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# Cancer in Kent and Medway

## September 2017

# Public Health England Local Knowledge and Intelligence Service, South East

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# 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 Kent and Medway 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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# Authors and main source of cancer data

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, Peter 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[2], which was published by PHE in 2016.

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 Kent and Medway Cancer Alliance area

- in 2014, 54,500 people were estimated to be either living with cancer or to be beyond their diagnosis and treatment
- in 2014, over 10,300 new cancer cases were diagnosed
- in 2014, there were over 4,700 deaths from cancer
- by 2030, there could be 90,900 people living with or beyond a cancer diagnosis
- in the South East of England, the incidence of most cancers (except breast and prostate) was higher in more deprived populations

## Changes over time

- cancer incidence increased across Kent and Medway Cancer Alliance, with large increases in prostate and breast cancers
- cancer mortality improved across Kent and Medway 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 breast and cervical cancers, 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 Kent and Medway 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 as 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 an important public health intervention 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 Kent and Medway 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, otherwise it 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 Kent and Medway Cancer Alliance includes the following CCGs:

- NHS Ashford
- NHS Canterbury and Coastal
- NHS Dartford, Gravesham and Swanley
- NHS Medway
- NHS South Kent Coast
- NHS Swale
- NHS Thanet
- NHS West Kent

The terms “NHS [name]” and “[name] CCG” are used interchangeably throughout this document eg “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.

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

# Cancer prevalence, incidence and mortality

In 2014, there were over 10,300 new cancers diagnosed in Kent and Medway Cancer Alliance and over 4,700 deaths from cancer. Over the past ten years, the incidence of all cancers has increased overall in Kent and Medway, with statistically significant increases 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 Kent and Medway 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 (colorectal), 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).

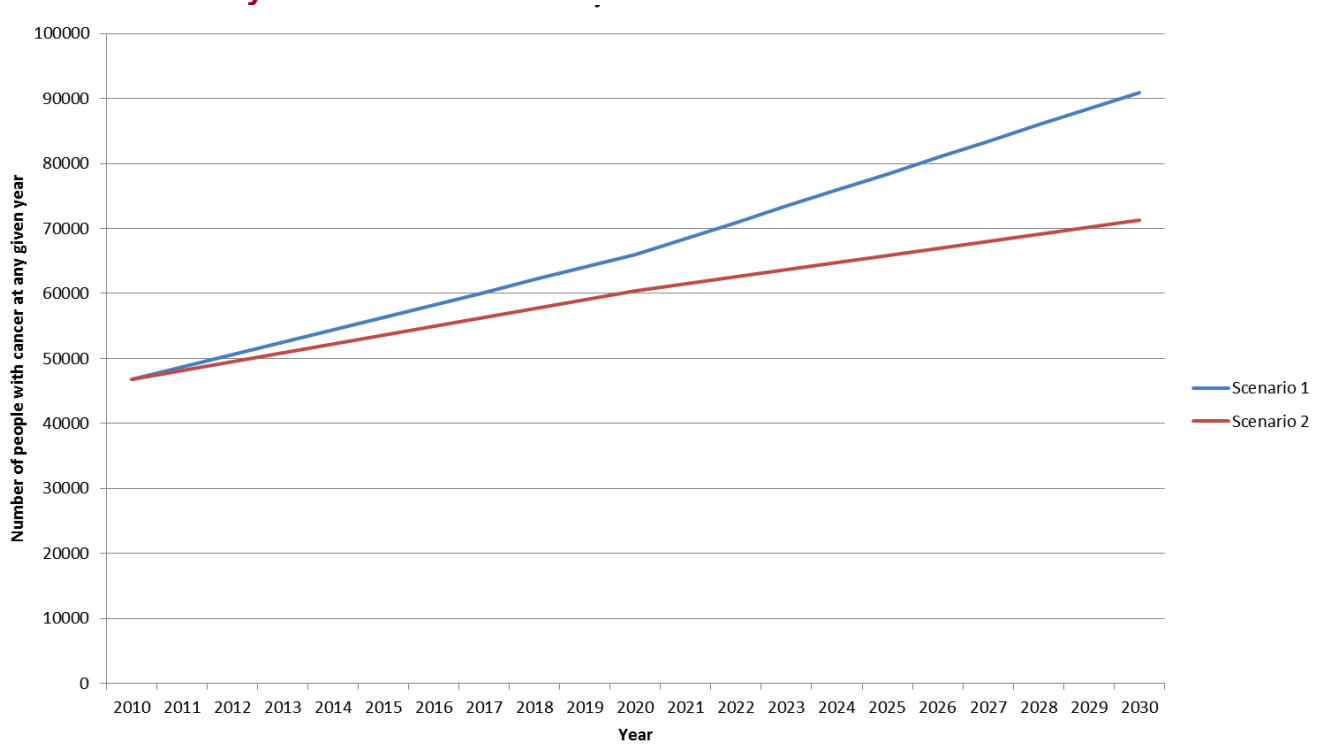
**Table 1 – Cancers causing the greatest burden of ill health in South East England in 2013 (top five), as estimated by the Global Burden of Disease Study**

| 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 54,500 people in Kent and Medway 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 90,900 people in Kent and Medway living with and beyond cancer, a potential increase of approximately 67% (36,400 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 Kent and Medway Cancer Alliance**




Source: Local Cancer Intelligence lci.cancertoolkit.co.uk

*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

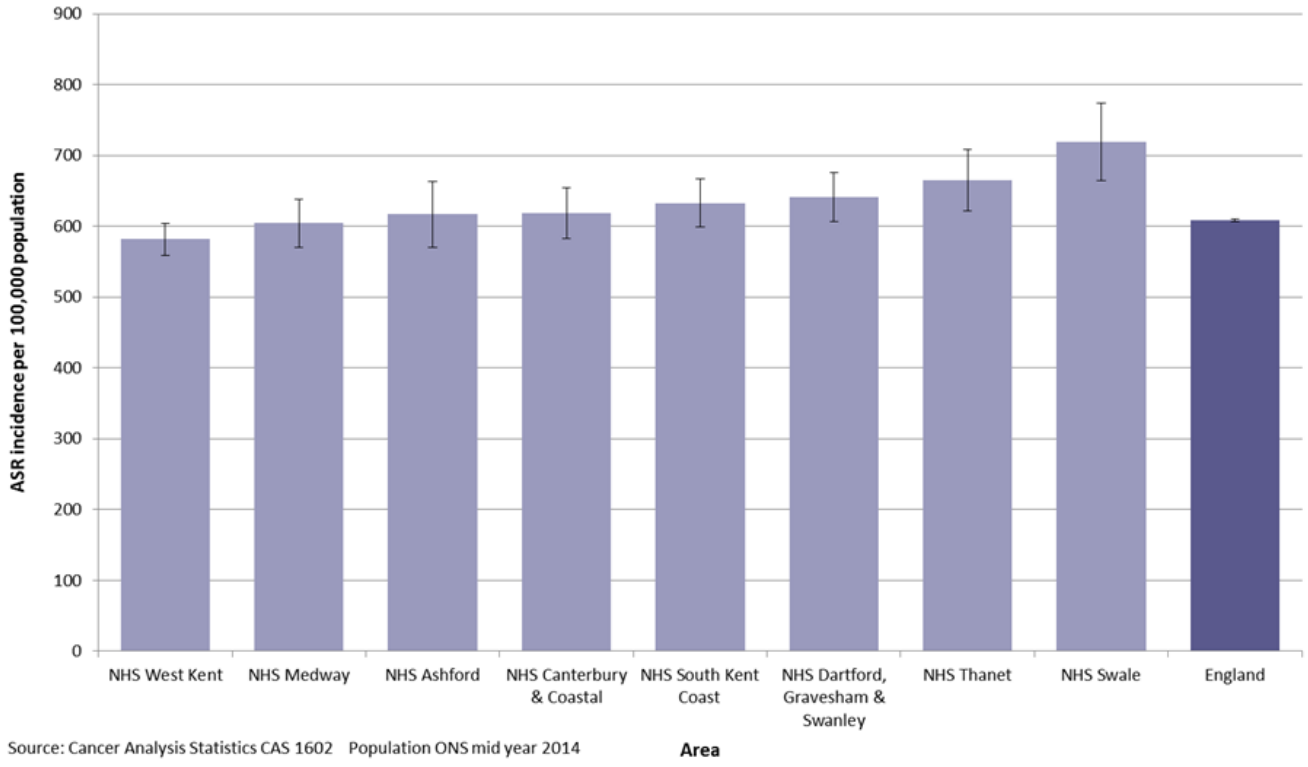
*Scenario 2* assumes people will continue to get cancer at the rate they do today, and that survival rates will remain as they are. The estimates are therefore driven only by a growing and ageing population.

