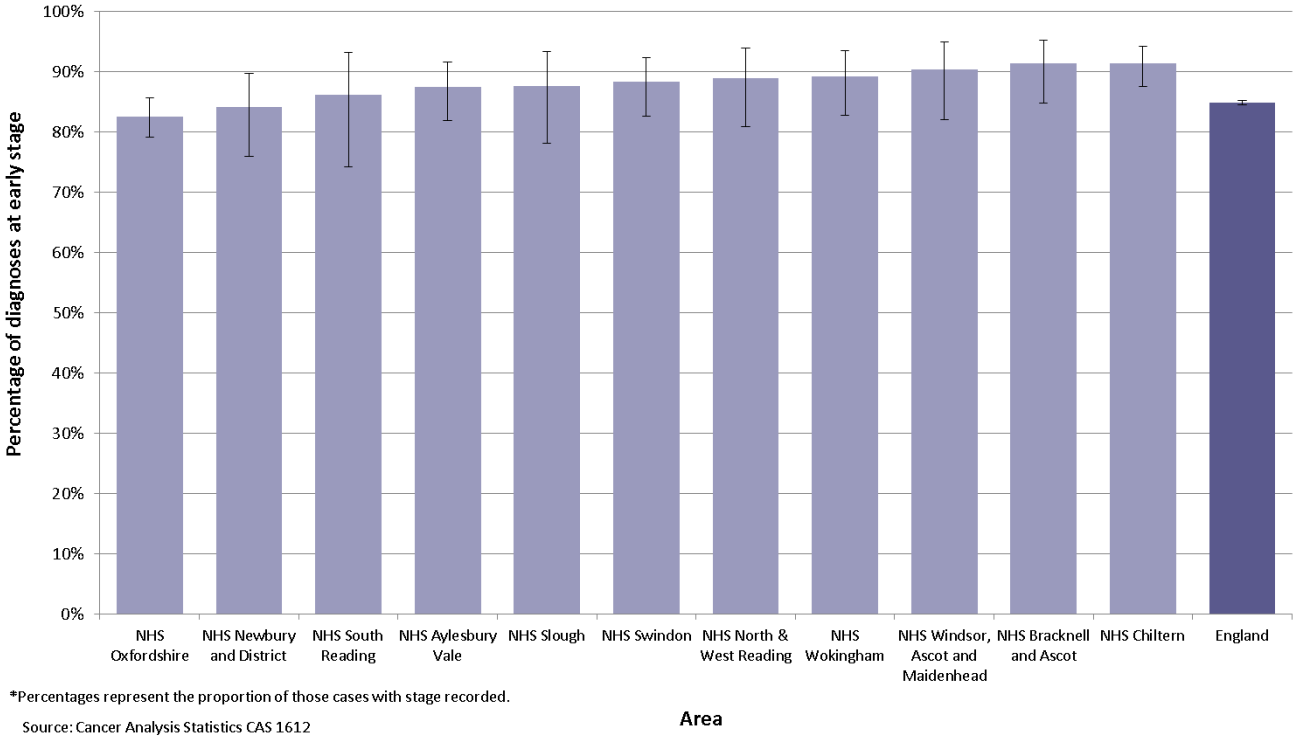


Source: PHE NCRAS Cancer Survival by Stage 2012 - non-imputed workbook

Breast cancer

Across the Thames Valley Cancer Alliance, the percentage of female breast cancer cases diagnosed at stages 1 or 2 in 2015 showed statistically significant variation between CCGs with Oxfordshire CCG statistically significantly lower than Chiltern CCG. Chiltern CCG was also the only area statistically significantly higher than the England average (85%).

Figure 45 – Percentage of breast cancer cases diagnosed at an early stage (stages 1 or 2) in Thames Valley Cancer Alliance by CCG in 2015, females, all ages (patients with stage recorded)



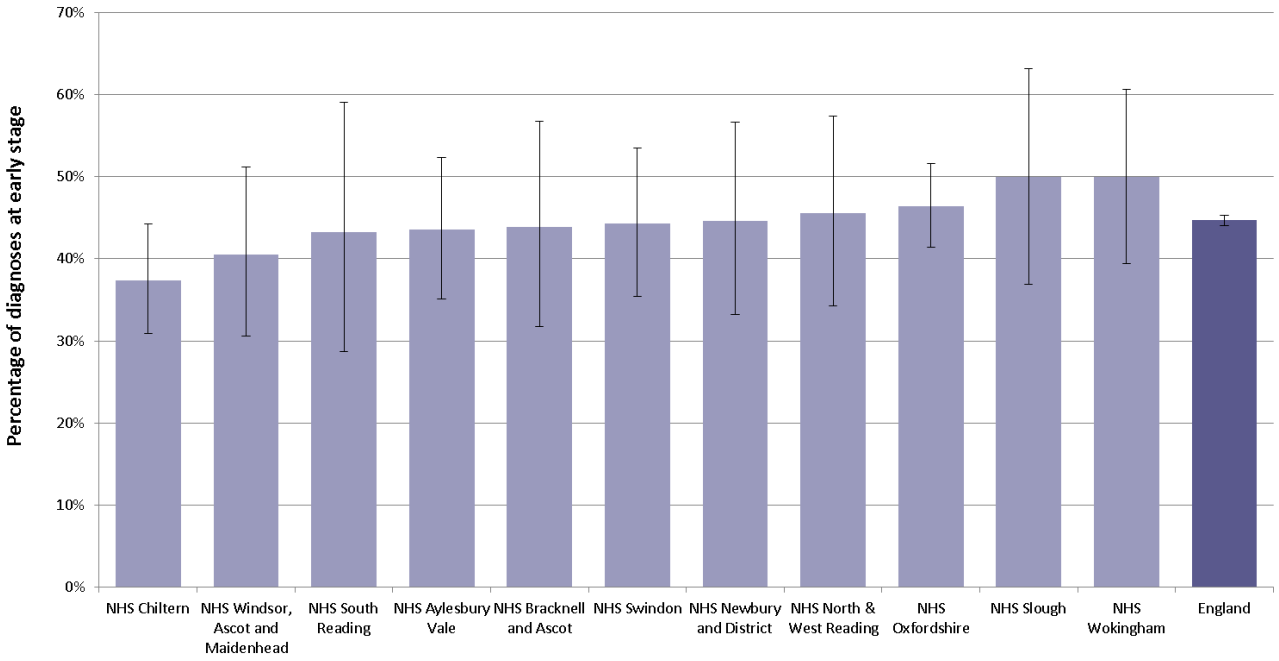
*Percentages represent the proportion of those cases with stage recorded.

Source: Cancer Analysis Statistics CAS 1612

Colorectal cancer

Across the Thames Valley Cancer Alliance, the percentage of colorectal cancer cases diagnosed at stages 1 or 2 in 2015 showed no statistically significant differences between CCGs, with all areas similar to the England average (45%). Wokingham CCG had the highest proportion of colorectal cancer cases diagnosed at stages 1 or 2 (50%), and Chiltern the lowest (37%) - see Figure 46.

Figure 46 – Percentage of colorectal cancer cases diagnosed at an early stage (stages 1 or 2) in Thames Valley Cancer Alliance by CCG in 2015, persons, all ages (patients with stage recorded)



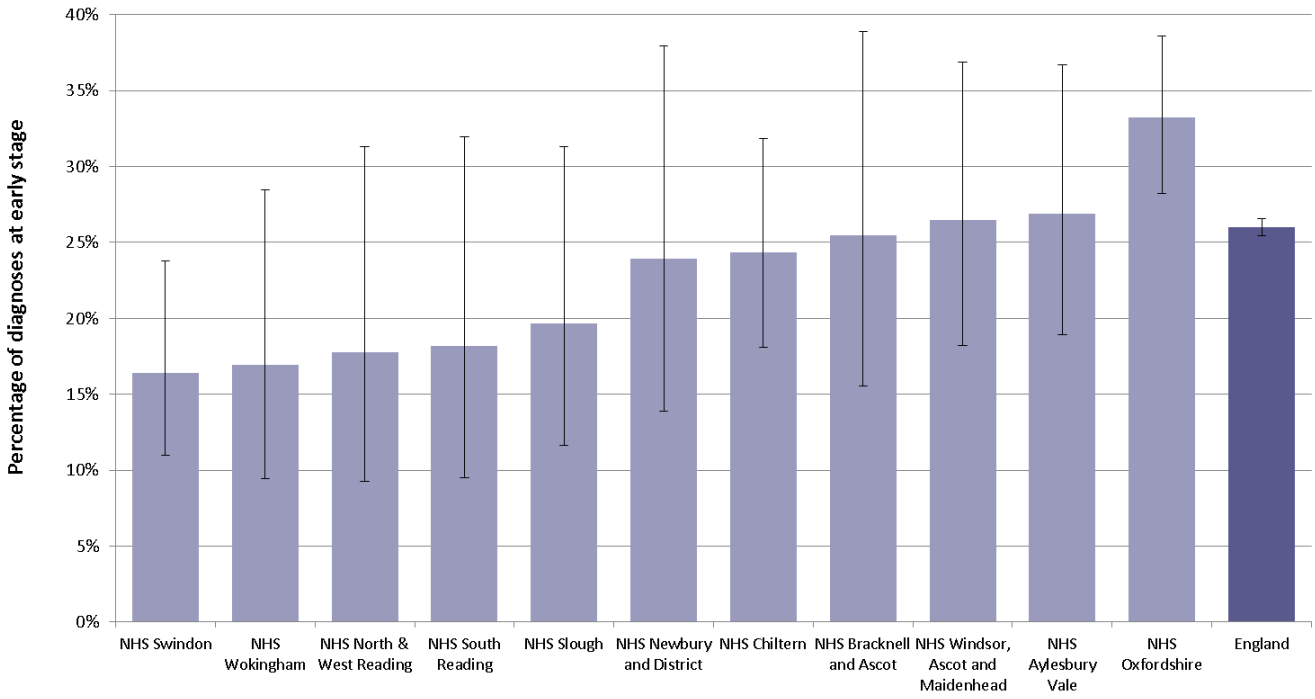
*Percentages represent the proportion of those cases with stage recorded.

Source: Cancer Analysis Statistics CAS 1612

Lung cancer

Across the Thames Valley Cancer Alliance, the percentage of lung cancer cases diagnosed at stages 1 or 2 in 2015 showed some statistically significant differences between CCGs. Oxfordshire CCG (33%) was statistically significantly higher than the England average and Swindon CCG (16%) lower, while all other areas were statistically similar to the England average (26%) – see Figure 47.

Figure 47 – Percentage of lung cancer cases diagnosed at an early stage (stages 1 or 2) in Thames Valley Cancer Alliance by CCG in 2015, persons, all ages (patients with stage recorded)



*Percentages represent the proportion of those cases with stage recorded.