## 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 significant variation in the incidence of all new cancer cases by clinical commissioning group (CCG) within Kent and Medway Cancer Alliance, from 582 cases per 100,000 population in West Kent CCG to 719 per 100,000 in Swale CCG (Figure 2). The rate in West Kent CCG was statistically significantly lower than England, whereas the rates in Thanet and Swales CCGs were statistically significantly higher than England. None of the CCGs within the Kent and Medway Cancer Alliance had an incidence which fell in the lowest national quintile, but Swale and Thanet CCGs had incidences in the highest national quintile (Figure 3).

**Figure 2 – Age-standardised incidence for all cancers by CCG, rate per 100,000 population in Kent and Medway 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 Kent and Medway Cancer Alliance in 2014 – by national quintiles

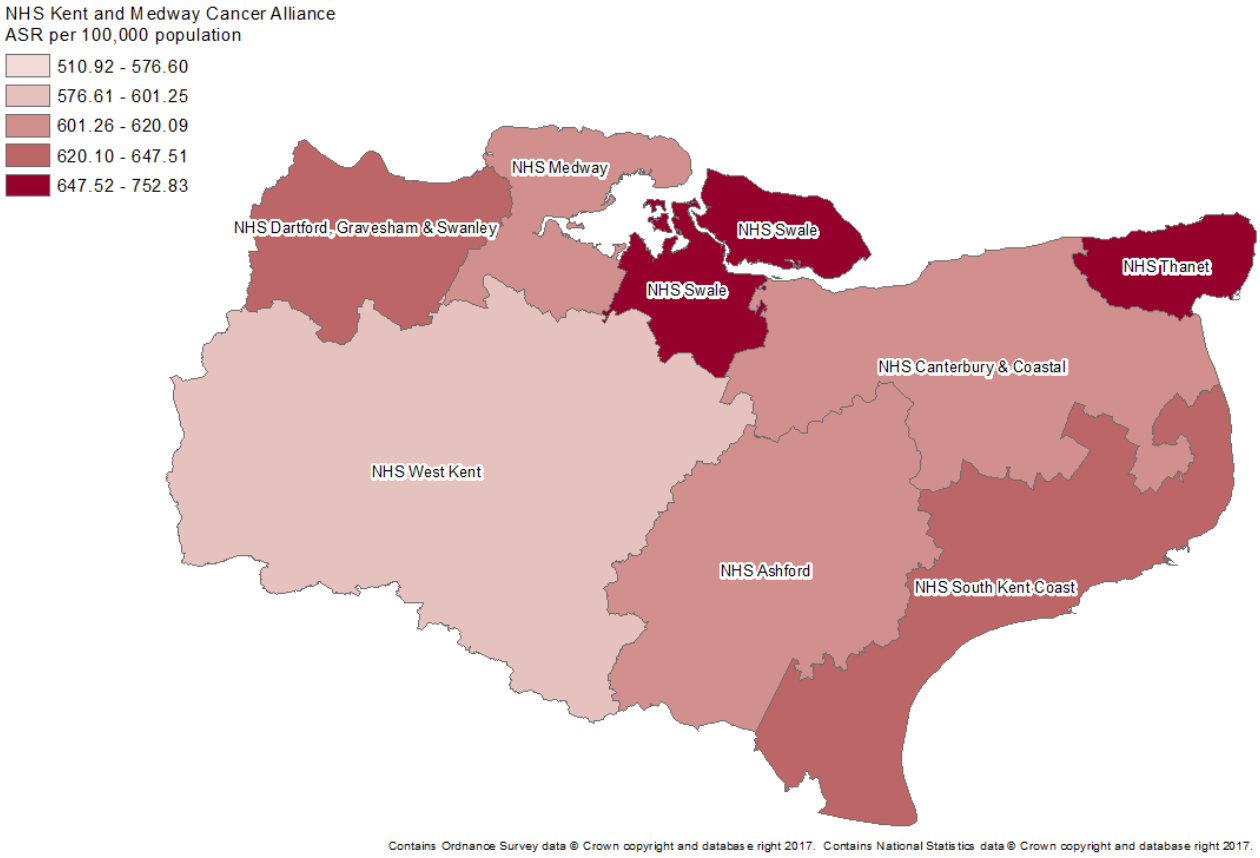
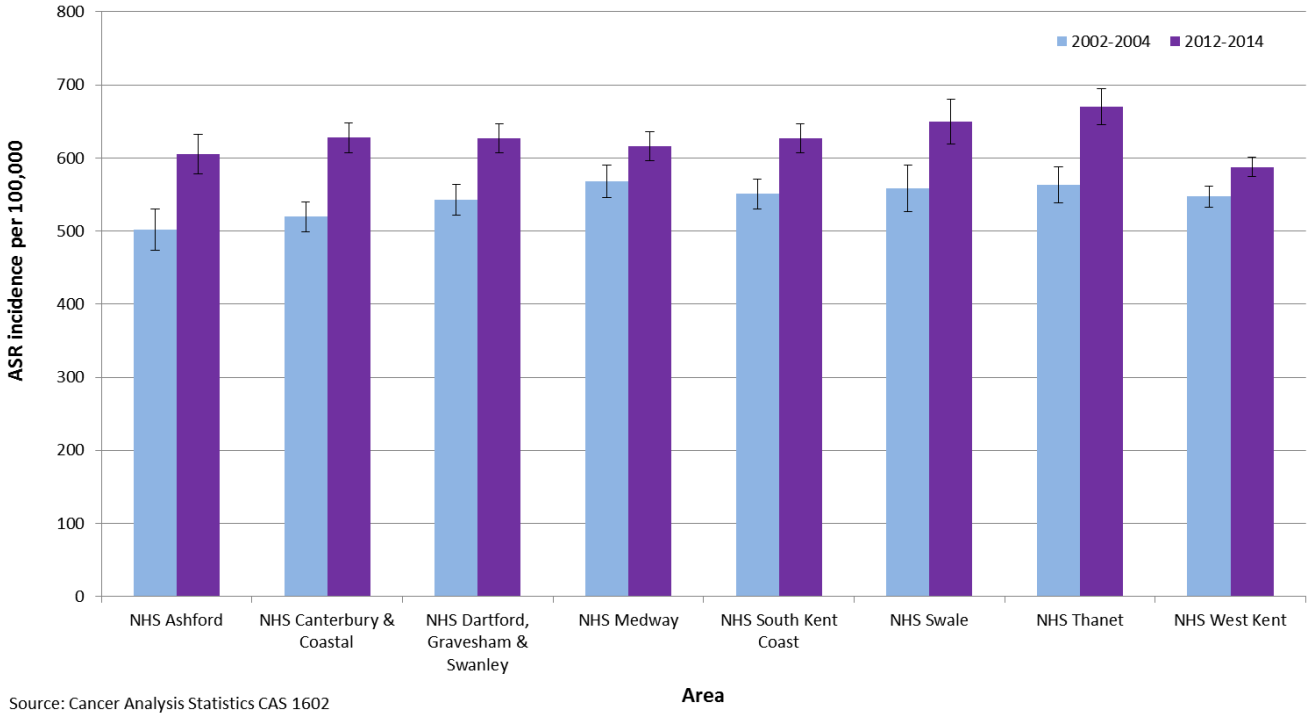


Figure 4 shows the change in all cancer incidence across the CCGs in the Kent and Medway Cancer Alliance comparing the age-standardised incidences (three-year rolling averages) for 2002-2004 and 2012-2014. There have been statistically significant increases in the incidence rates of all cancers in each CCG[4].