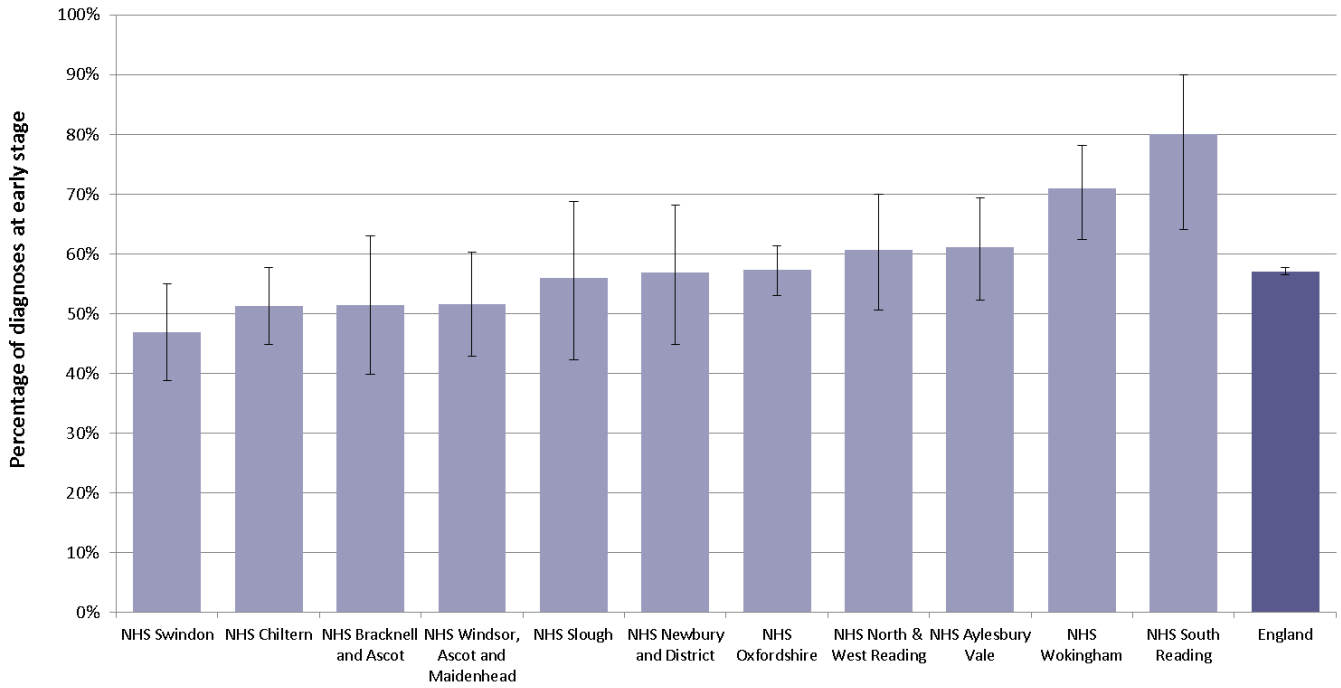
Source: Cancer Analysis Statistics CAS 1612

Prostate cancer

Across the Thames Valley Cancer Alliance, the percentage of prostate cancer cases diagnosed at stages 1 or 2 in 2015 showed statistically significant differences between CCGs.

Only Swindon CCG (46%) had a percentage statistically significantly lower than the England average (57%), while Wokingham (70%) and South Reading (80%) CCGs had statistically significantly higher percentages compared to the England average.

Figure 48 – Percentage of prostate cancer cases diagnosed at an early stage (stages 1 or 2) in Thames Valley Cancer Alliance by CCG in 2015, males, all ages (patients with stage recorded)



*Percentages represent the proportion of those cases with stage recorded.

Source: Cancer Analysis Statistics CAS 1612

Survival

Figure 49 and Figure 50 show the percentage changes in one-year relative survival between 2003-2007 and 2008-2012 for three main cancer types for males and females in South East England. (Relative survival compares the survival of people diagnosed with cancer to survival in the general population.) They also show the one-year relative survival (2008-2012) and five-year relative survival (2004-2008)[4].

Breast cancer had the highest one-year and five-year survival rates in females. Over 2008-2012, one-year survival in the South East was 96%, similar to the England average which was also 96%. Over 2004-2008, five-year survival in the South East was 86%, which was statistically significantly higher than the England average (85%). Between 2003-2007 and 2008-2012, there was a 0.5% relative improvement in one-year breast cancer survival in the South East. Figure 51 shows the variation in one-year breast cancer survival between CCGs in the Thames Valley Cancer Alliance in 2014.

For colorectal cancer, over 2008-2012 one-year survival in the South East was 79% for males (not statistically significantly different from the England average of 78%) and 76% for females (not statistically significantly different from the England average of 75%). Over 2004-2008, five-year survival in the South East was 56% for males (statistically significantly better than the England average of 54%) and 54% for females (the same as the England average of 54%). Between 2003-2007 and 2008-2012, there was a 5% relative improvement in colorectal cancer survival for both males and females in the South East. Figure 52 shows the variation in one-year colorectal cancer survival (all persons) between CCGs in the Thames Valley Cancer Alliance in 2014.

Lung cancer had the poorest one-year and five-year survival rates in both males and females. Over 2008-2012, one year survival in the South East was 29% for males (not statistically significantly different from the England average of 30%) and 33% for females (not statistically significantly different from the England average of 34%). Over 2004-2008, five-year survival was only 7.0% for males (not statistically significantly different from the England average of 7.4%) and 8.0% for females (not statistically significantly different from the England average of 8.8%). Between 2003-2007 and 2008-2012, there was a 7% relative improvement in one-year lung cancer survival for males and a 16% relative improvement for females in the South East. Figure 53 shows the variation in one-year lung cancer survival (all persons) between CCGs in the Thames Valley Cancer Alliance in 2014.

Prostate cancer had the highest one-year and five-year survival rates in males. Over 2008-2012, one-year survival in the South East was 96%, which was similar to the England average (also 96%). Over 2004-2008, five-year survival in the South East was 85% (not statistically significantly different from the England average of 84%). Between 2003-2007 and 2008-2012, there was a 2% relative improvement in one-year prostate cancer survival in the South East

All cancers presented showed an improvement in one-year survival between 2003-2007 and 2008-2012, with the greatest improvement in lung cancer.

Figure 49 – Change in one-year relative survival (between 2003-2007 and 2008-2012), one-year relative survival (2008-2012) and five-year relative survival (2004-2008) by cancer type for females in South East England

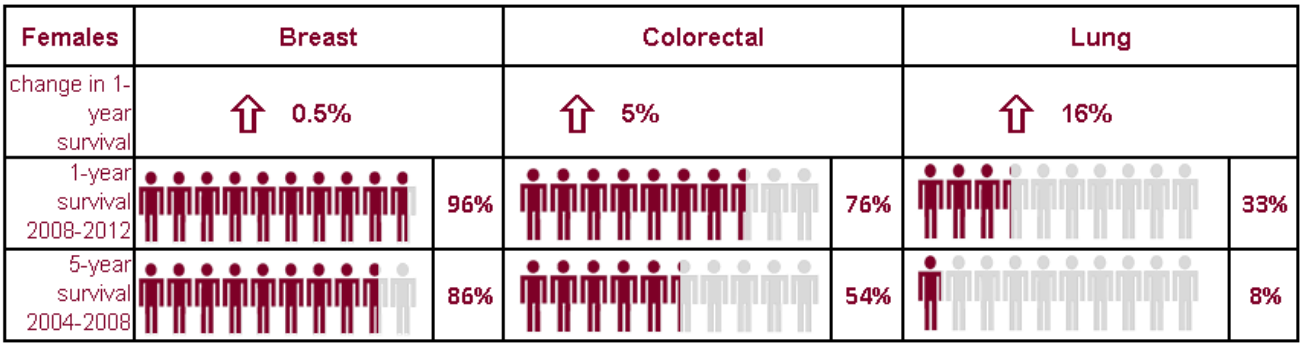
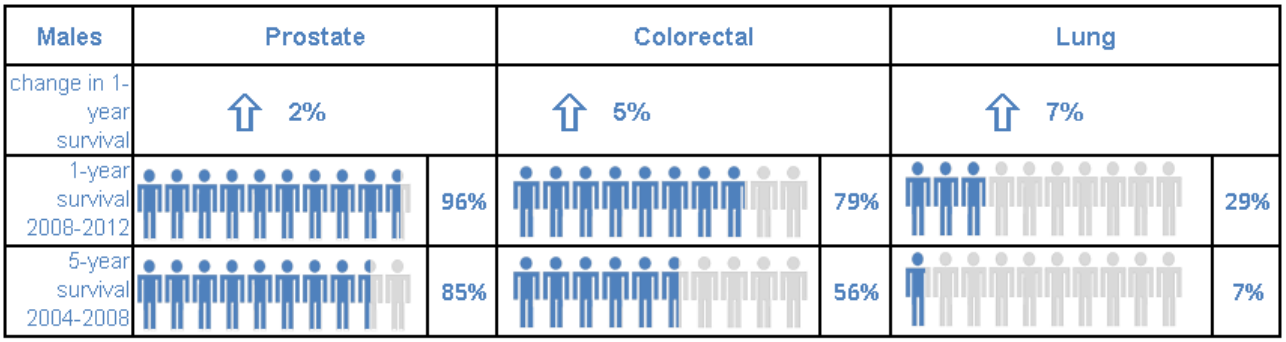


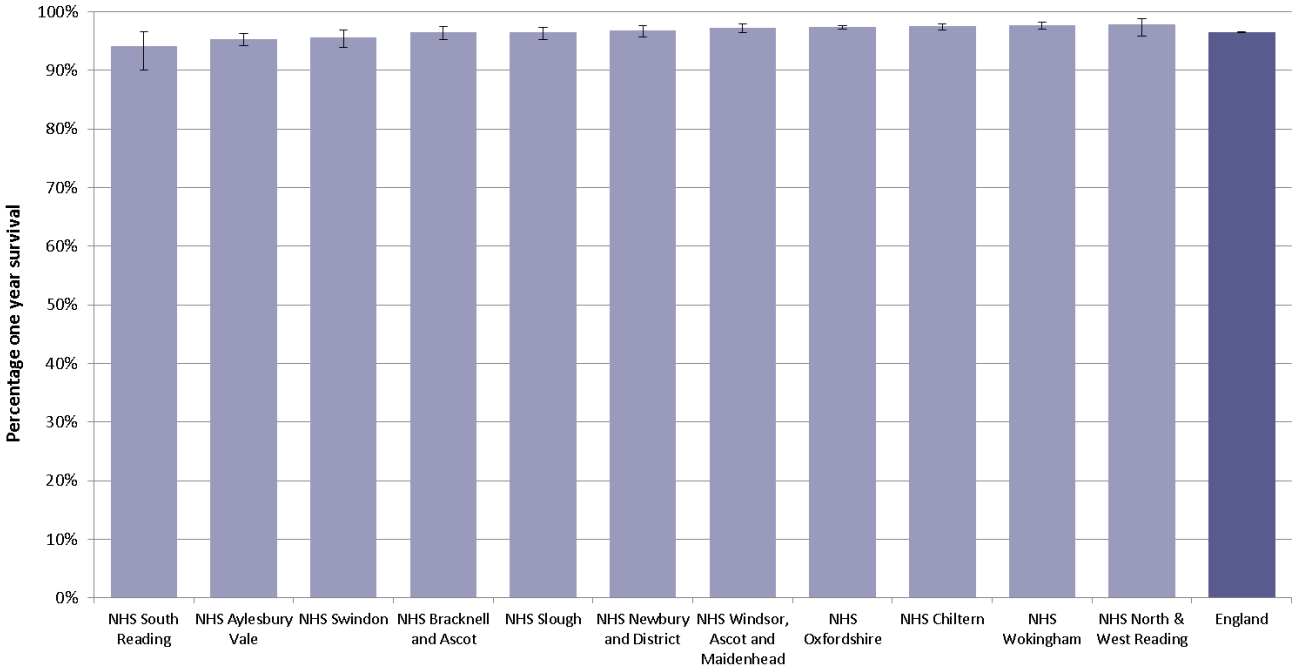
Figure 50 – Change in one-year relative survival (between 2003-2007 and 2008-2012), one-year relative survival (2008-2012) and five-year relative survival (2004-2008) by cancer type for males in South East England



Breast cancer survival

The one-year survival for female breast cancer in 2014 showed some statistically significant variation across the CCGs within Thames Valley Cancer Alliance, ranging from 94% in South Reading CCG to 98% in North and West Reading CCG (Figure 51)[28]. One-year survival was statistically significantly lower than the England average (96.5%) in Aylesbury Vale CCG (95.4%), and statistically significantly higher in Oxfordshire (97.4%), Chiltern (97.5%) and Wokingham (97.7%) CCGs. One-year survival in the other CCGs was not statistically significantly different from the England average.

Figure 51 – Percentage one-year survival for breast cancer in Thames Valley Cancer Alliance by CCG in 2014, females, all ages

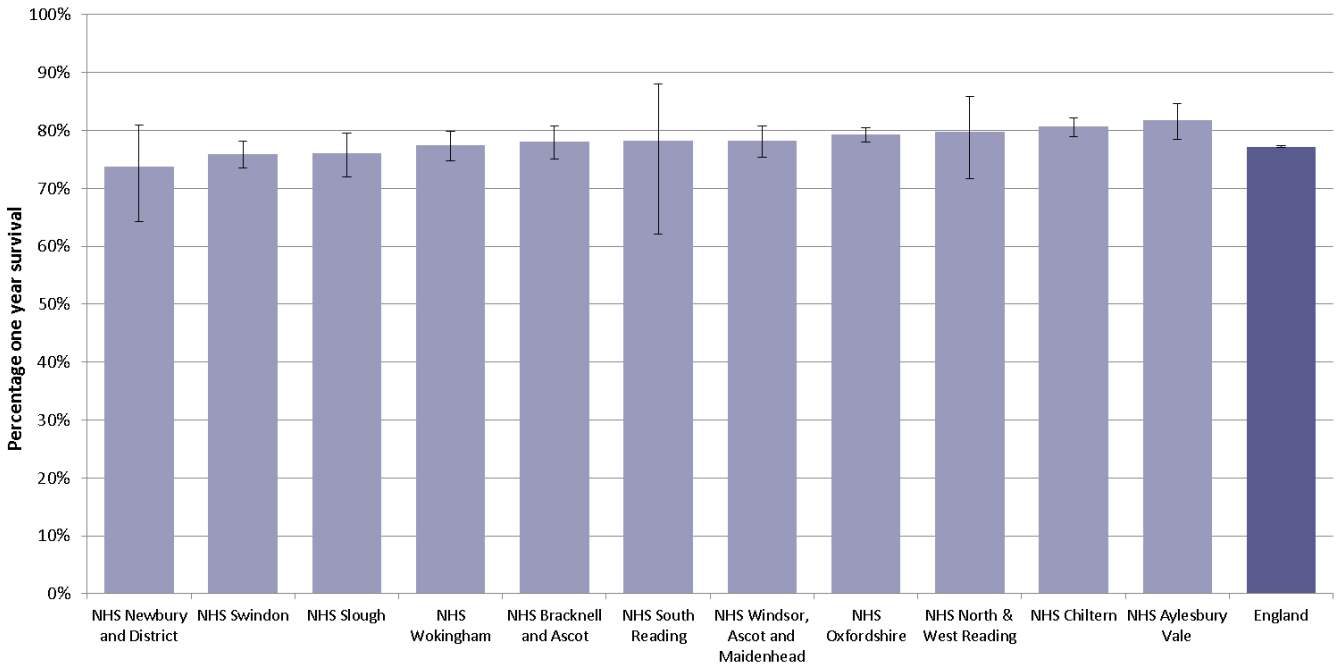


Source: Cancer Analysis Statistics CAS 1602

Colorectal cancer survival

The one-year survival for colorectal cancer in 2014 showed little statistically significant variation across the CCGs within Thames Valley Cancer Alliance, ranging from 74% in Newbury and District CCG to 82% in Aylesbury Vale CCG (Figure 52)[28]. One-year survival was statistically significantly higher than the England average (77%) in Oxfordshire, Chiltern and Aylesbury Vale CCGs, and similar to the average in all others.

Figure 52 – Percentage one-year survival for colorectal cancer in Thames Valley Cancer Alliance by CCG in 2014, persons, all ages

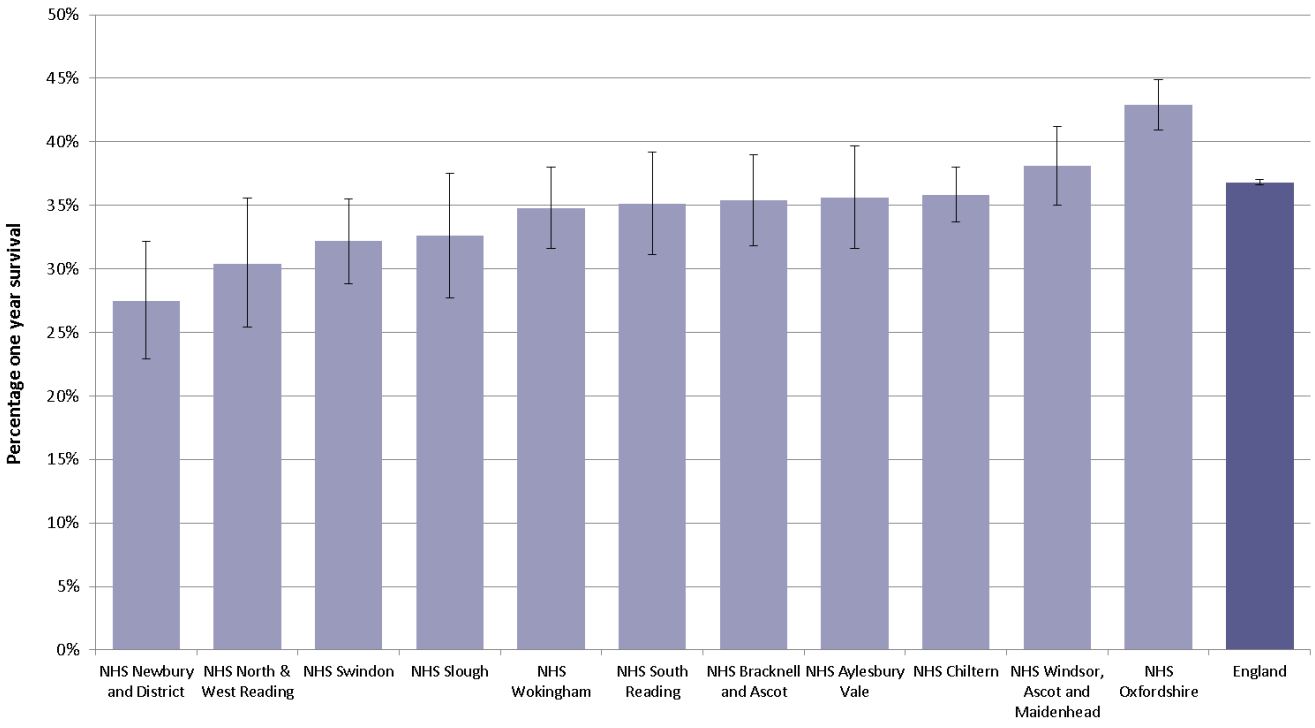


Source: Cancer Analysis Statistics CAS 1602

Lung cancer survival

The one-year survival for lung cancer in 2014 showed some statistically significant variation across the CCGs within Thames Valley Cancer Alliance, ranging from 28% in Newbury and District CCG to 43% in Oxfordshire CCG (Figure 53 – Percentage one-year survival for lung cancer in Thames Valley Cancer Alliance by CCG in 2014, persons, all ages)[28]. One-year survival was statistically significantly lower than the England average (37%) in Newbury and District CCG (28%), North and West Reading CCG (30%) and Swindon CCG (32%), and statistically significantly higher in Oxfordshire CCG (43%). One-year survival in the other CCGs was not statistically significantly different from the England average.

Figure 53 – Percentage one-year survival for lung cancer in Thames Valley Cancer Alliance by CCG in 2014, persons, all ages



Source: Cancer Analysis Statistics CAS 1602

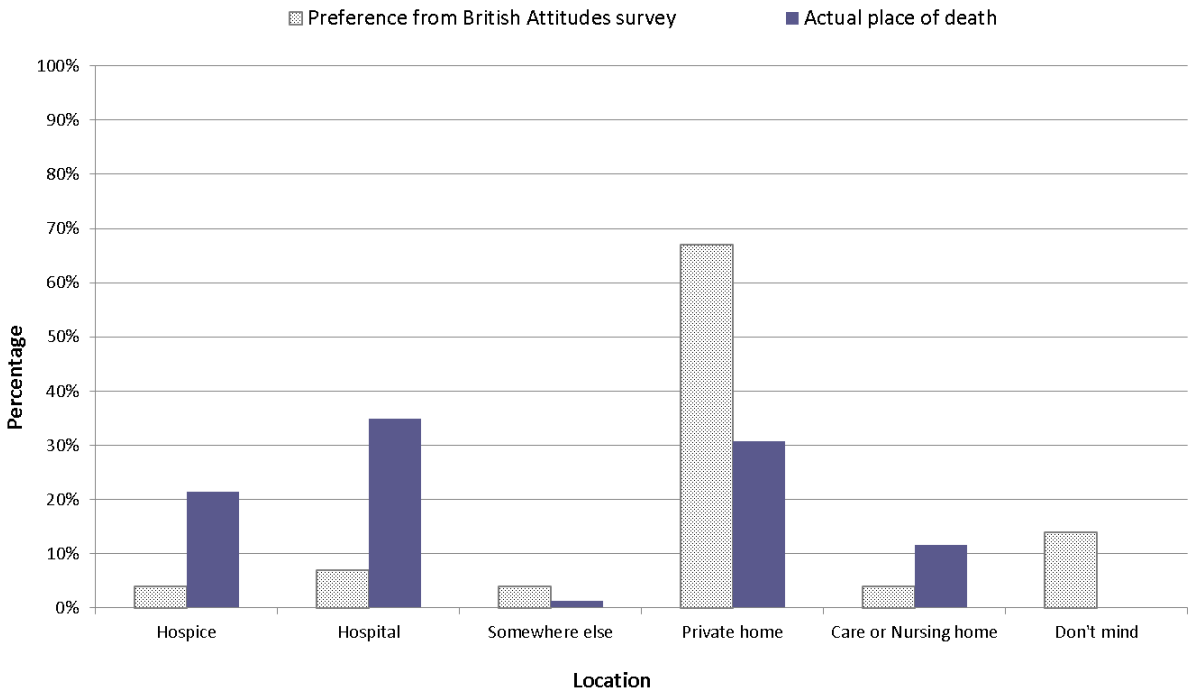
Place of death

For people who are dying, place of death is an important part of the quality of care. Commissioned by Dying Matters, NatCen Social Research interviewed 2,145 adults in Britain on their attitudes to dying as part of the 2012 British Social Attitudes survey. Although 70% said they were comfortable talking about death, most had not discussed their end of life wishes or put plans in place. Of those questioned, only 7% said they would prefer to die in hospital, compared to 67% who would prefer to die at home[29].

Figure 54 shows the place of death for cancer patients from the Thames Valley Cancer Alliance, who died[30] between 2013-2015. This is presented alongside preferred place of death for England from the 2012 British Social Attitudes survey[29].

In the Thames Valley Cancer Alliance, 31% of cancer patients died in a private home. A further 12% of cancer patients died in a nursing or care home which may also be considered their home; 35% died in hospital and 21% died in a hospice.

Figure 54 – Comparison of preferred place of death (British Attitudes Survey for England 2012) with actual place of death for Thames Valley Cancer Alliance, 2013-2015



Source: British Social Attitudes Survey for England and PHE Annual Mortality Extracts (ONS)

There are many other factors that can affect the quality of end of life care, and information on place of death presents only a part of the picture.

The government commissioned “The Choice in End of Life Care Programme Board” to provide advice on improving the quality and experience of care for adults at the end of life, their carers and others who are important to them, by expanding the choices available. The board’s report[31] was published in 2015 and followed by the government’s response in 2016. This response included a set of commitments (see Figure 55) and an intention to publish benchmarking information on quality and choice in end of life care. Some relevant indicators are now available in Public Health England’s “End of Life Care Profiles”[32].

Figure 55 – "Our commitment to you for end of life care: the government response to the review of choice in end of life care”, July 2016

Our commitment to you is that, as you approach the end of life, you should be given the opportunity and support to:

- have honest discussions about your needs and preferences for your physical, mental and spiritual wellbeing, so that you can live well until you die
- make informed choices about your care, supported by clear and accessible published information on quality and choice in end of life care; this includes listening to the voices of children and young people about their own needs in end of life care, and not just the voices of their carers, parents and families
- develop and document a personalised care plan, based on what matters to you and your needs and preferences, including any advance decisions and your views about where you want to be cared for and where you want to die, and to review and revise this plan throughout the duration of your illness
- share your personalised care plan with your care professionals, enabling them to take account of your wishes and choices in the care and support they provide, and be able to provide feedback to improve care
- involve, to the extent that you wish, your family, carers and those important to you in discussions about, and the delivery of, your care, and to give them the opportunity to provide feedback about your care
- know who to contact if you need help and advice at any time, helping to ensure that your personalised care is delivered in a seamless way

Summary of findings

This report presents information on some cancers that cause a large burden of ill health in the South East. It is intended to support local discussion and benchmarking and to demonstrate variations between clinical commissioning groups in the Thames Valley Cancer Alliance where possible.