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



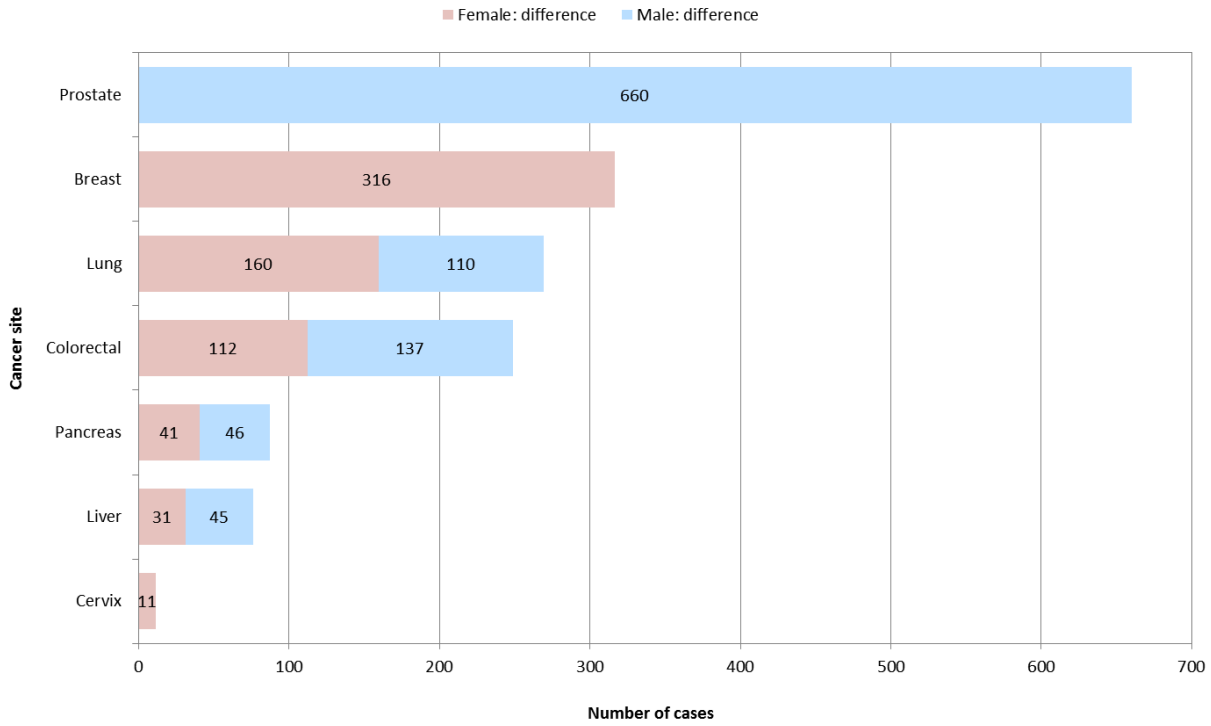

Source: Cancer Analysis Statistics CAS 1602

Figure 5 shows the change in the average annual number of new cases of different types of cancer over the last 10 years in Kent and Medway 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 660 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 316 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 270 more lung cancers diagnosed annually in the years 2012-2014 compared to 2002-2004.

Colorectal cancers have also shown an annual increase of 249 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, Kent and Medway Cancer Alliance**




Source: Cancer Analysis Statistics CAS 1602

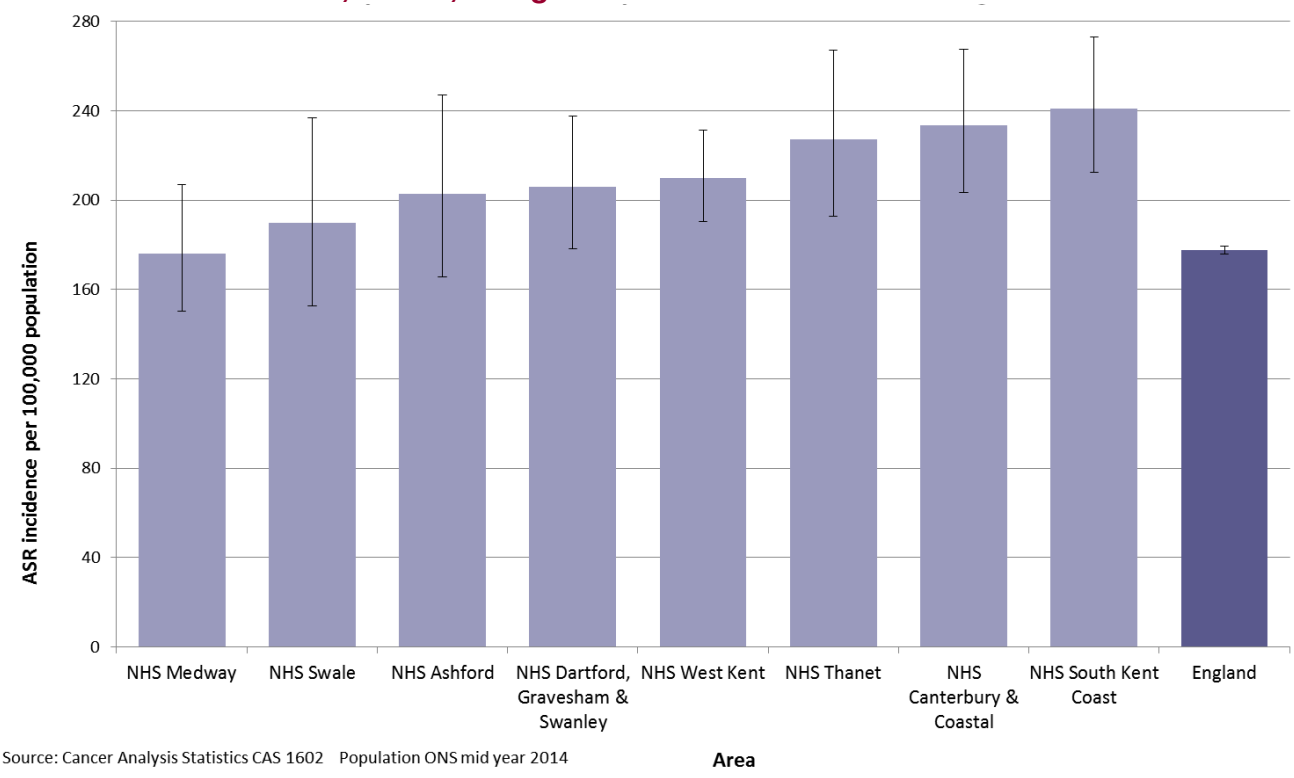
## Variations in incidence of selected cancers

Figure 6 to Figure 12 illustrate variations in incidence of some common cancers between CCGs in the Kent and Medway Cancer Alliance. The Appendix contains maps showing the incidence of some selected cancers by CCG, compared to national quintiles of incidence.

### Prostate Cancer

There was significant variation in the rate of incidence of prostate cancer by CCG within Kent and Medway Cancer Alliance, from 176 cases per 100,000 population in Medway CCG to 241 per 100,000 in South Kent Coast CCG (Figure 6). The rates in West Kent, Thanet, Canterbury & Coastal and South Kent Coast CCGs were statistically significantly higher than England (178 per 100,000).