Incidence, mortality and prevalence

The number of people living with cancers has been increasing nationally. This is due to a combination of increasing incidence (particularly associated with population ageing), and improved survival (related to detection, diagnosis and treatment).

Cancer incidence in the South East is lower than the average for England, but the age-standardised rate has increased from 566 per 100,000 (in 2004) to 600 per 100,000 (in 2014). For some cancers, incidence in the South East varied by deprivation. For males, incidence rates of lung and liver cancers were higher in the most deprived groups compared to the least deprived. For females, incidence rates of lung, cervix, pancreatic and liver cancers were all higher in the most deprived groups. In contrast, the incidence rates of prostate and breast cancers were higher in the least deprived groups.

Cancer mortality in the South East is lower than the average for England, and the age-standardised mortality rate for all cancers has decreased from 279 deaths per 100,000 (in 2004) to 265 deaths per 100,000 (in 2014). For some cancers in the South East mortality varied by deprivation. For males, mortality rates for lung, colorectal and liver cancers were higher in the most deprived groups compared to the least deprived. In females, mortality rates for lung, pancreatic and cervical cancers were higher in the most deprived groups.

Across the CCGs in the Thames Valley Cancer Alliance area, cancer incidence has increased over the past ten years. There have been increasing numbers of new cases of almost all the cancers featured in this report, the exception being cervical cancer, which has shown a small decrease. The largest increases were seen in with particularly large increases in breast cancer (change in the average annual number of +361) and colorectal cancer (change in the average annual number of 277). Annual numbers of new cases of lung cancer have shown a greater increase in females than males. There is statistically significant variation in both cancer incidence and mortality (all cancers) across the CCGs in the Thames Valley Cancer Alliance.

In the Thames Valley Cancer Alliance area it is estimated that the number of people living with and beyond a cancer diagnosis will increase to 130,100 by the year 2030 (a relative increase of 67% from 2014).

Risk factors and prevention

Smoking remains one of the most important avoidable risk factors for many cancers. In 2014, smoking prevalence (estimated from QOF for people aged 15+) was 16% across the Thames Valley Cancer Alliance, although most CCGs in the alliance fell within the lowest national quintile.

Alcohol consumption is another important risk factor for many cancers. In the period 2013-15 the rate of new cases of alcohol-related cancers was 37 per 100,000 across the South East (slightly lower than the England average). The highest rate in Thames Valley was in Windsor and Maidenhead. In 2015/16 the age-standardised rate of hospital admissions for alcohol-related conditions (broad definition) was 1,768 per 100,000 across the South East (lower than the England average). There was considerable variation between local authorities in Thames Valley, with the highest rates in Slough and the lowest in Wokingham.

Over 2012-14, 62% of adults were classed as having excess weight in Thames Valley. This is similar to the average for the South East. There was considerable variation between local authorities in Thames Valley, with the highest proportions of adults with excess weight in Swindon and the lowest in Oxford.

In 2014 in the Thames Valley Cancer Alliance, 42% of adults reported they had NOT eaten the recommended five portions of fruit and vegetables on a usual day. This was generally better than the England average, but considerable variation was seen between CCGs, ranging from the best to second worst national quintiles.

In 2014 in the Thames Valley Cancer Alliance, 23% of adults were classed as physically inactive (lower than the England average), with the highest proportions of inactive adults in Swindon and Slough CCGs.

The NHS Health Check programme provides a mechanism to identify people with risk factors for vascular diseases, which are also important risk factors for many cancers. Between 2013/14 and 2016/17, across the Thames Valley Cancer Alliance 34% of the eligible population had received an NHS Health Check (slightly lower than the England average).

Human Papilloma Virus (HPV) vaccination provides protection from the strains of HPV that are most commonly associated with cervical cancer. In 2015/16 across the South East, 88% of girls aged 12 to 13 received at least one dose of HPV vaccine as part of the national immunisation programme. The lowest rate of uptake of one dose of HPV vaccine in Thames

Valley Cancer Alliance was seen in Windsor and Maidenhead – however, all areas within the Thames Valley alliance showed rates statistically significantly higher than the England average.

Screening

Screening is an important mechanism for detecting malignant disease (or potentially malignant changes) early, with the aim of improving the success of treatment. In 2015/16, screening coverage in the Thames Valley Cancer Alliance was higher than the England average for breast, colorectal and cervical cancers. Since 2009/10, there has been a slightly greater increase in breast cancer screening coverage in Thames Valley Cancer Alliance compared to England. Bowel cancer screening coverage rose by 37%, but was fairly stable from 2012-13 at about 58% of the eligible population. The fall in cervical screening coverage seen in this area is similar to the England average.

Breast screening coverage showed statistically significant variation across the alliance, with coverage in Slough CCG and South Reading CCG statistically significantly lower than the England average and all others higher. Bowel cancer screening coverage also varied widely between CCGs.

There was statistically significant variation by deprivation quintile for all screening programmes, with people living in the most deprived quintiles of areas being significantly less likely to receive screening than those living in the least deprived quintiles.

Diagnosis

Nationally the route of diagnosis is associated with whether cancers are detected at an early stage and therefore more likely to be successfully treated. Cancer patients receiving their diagnosis through screening (where available) or managed routes have better prognoses than those diagnosed through emergency presentations. In the period 2006-2013, patients in the Thames Valley Cancer Alliance had their cancers diagnosed through emergency presentations for 3% of breast cancers, 8% of prostate cancers, 23% of colorectal cancers and 34% of lung cancers.

In 2015, across Thames Valley Cancer Alliance patients had their cancers diagnosed at early stages (stage 1 or 2) for 87% of breast cancers, 57% of prostate cancers, 44% of colorectal cancers, but only 25% of lung cancers. The majority of CCGs in the alliance showed no statistically significant difference in the proportion of early stage breast cancer diagnoses from the England average, with the exception of Chiltern CCG which was statistically significantly higher. The proportions of early stage colorectal cancer diagnoses within the alliance CCGs

showed no statistically significant difference from the England average. However there was some statistically significant variation in early stage diagnosis for lung cancer, with the lowest proportion in Swindon CCG and the highest in Oxfordshire CCG. Prostate cancer diagnosis also showed statistically significant variation with the lowest rate in Swindon CCG and highest in South Reading CCG.

Survival

In the South East, survival from breast, colorectal, lung and prostate cancers was generally similar to the England average, apart from five-year survival from breast cancer and five-year survival from colorectal cancer in males, which were slightly higher. All four cancers showed improved one-year survival between 2003-2007 and 2008-2012, with the greatest relative improvement in lung cancer (particularly in females). However, lung cancer survival remained poor across the South East, with five-year survival rates of 7% for males and 8% for females (similar to England).

In 2014, across the CCGs in the Thames Valley Cancer Alliance, there was some statistically significant variation in one-year survival for breast cancer, with one year survival in Aylesbury Vale CCG statistically significantly lower than the England average, and statistically significantly higher in Oxfordshire, Chiltern, and Wokingham CCGs. One year survival for colorectal cancer was statistically significantly higher than the England average for Oxfordshire, Chiltern and Aylesbury Vale CCGs, and similar to the England average in all others. Lung cancer was similarly varied – Newbury and District, North and West Reading, and Swindon CCGs showed survival rates statistically significantly lower than the England average, and Oxfordshire CCG statistically significantly higher, with all other areas similar to the England average.

Place of death

Over 2013-2015, across the Thames Valley Cancer Alliance, 31% of patients died in a private home, which is considerably lower than the preference expressed by 67% of patients surveyed across England who would prefer to die in a private home. In the Thames Valley Cancer Alliance, a further 12% died in a nursing or care home, which may also be considered their home. Across the alliance, 35% of cancer patients died in hospital and 21% died in a hospice.

Recommendations

The information in this report offers a number of recommendations for discussion as part of the local processes to prevent, detect and treat cancers, and provide care for cancer patients in the Thames Valley Cancer Alliance.

Continued whole-system action is recommended to tackle lifestyle risk factors for cancer such as smoking, alcohol, excess weight, poor diet and physical inactivity. Targeted interventions may be required among specific populations such as areas with higher levels of deprivation, or female smokers.

Improving the uptake of NHS Health Checks is important to increase identification of individuals with modifiable risk factors, so they can be offered opportunities to reduce their risks of cancer as early as possible.

Improving the uptake of HPV vaccination, particularly in those local authorities with lower update, should continue to reduce the risk of cervical cancer. This may be particularly important if cervical screening coverage cannot be increased.

Improving the coverage of all cancer screening programmes (and redressing the falling coverage of cervical cancer screening) with particular attention to more deprived populations and areas with lower coverage, should improve overall detection of early stage cancers and reduce the inequalities in screening between more and less deprived areas.

Increasing the proportions of patients receiving their cancer diagnoses through managed routes rather than emergency presentation (particularly for colorectal and lung cancers) may increase the proportion diagnosed at early stage.

Improving understanding of the wishes of people who are coming to the end of their lives and improving provision of end-of-life care in the community should redress the difference between preferred place of death and actual place of death.

Prepare for the expected large (67%) increase in the number of people living with or beyond a diagnosis of cancer and the additional resources that may be required for their treatment and care. It is possible that these expected costs may be reduced by increased risk factor reduction now and improving preventative services, screening and earlier diagnoses.

Appendices

Appendix 1 - Cancers associated with smoking

Table 2 –Sixteen types of cancer associated with smoking

Oral cavity
Nasal cavity and paranasal sinuses
Pharynx
Larynx
Oesophagus
Lung
Stomach
Liver
Pancreas
Kidney
Ureter
Bladder
Ovary
Cervix
Colorectal (bowel)
Myeloid leukaemia

Source: the International Agency for Research on Cancer (IARC)

Appendix 2 - Maps showing variations in incidence for selected cancers

Figure 56 – Age-standardised incidence of prostate cancer by CCG in Thames Valley Cancer Alliance in 2014, males, all ages – national quintiles

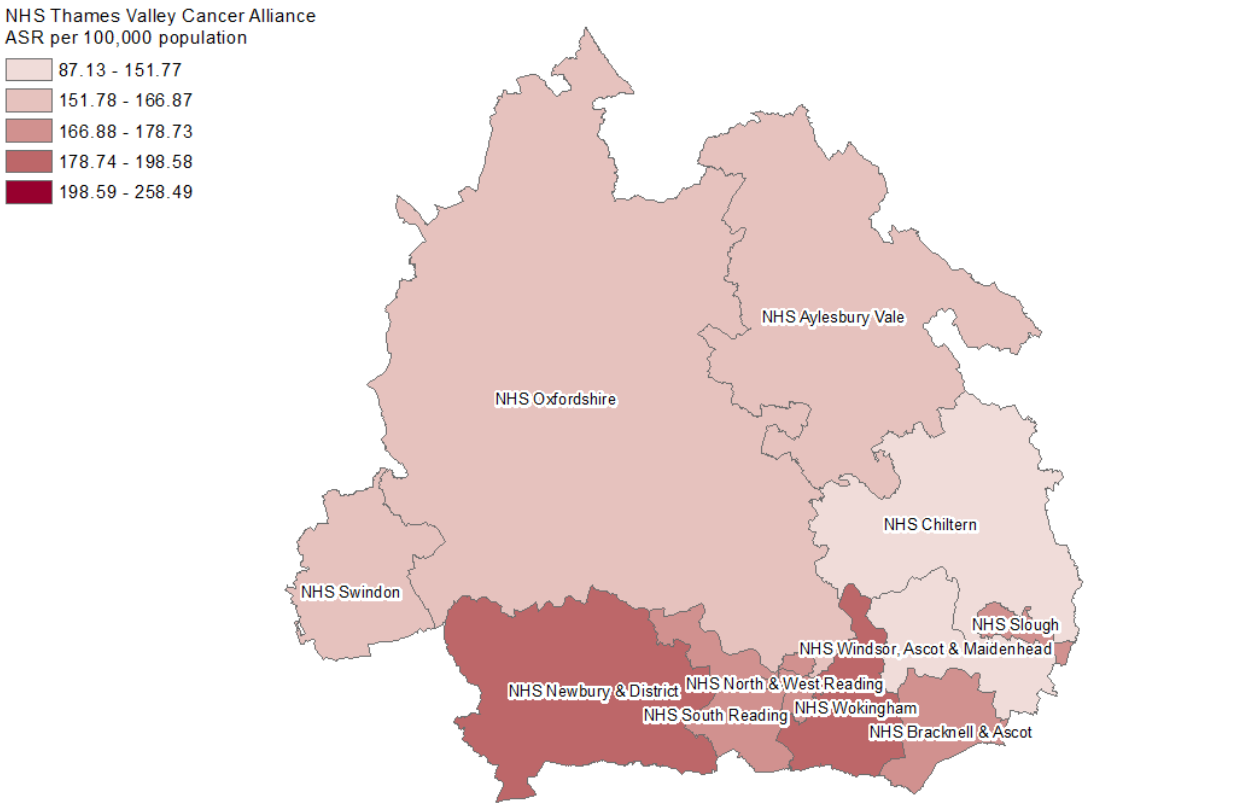


Figure 57 – Age-standardised incidence of breast cancer by CCG in Thames Valley Cancer Alliance in 2014, females, all ages – national quintiles

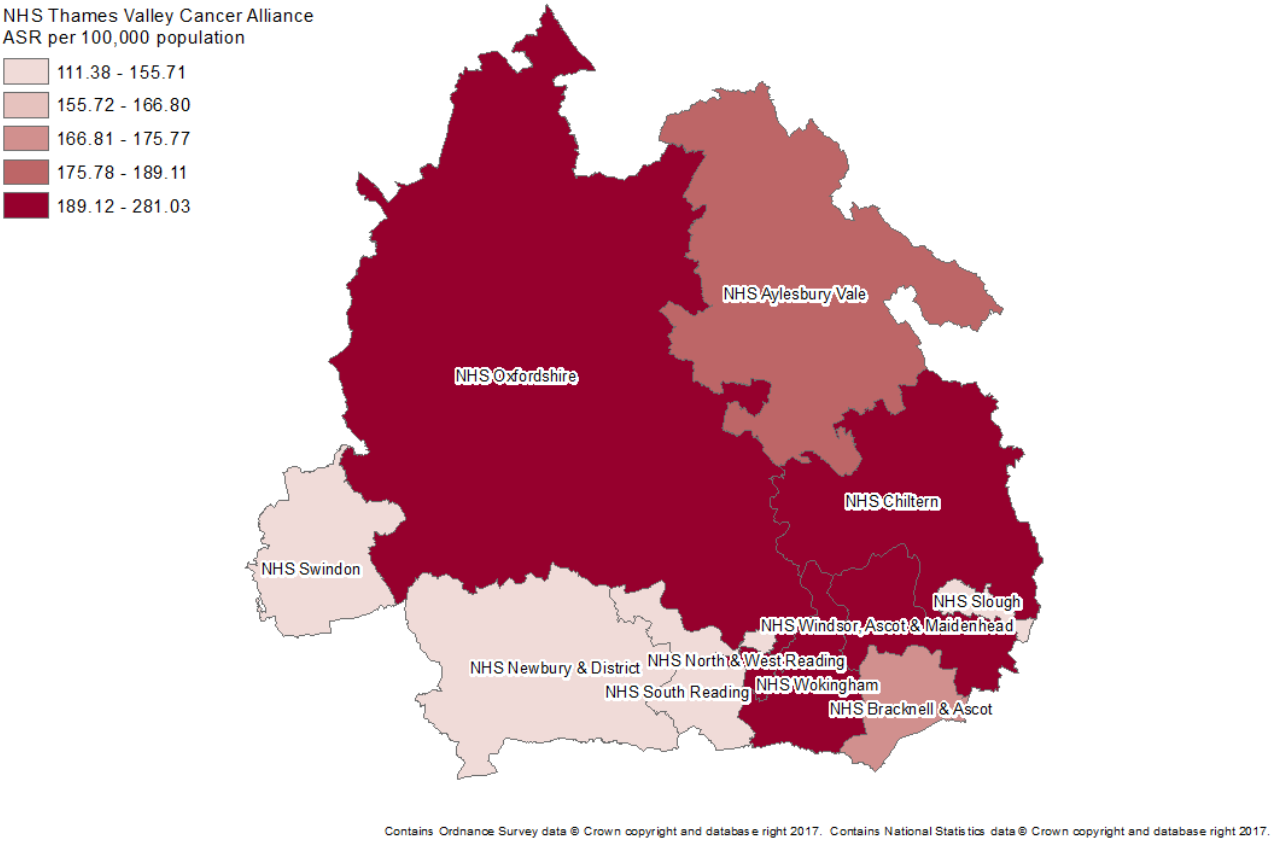


Figure 58 – Age-standardised incidence of trachea, bronchus and lung cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages – national quintiles

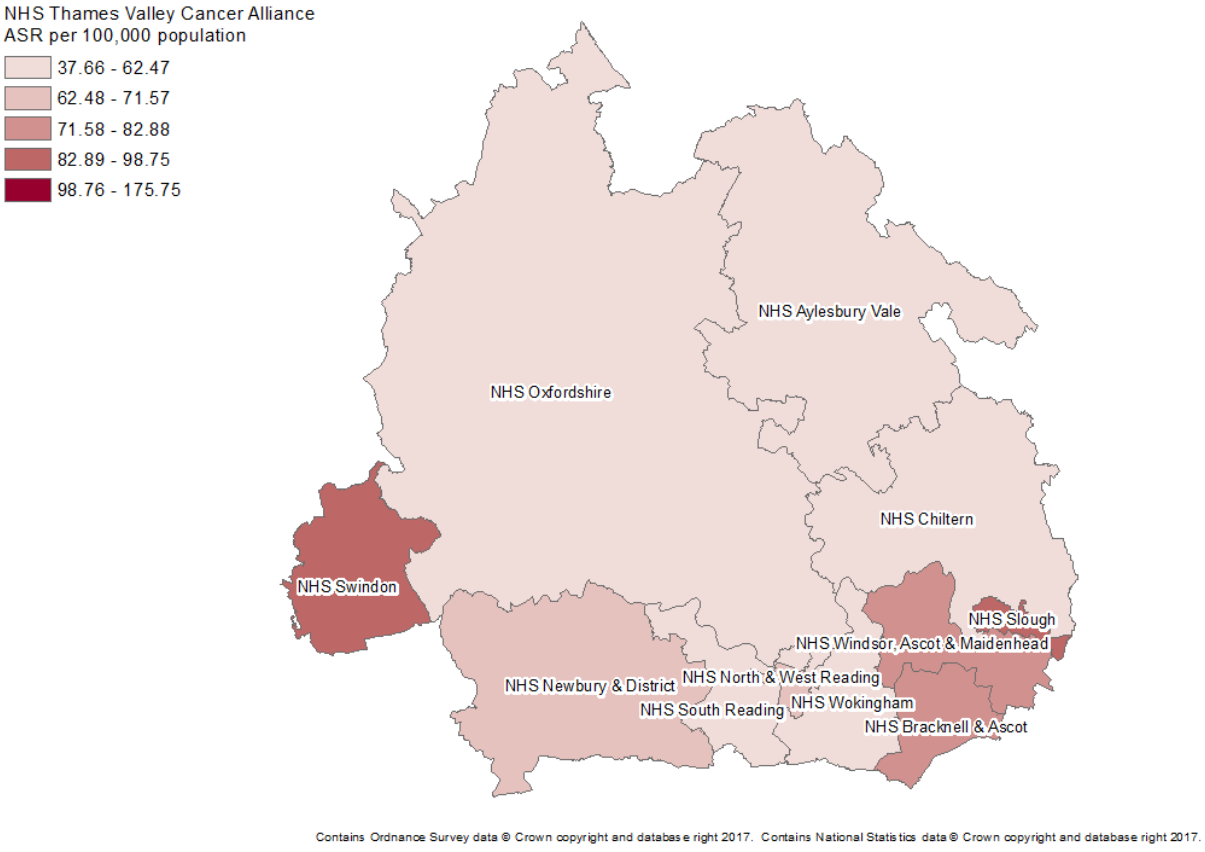


Figure 59 – Age-standardised incidence of colorectal cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages – national quintiles

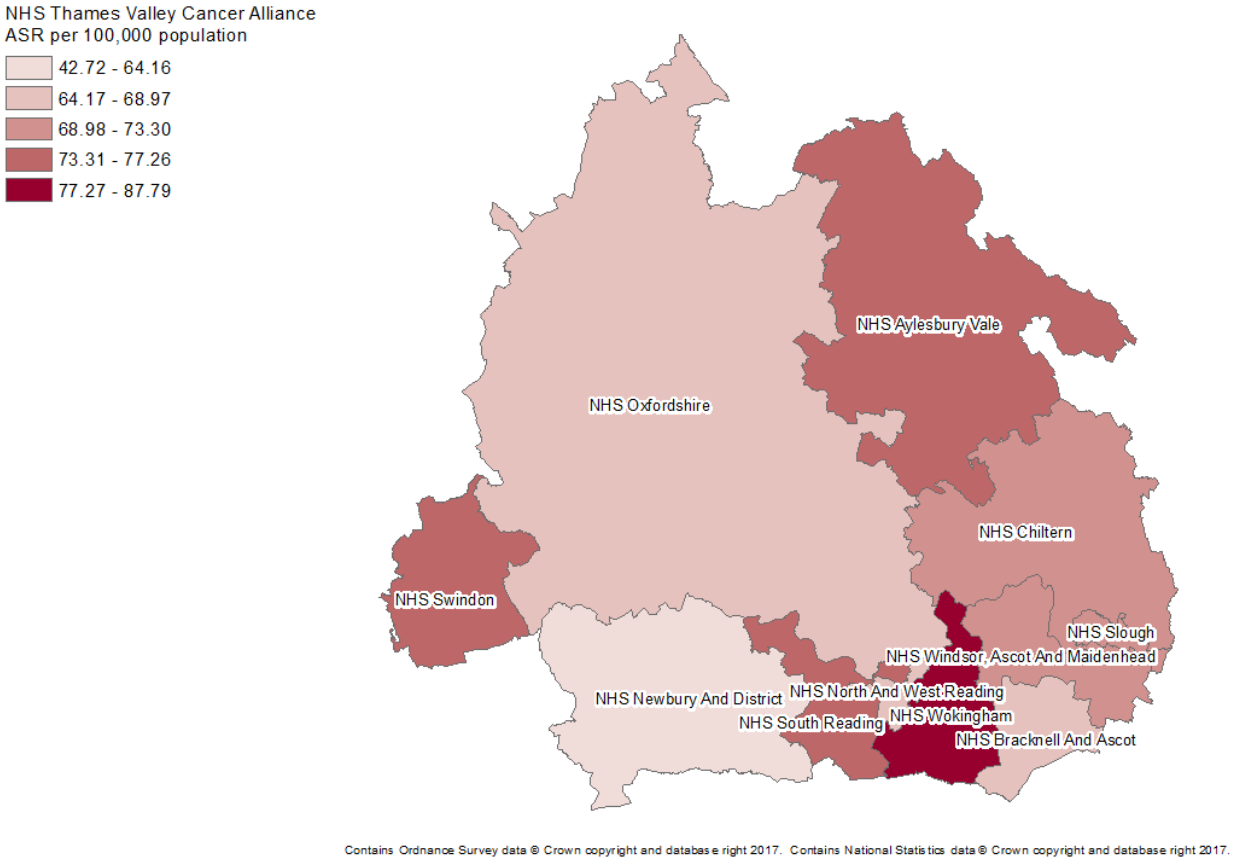


Figure 60 – Age-standardised incidence of pancreatic cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages – national quintiles