**Figure 6 – Age-standardised incidence of prostate cancer by CCG in Kent and Medway Cancer Alliance in 2014, males, all ages**

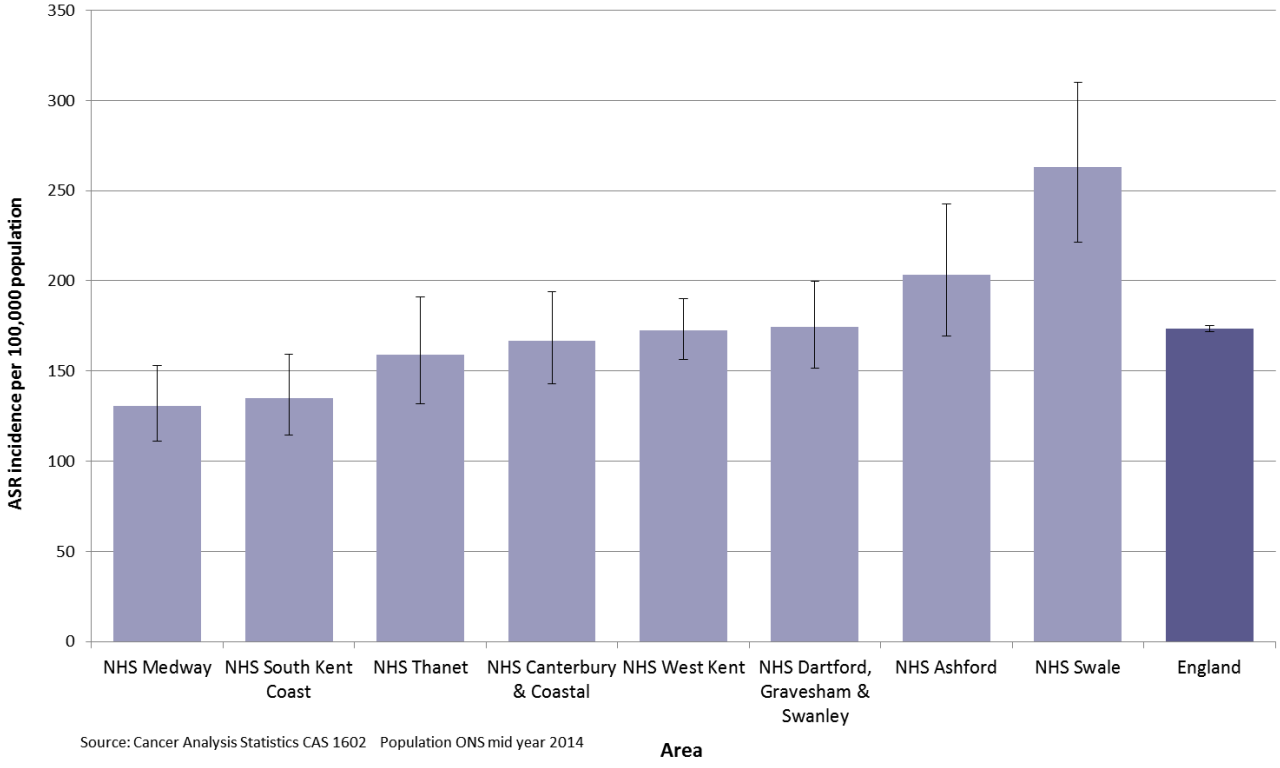



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Female Breast Cancer

There was significant variation in the rate of incidence of female breast cancer by CCG within Kent and Medway Cancer Alliance, from 131 cases per 100,000 population in Medway CCG to 263 per 100,000 in Swale CCG (Figure 7). The rates in Medway and South Kent Coast CCGs were statistically significantly lower than England (173 per 100,000), whereas the rate in Swale CCG was statistically significantly higher than England.

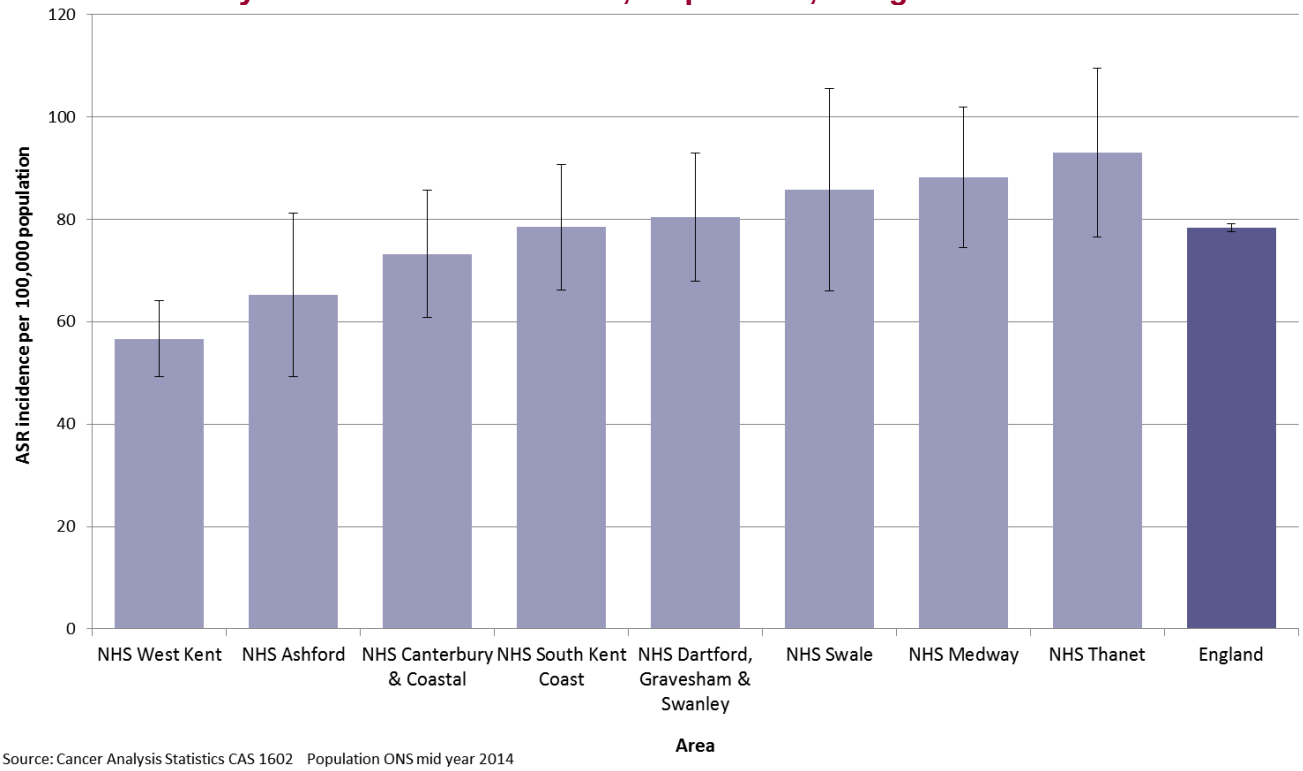
**Figure 7 – Age-standardised incidence of breast cancer by CCG in Kent and Medway Cancer Alliance in 2014, females, all ages**



## Lung cancer

There was significant variation in the rate of incidence of trachea, bronchus and lung cancer by CCG within Kent and Medway Cancer Alliance, from 57 cases per 100,000 population in West Kent CCG to 93 per 100,000 in Thanet CCG (Figure 8). The rate in West Kent CCG was statistically significantly lower than England (78 per 100,000).

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

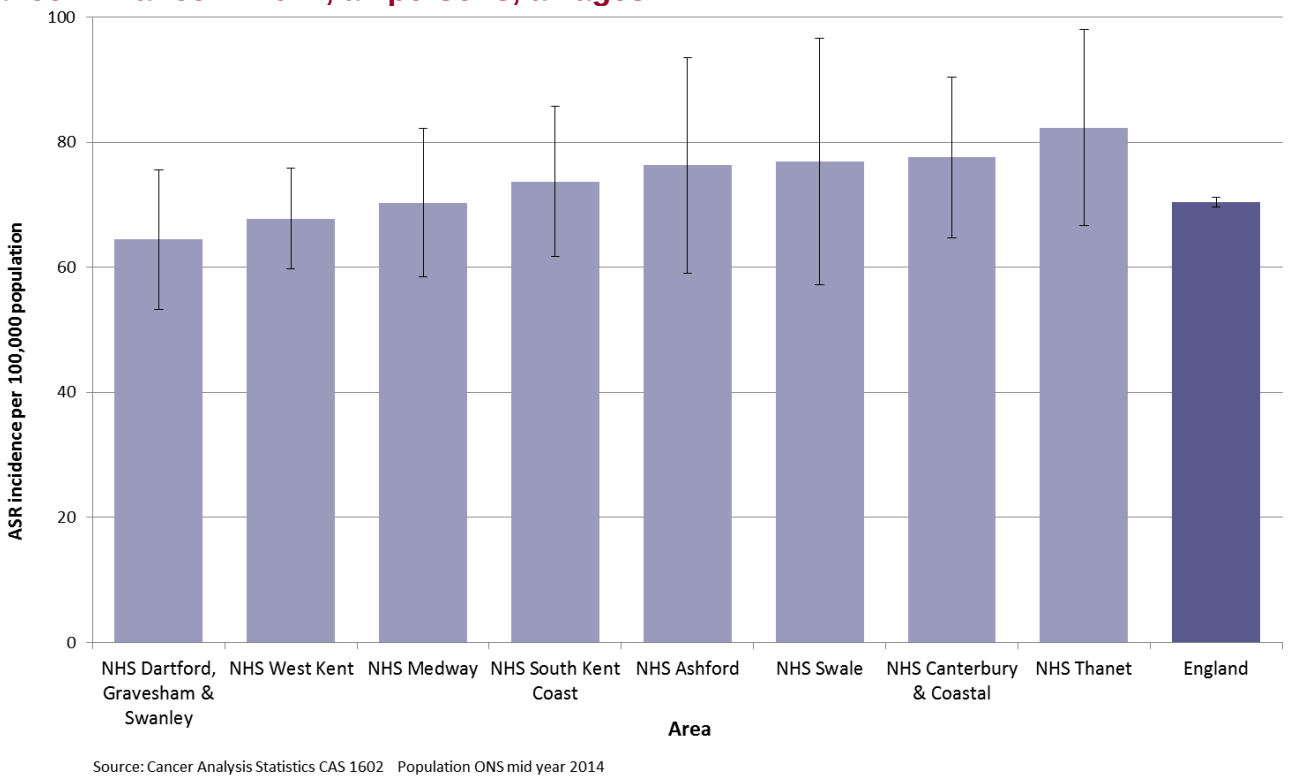



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Colorectal cancer

There was some non-statistically significant variation in the rates of incidence of colorectal cancer by CCG within Kent and Medway Cancer Alliance, from 64 cases per 100,000 population in Dartford, Gravesham and Swanley CCG to 82 per 100,000 in Thanet CCG (Figure 9). No CCGs in Kent and Medway had incidence rates that were statistically different from England (70 per 100,000).

**Figure 9 – Age-standardised incidence of colorectal cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages**

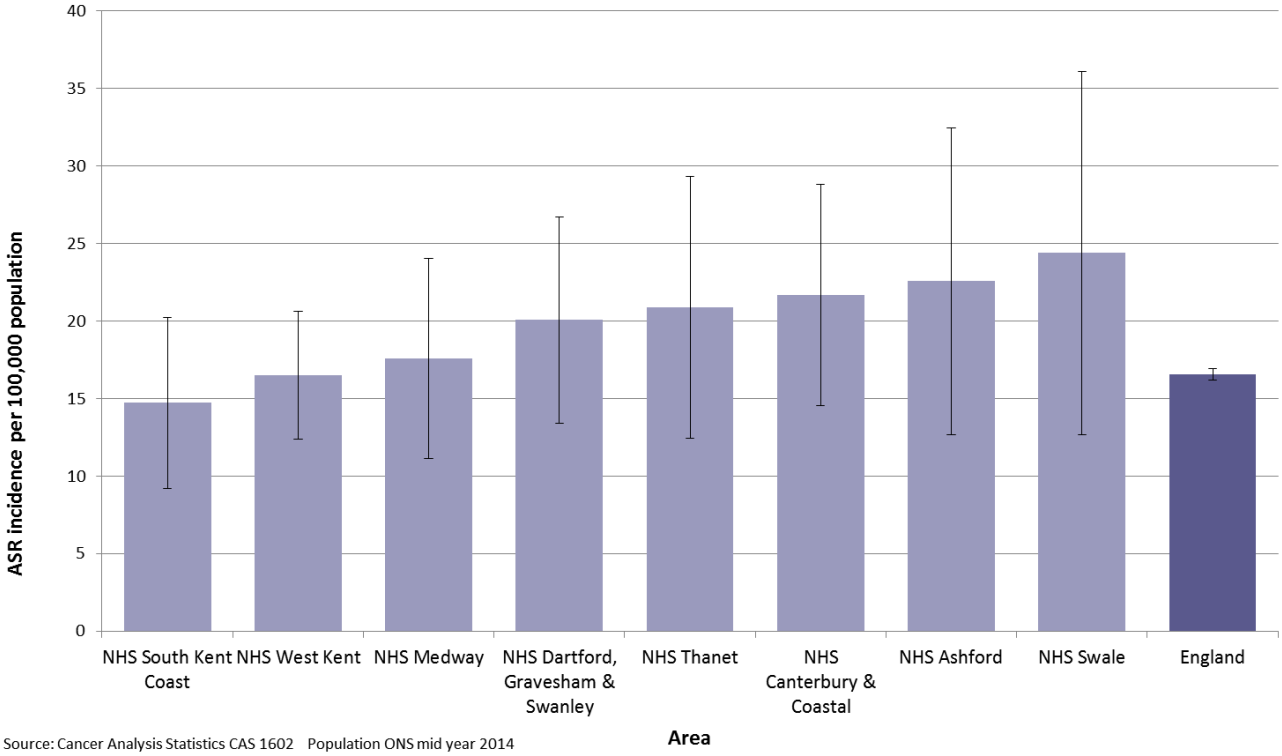



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Pancreas

There was some non-statistically significant variation in the rate of incidence of pancreatic cancer by CCG within Kent and Medway Cancer Alliance, from 15 cases per 100,000 population in South Kent Coast CCG to 24 per 100,000 in Swale CCG (Figure 10). No CCGs in Kent and Medway had incidence rates that were statistically different from England (17 per 100,000).