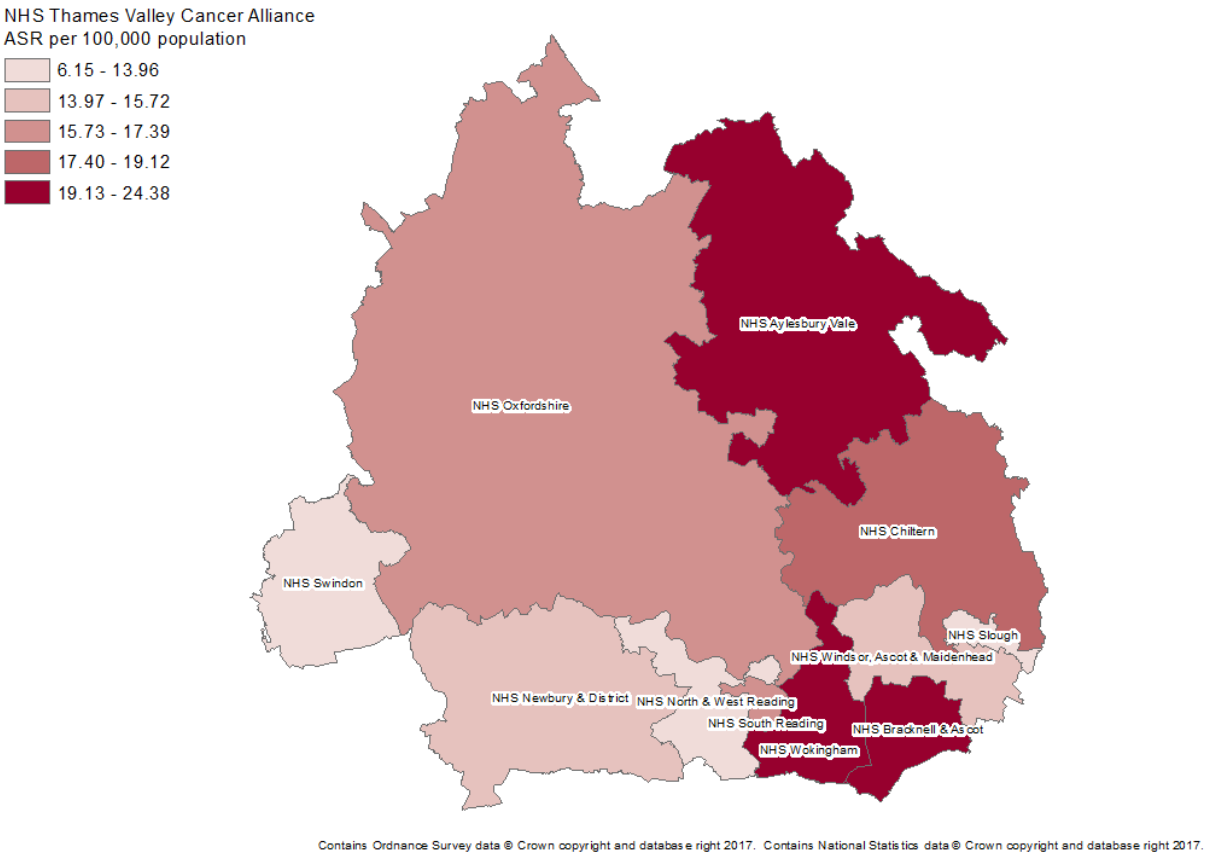


Figure 61 – Age-standardised incidence of liver cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages – national quintiles

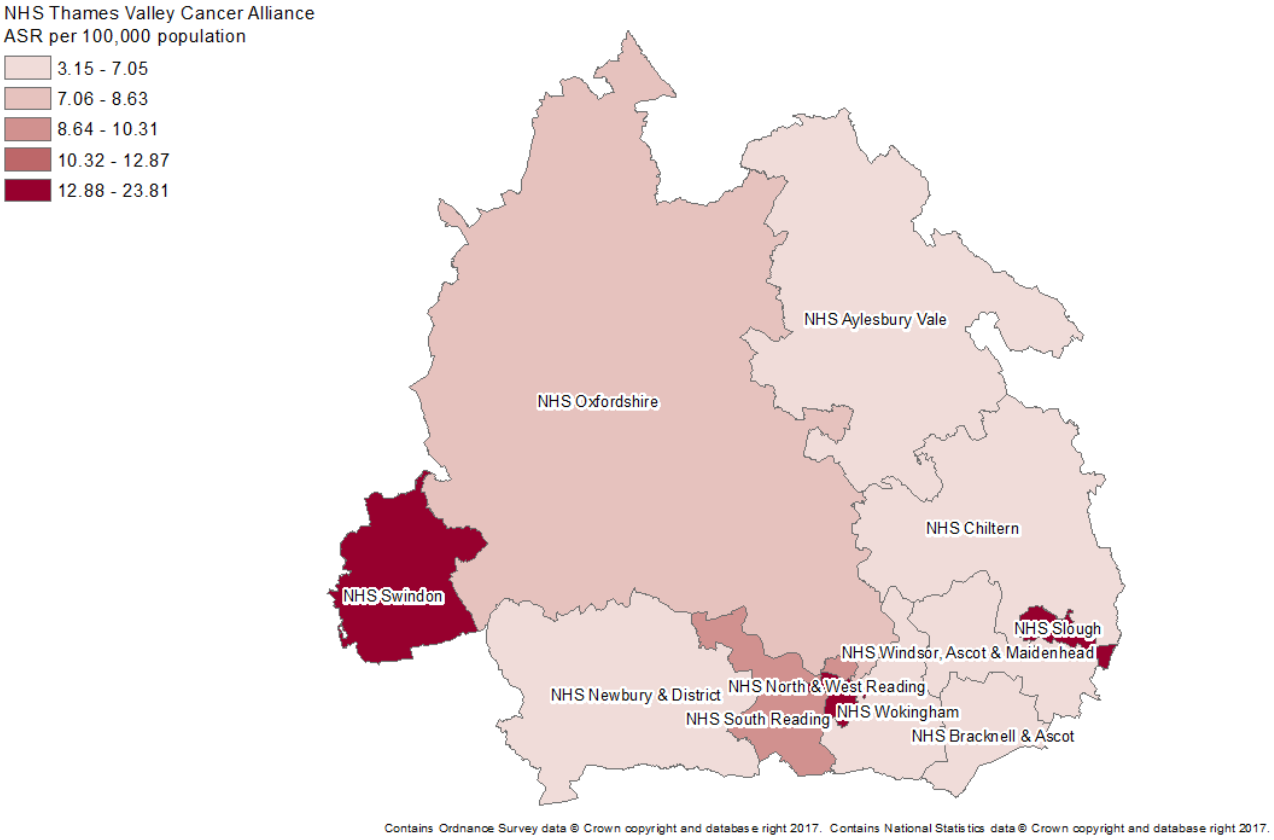
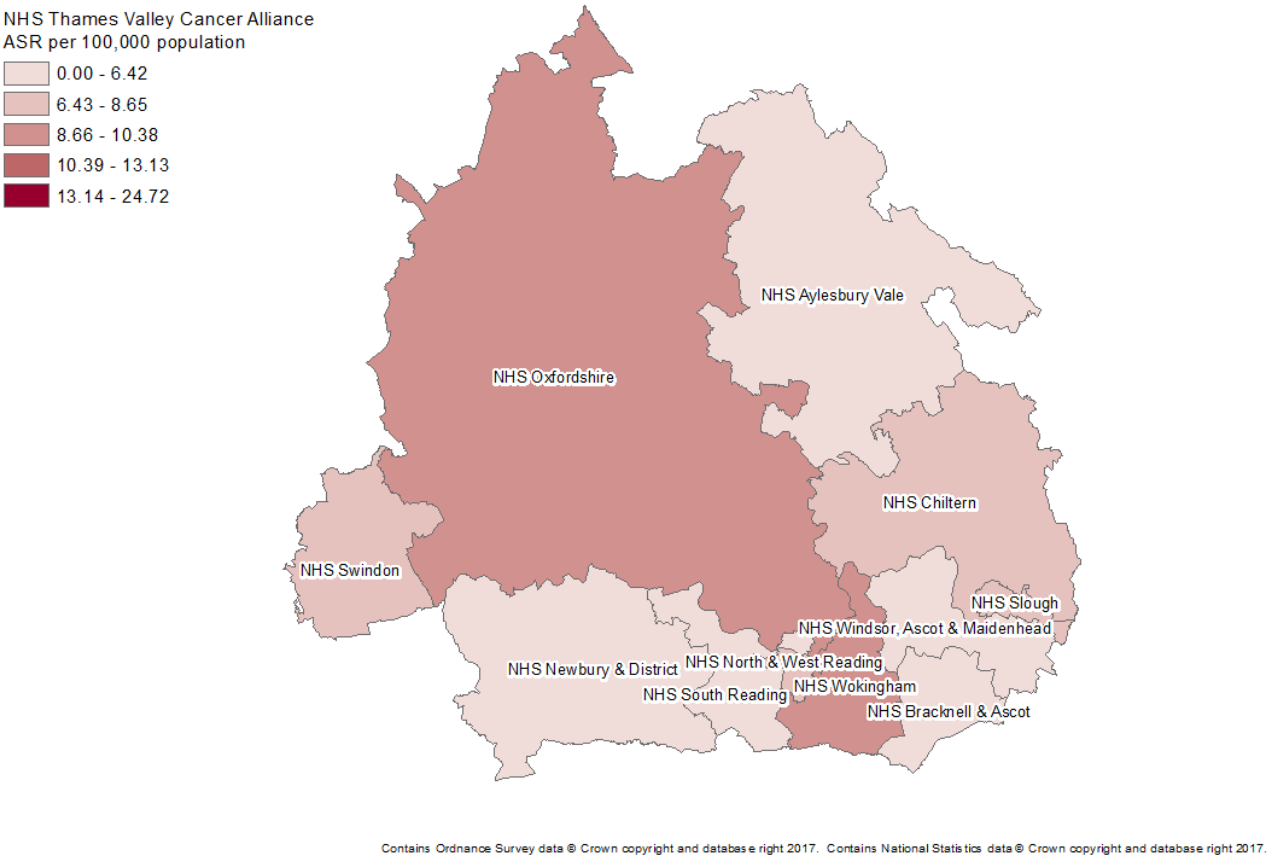


Figure 62 – Age-standardised incidence of cervical cancer by CCG in Thames Valley Cancer Alliance in 2014, females, all ages – national quintiles



Appendix 3 - Maps showing variations in mortality for selected cancers

Figure 63 – Age-standardised mortality rate of prostate cancer by CCG in Thames Valley Cancer Alliance in 2014, males, all ages – national quintiles

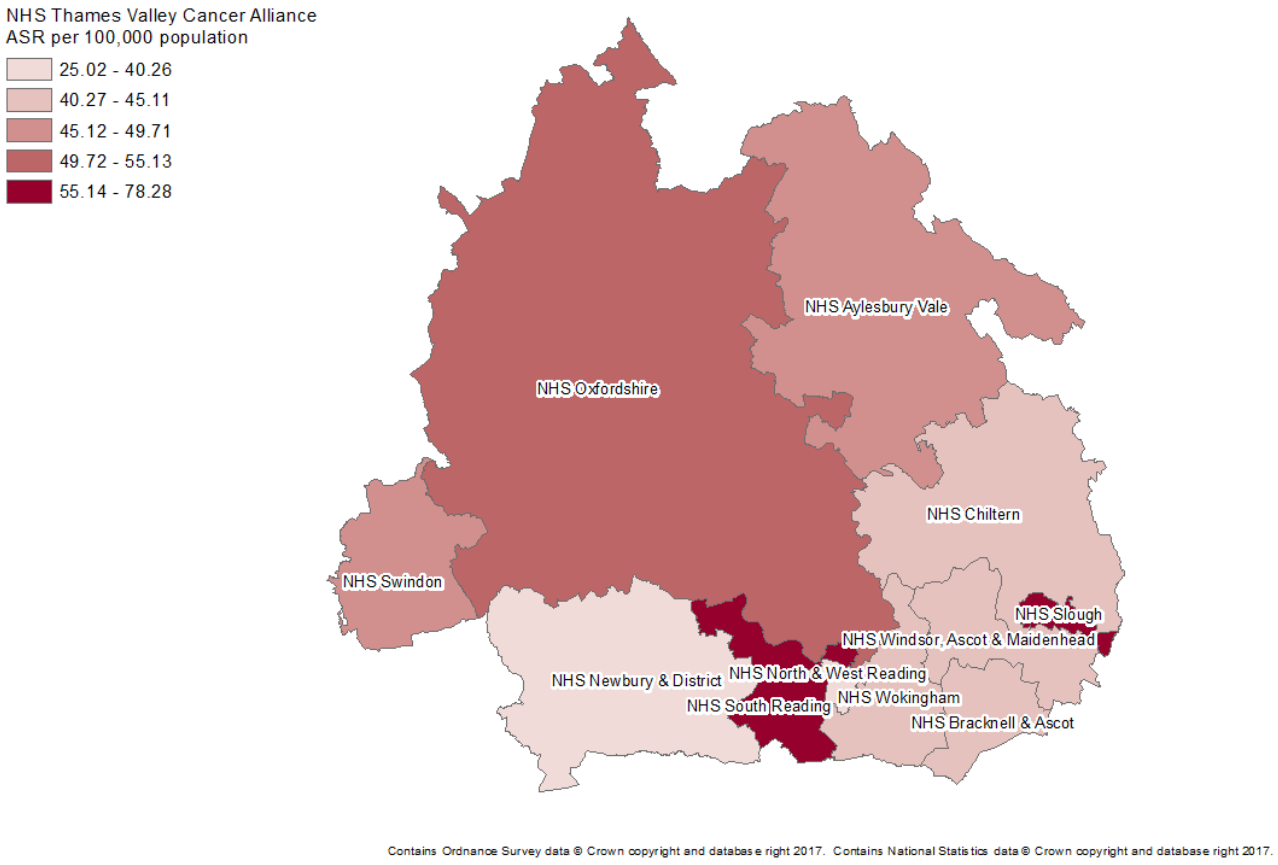


Figure 64 – Age-standardised mortality rate of breast cancer by CCG in Thames Valley Cancer Alliance in 2014, females, all ages – national quintiles