**Figure 10 – Age-standardised incidence of pancreatic cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages**

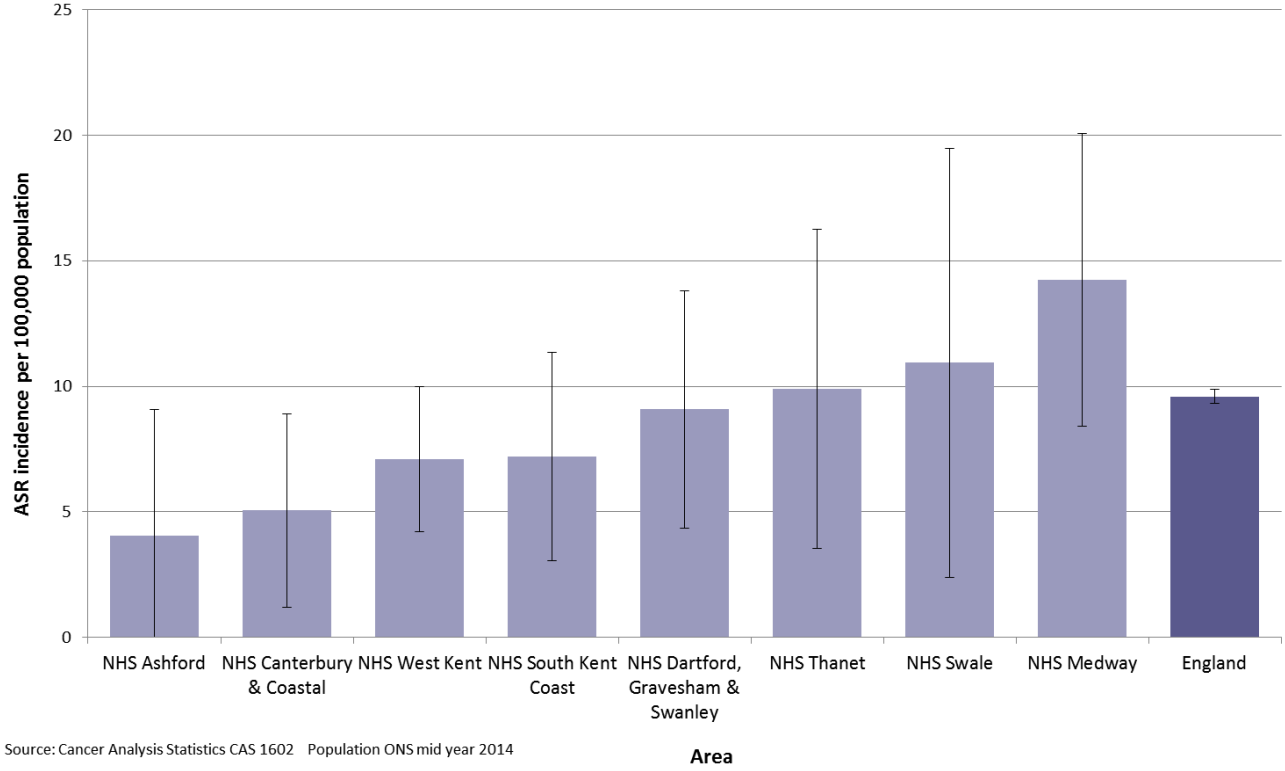



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Liver cancer

There was some non-statistically significant variation in the rate of incidence of liver cancer by CCG within Kent and Medway Cancer Alliance, from 4 cases per 100,000 population in Ashford CCG to 14 per 100,000 in Medway CCG (Figure 11). The rates in Ashford and Canterbury & Coastal CCGS were statistically significantly lower than England (10 per 100,000).

**Figure 11 – Age-standardised incidence of liver cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages**

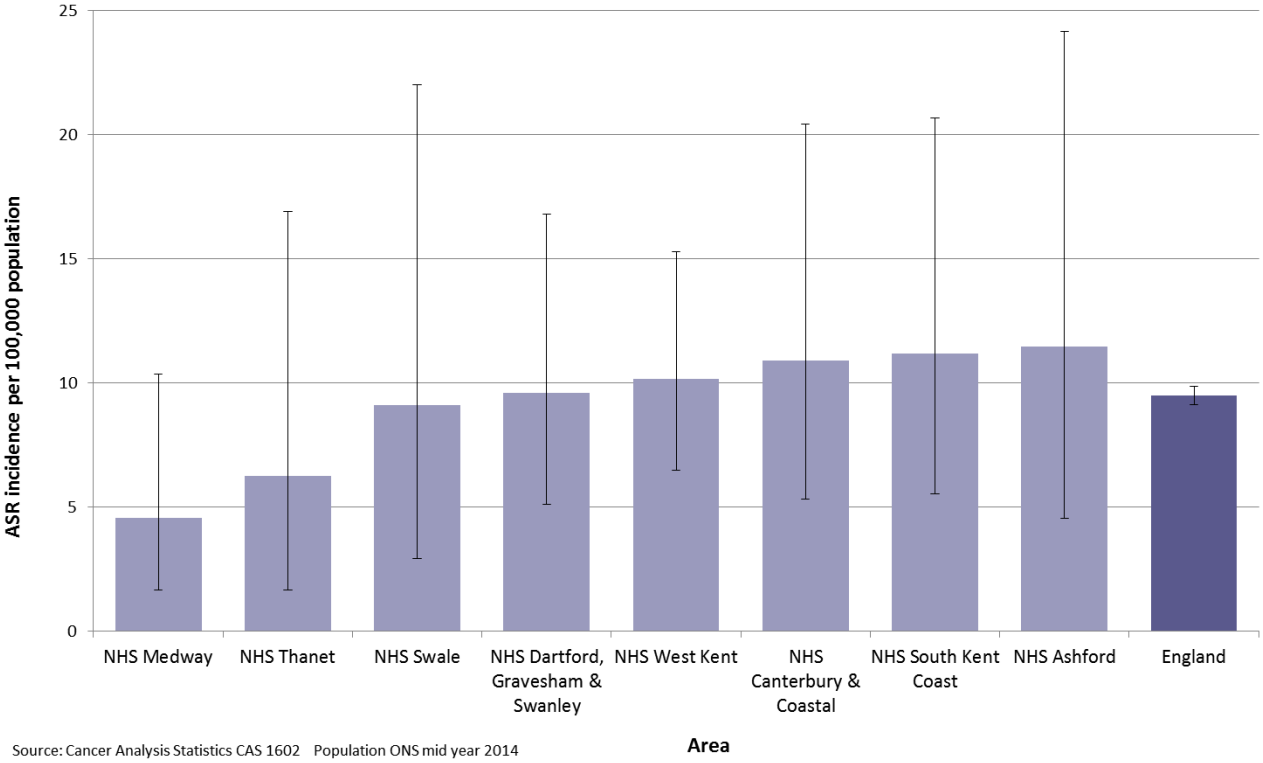



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Cervical cancer

There was some non-statistically significant variation in the rate of incidence of cervical cancer by CCG within Kent and Medway Cancer Alliance, from 5 cases per 100,000 population in Medway CCG to 11 per 100,000 in Ashford CCG (Figure 12). No CCGs in Kent and Medway had incidence rates that were statistically different from England (9 per 100,000).

**Figure 12 – Age-standardised incidence of cervical cancer by CCG in Kent and Medway Cancer Alliance in 2014, females, all ages**



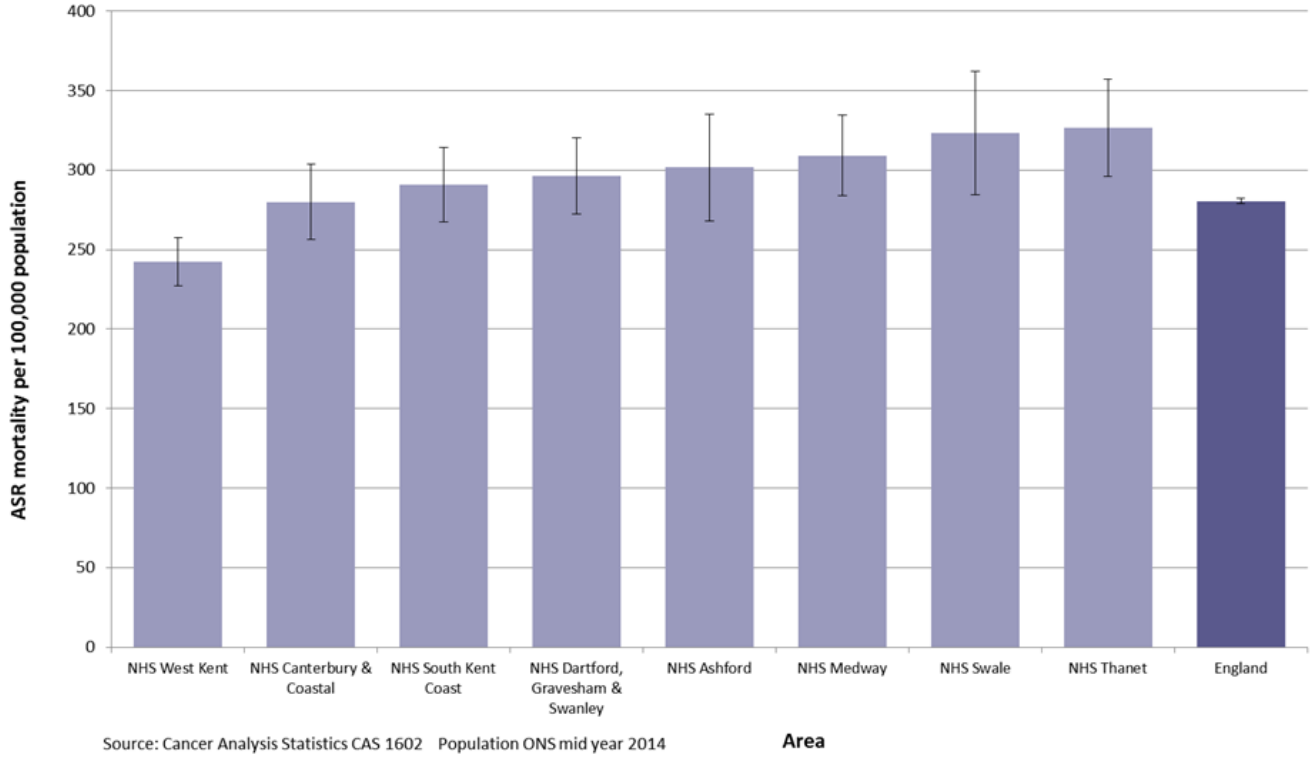

Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## 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[4] of 281 per 100,000. 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 significantly across the CCGs within Kent and Medway Cancer Alliance, from 242 deaths per 100,000 population in West Kent CCG to 327 deaths per 100,000 population in Thanet CCG (Figure 13). The mortality rate in West Kent CCG was statistically significantly lower than England, whereas the mortality rates in Medway, Swale and Thanet CCGs were statistically significantly higher than England (281 deaths per 100,000 population). Mortality rates by CCG across Kent and Medway spanned all of the national quintiles, with Swale and Thanet appearing in the highest quintile (Figure 14).

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



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

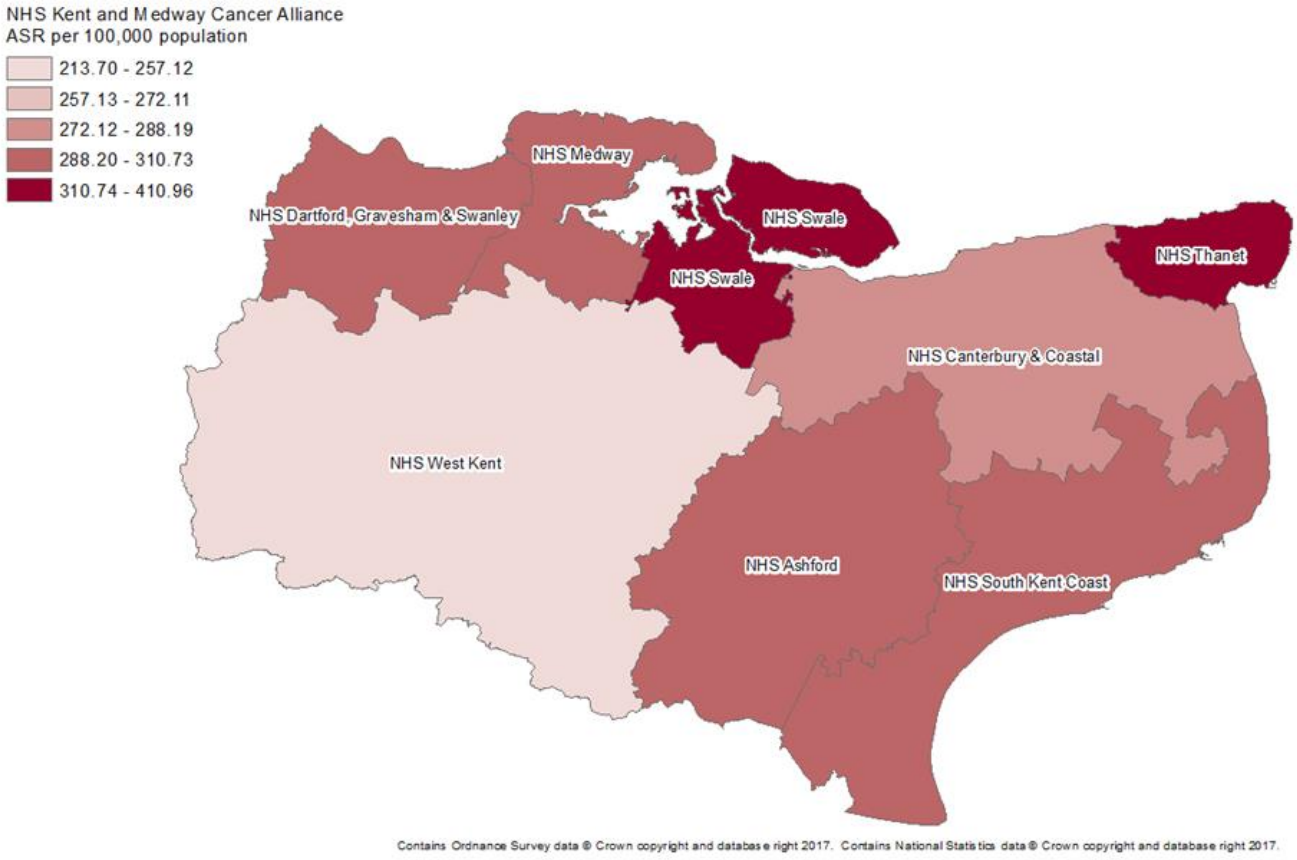
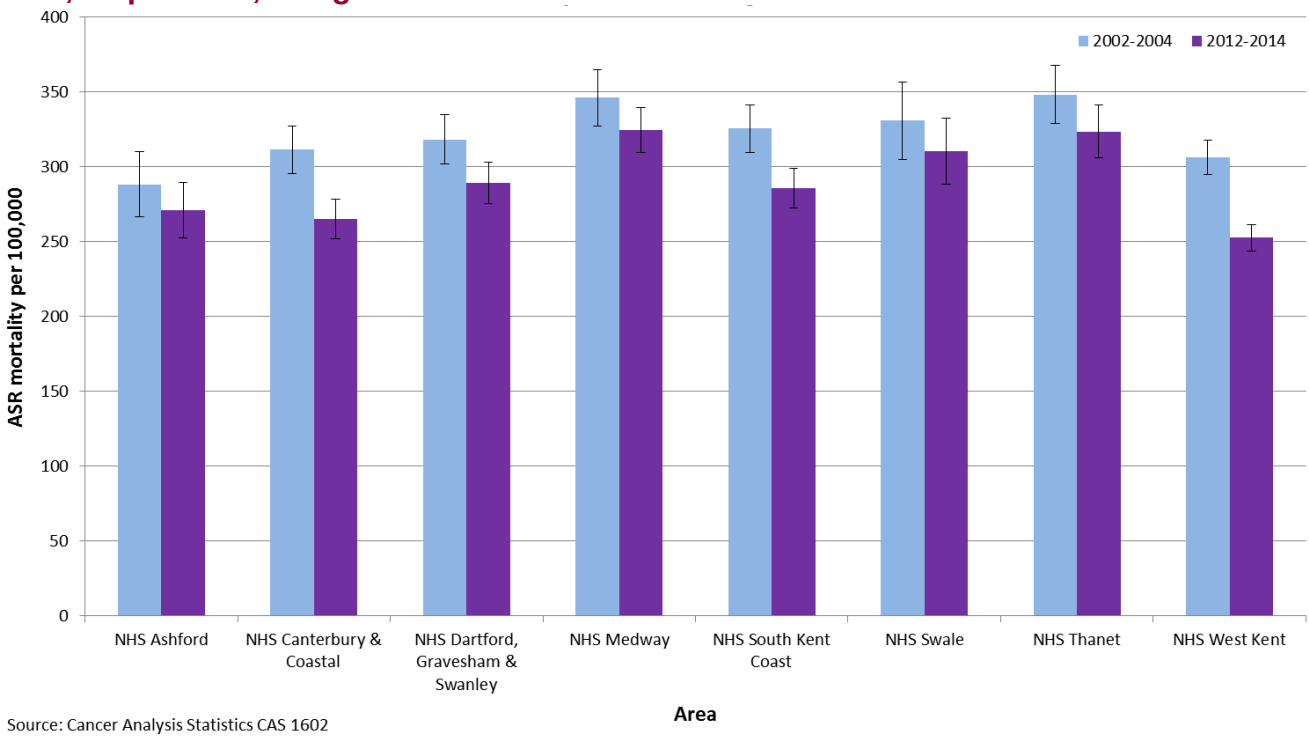