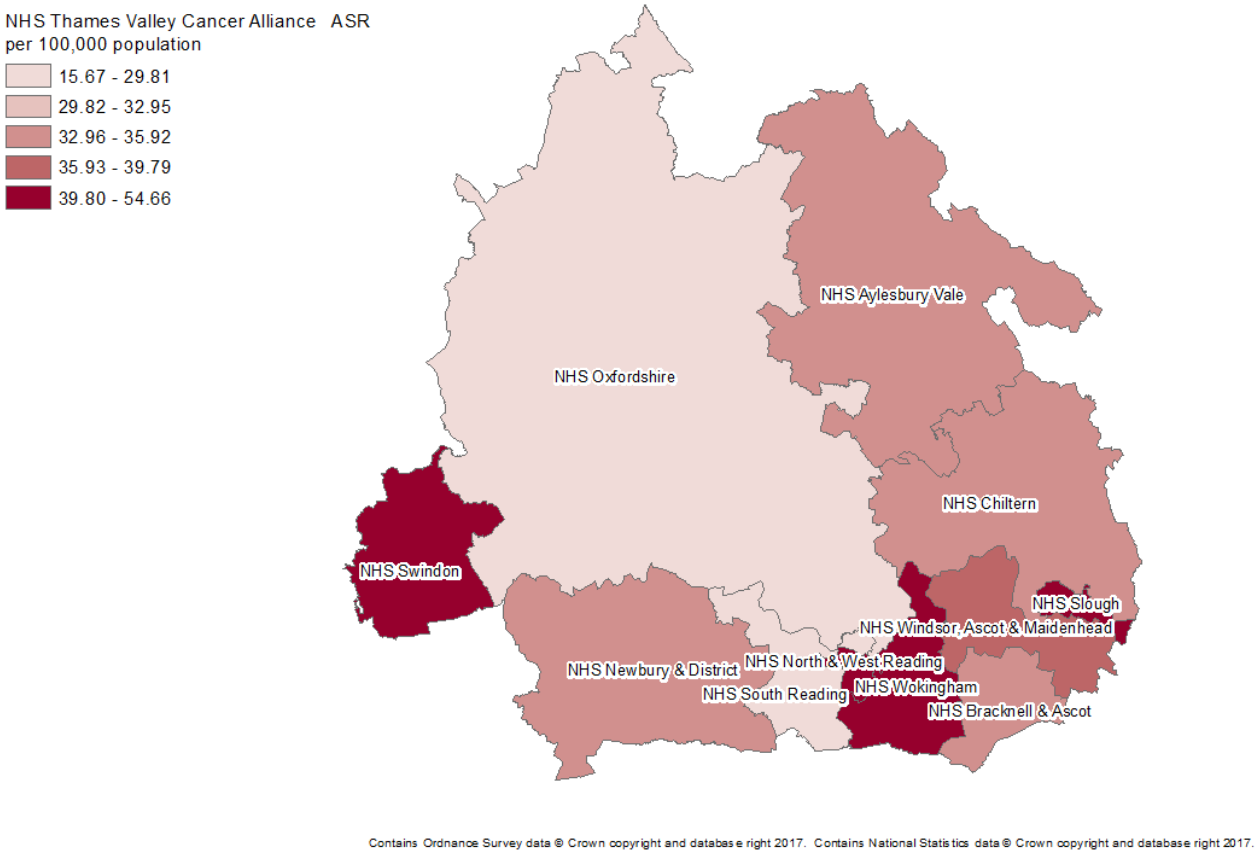


Figure 65 – Age-standardised mortality rate of trachea, bronchus and lung cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages – national quintiles

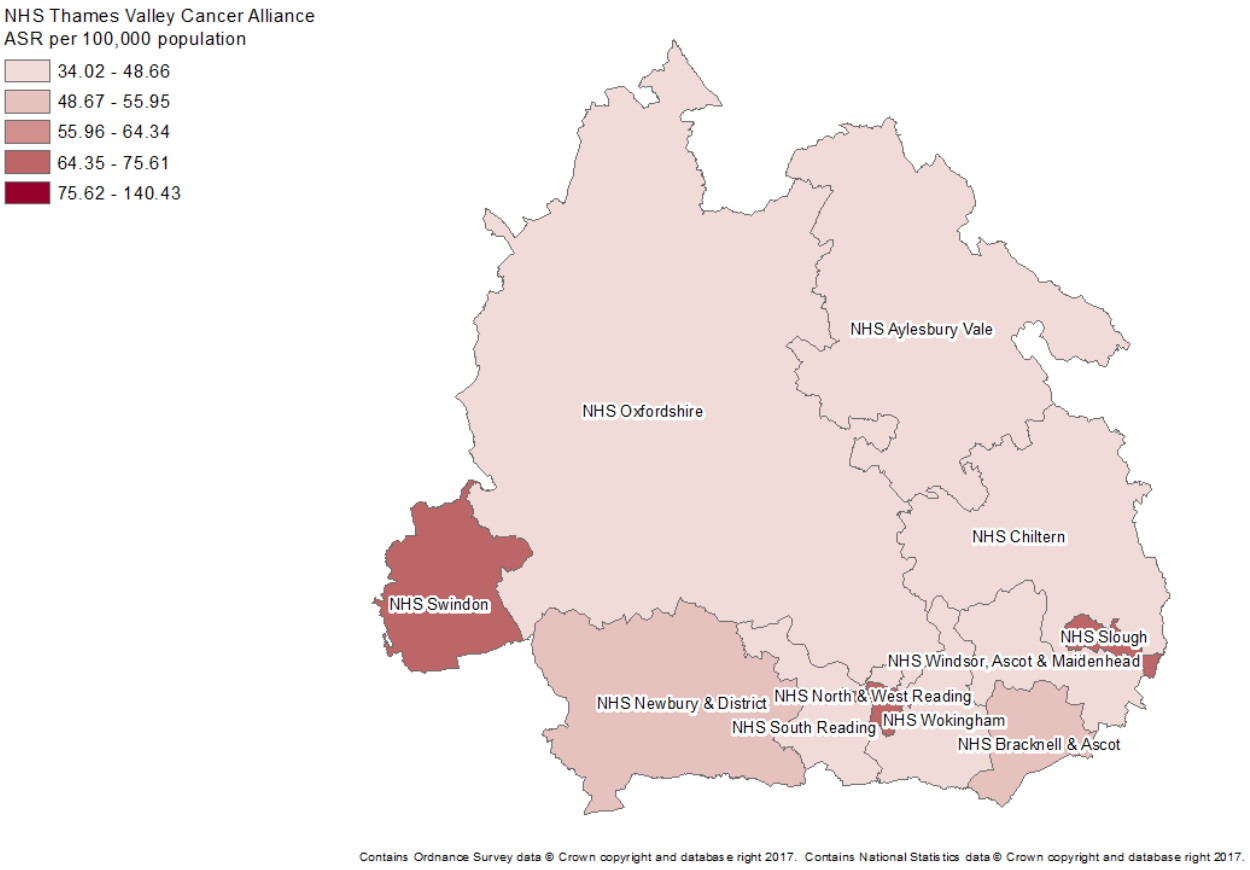


Figure 66 – Age-standardised mortality rate of colorectal cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages – national quintiles

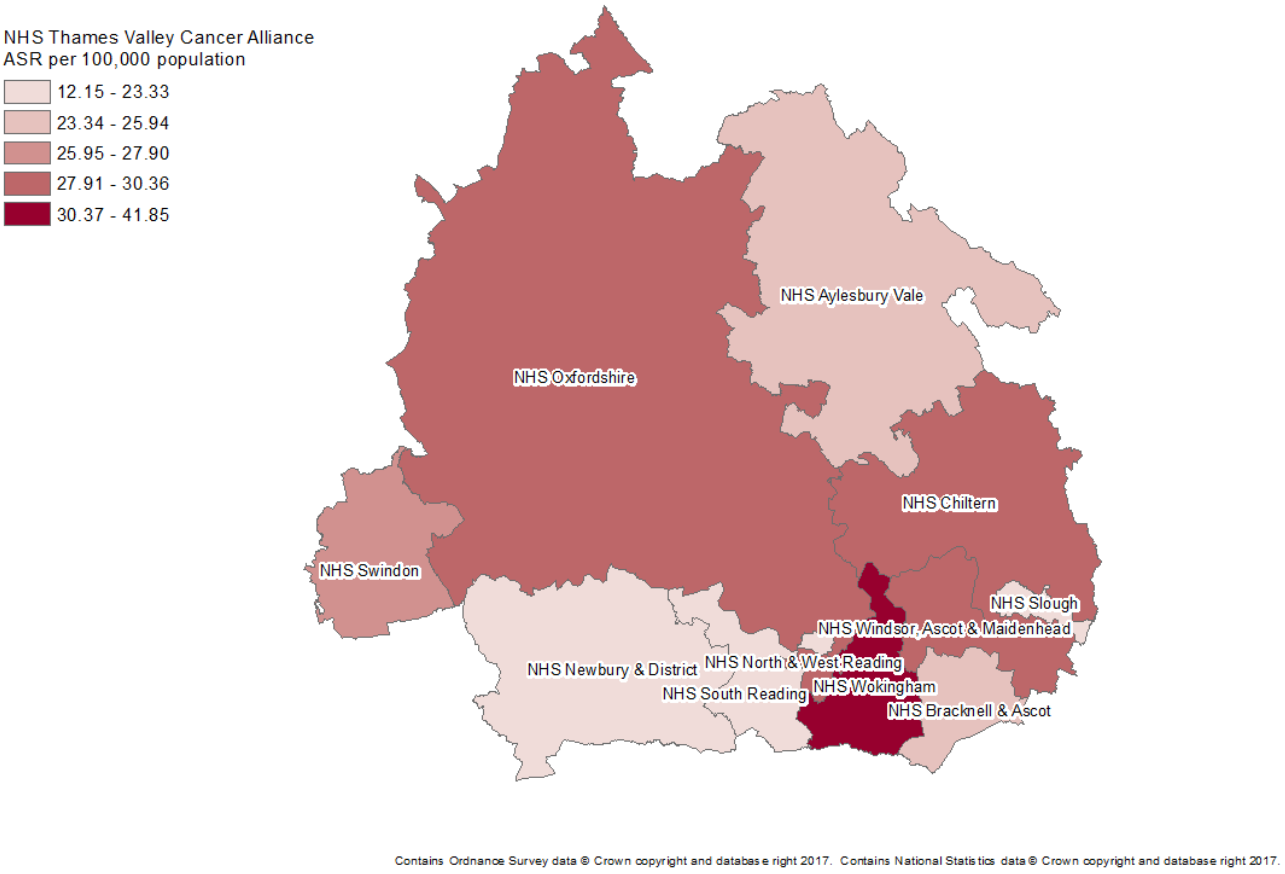


Figure 67 – Age-standardised mortality rate of pancreatic cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages – national quintiles

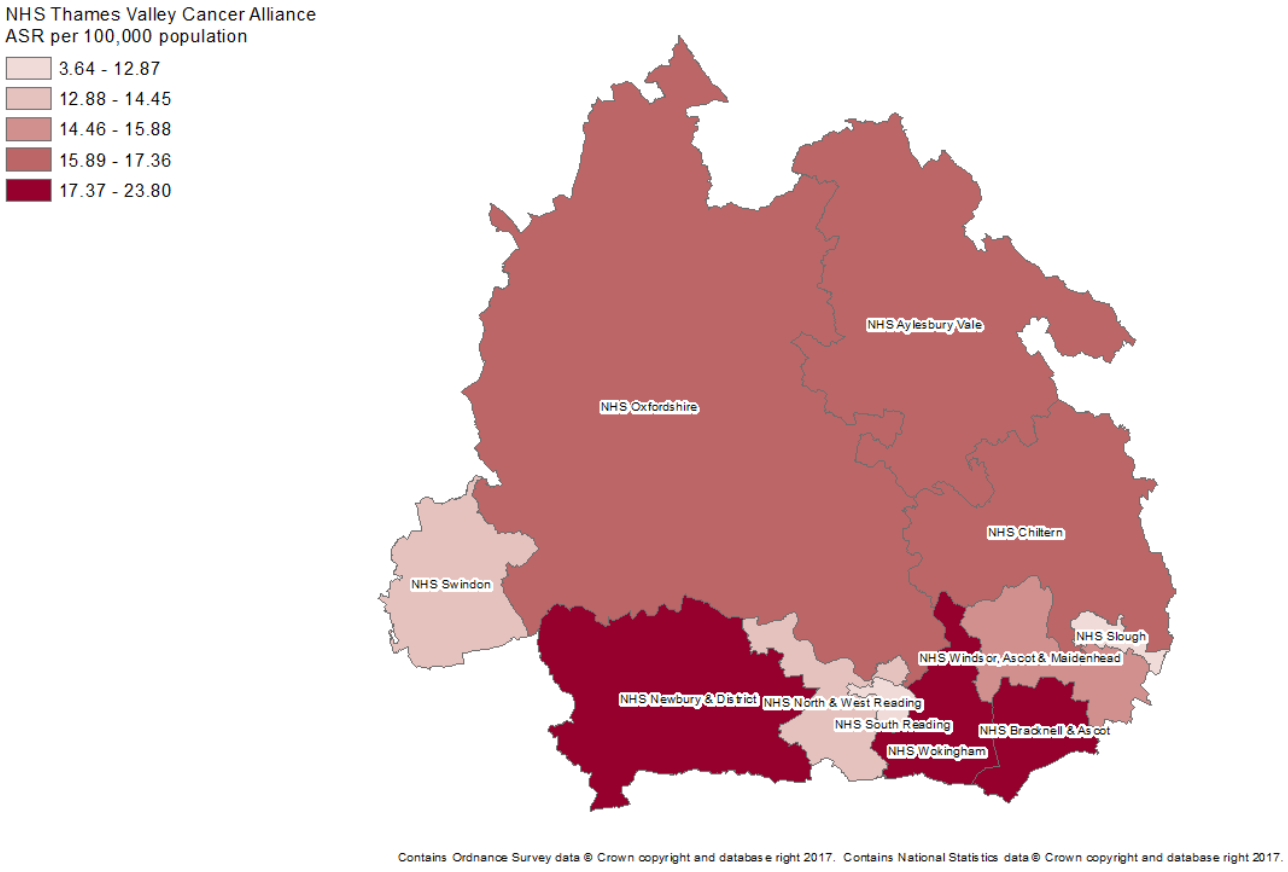


Figure 68 – Age-standardised mortality rate of liver cancer by CCG in Thames Valley Cancer Alliance in 2014, all persons, all ages – national quintiles

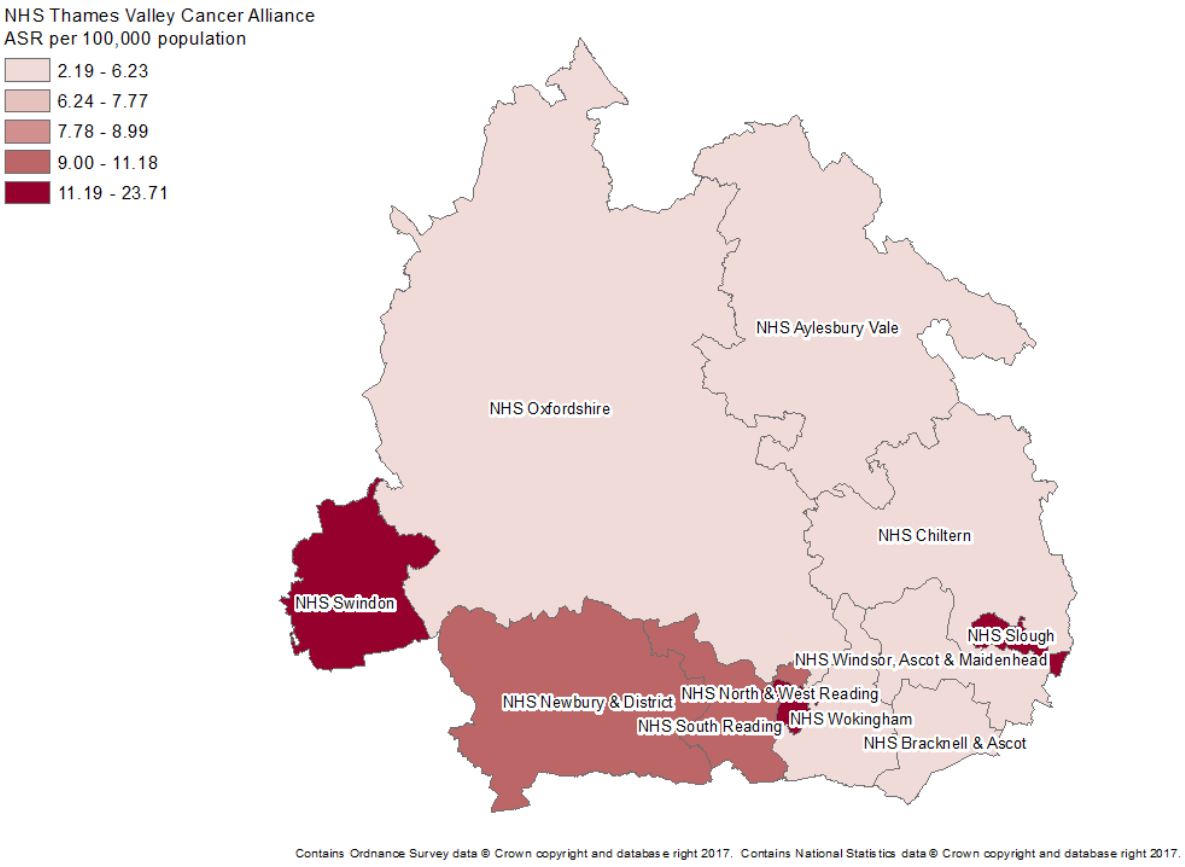
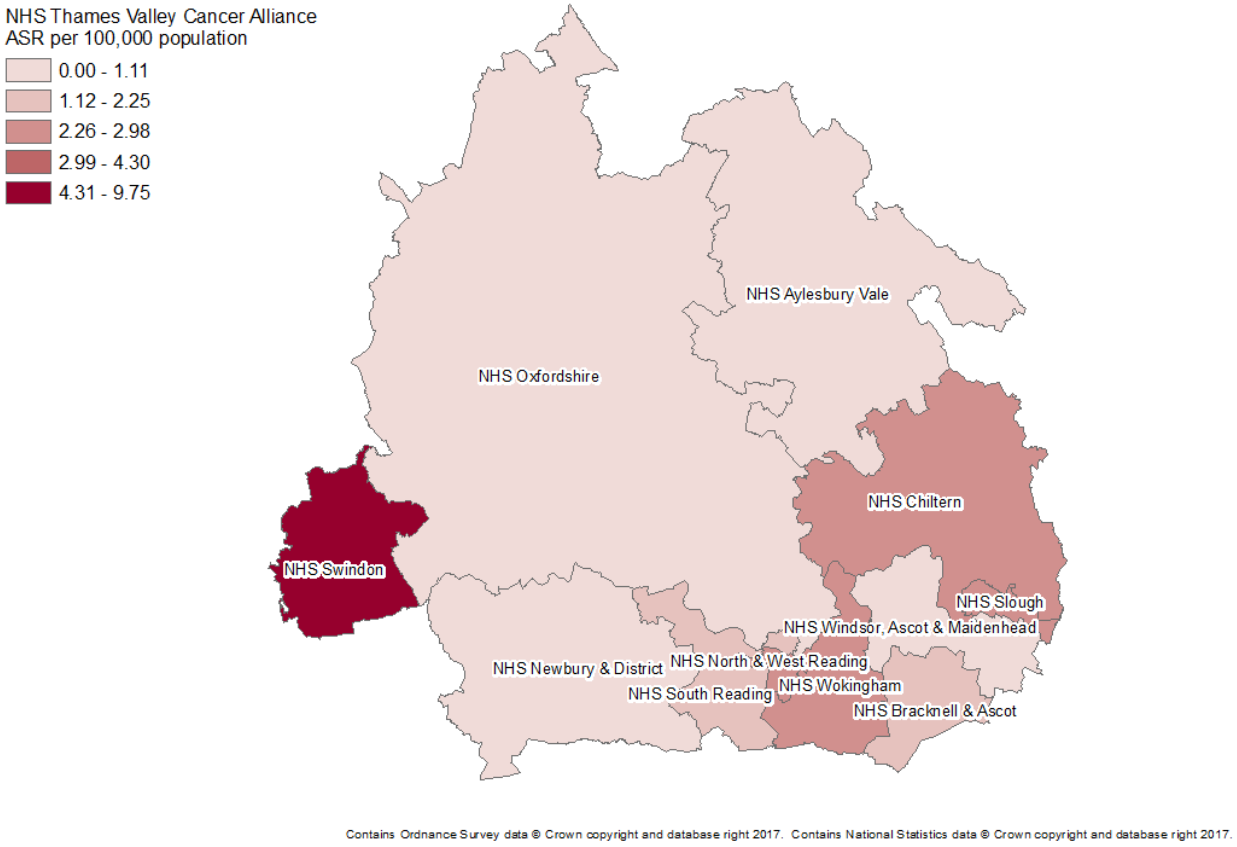


Figure 69 – Age-standardised mortality rate of cervical cancer by CCG in Thames Valley Cancer Alliance in 2014, females, all ages – national quintiles



Glossary

ASR	Age Standardised Rate - the number of events (deaths, new cases etc.) in a given population, over a given time period, adjusted to take account of the age-structure of the population
CCG	Clinical Commissioning Group
Incidence	the rate of occurrence of new cases of a particular disease in a population, over a given period of time
LA	a Local Authority area e.g. County Council, District, Borough or Unitary Authority
Living with and beyond cancer	people who have been diagnosed with cancer, who are undergoing treatment or who have finished their treatment
Mortality	the rate of deaths from a particular disease in a population, over a given period of time
Prevalence	the number of people who have been diagnosed with a particular disease in the past and who are still alive on a given date, or during a given period
QOF	Quality and Outcomes Framework – an annual voluntary reward and incentive programme for General Practices that measures practice achievement and rewards the provision of quality care. QOF may provide useful data for estimating the burden of some risk factors in the population
Quintile	any of five equal groups into which a population can be divided according to the distribution of values of a particular variable (e.g. deprivation)
Relative survival	represents the survival of people diagnosed with cancer compared to the expected survival in the general population
Stage	a way of describing the size of a cancer and how far it has grown

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