Figure 15 shows the change in all cancer mortality across the CCGs in the Kent and Medway Cancer Alliance comparing the age-standardised rates (three-year rolling averages) for 2002-2004 and 2012-2014. There have been decreases in the cancer mortality rates in each CCG[4], but these were only statistically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

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




Source: Cancer Analysis Statistics CAS 1602

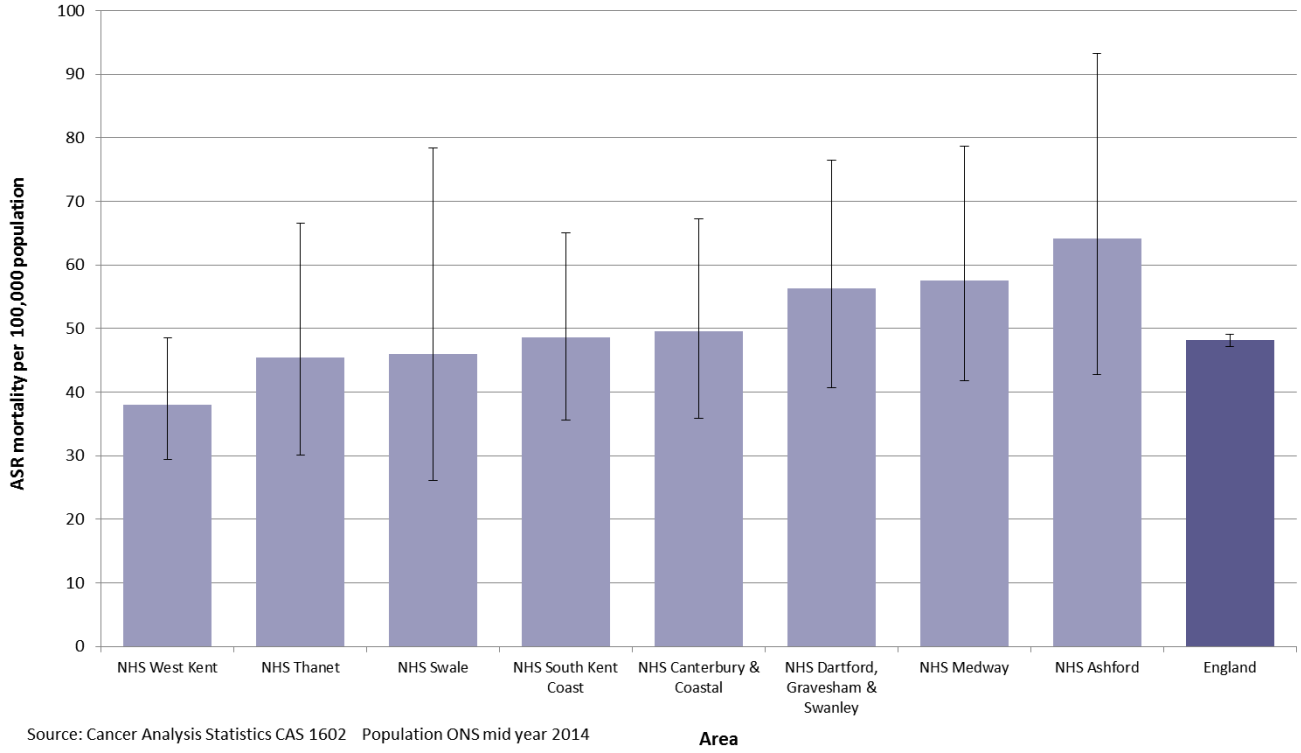
## Variations in mortality from selected cancers

Figure 16 to Figure 22 illustrate variations in mortality of some common cancers between CCGs in the Kent and Medway Cancer Alliance. The Appendix contains 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 Kent and Medway Cancer Alliance, from 38 deaths per 100,000 population in West Kent CCG to 64 deaths per 100,000 population in Ashford CCG (Figure 16). Although there was some variation across the alliance, no CCGs in Kent and Medway had mortality rates for prostate cancer that were statistically different from England (48 deaths per 100,000 population).

**Figure 16 – Age-standardised mortality rate of prostate cancer by CCG in Kent and Medway Cancer Alliance in 2014, males, all ages**

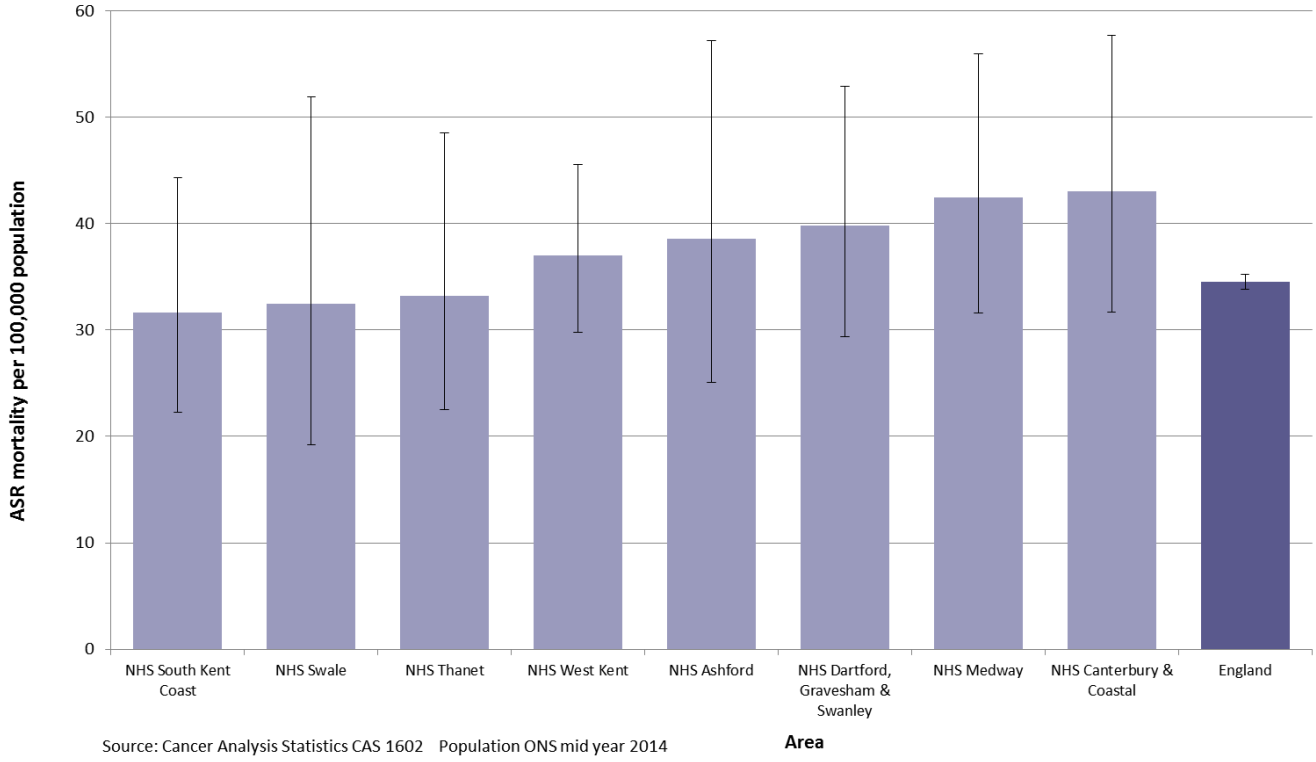



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Female Breast Cancer

The mortality rate for female breast cancer in 2014 showed some non-statistically significant variation across the CCGs within Kent and Medway Cancer Alliance, from 32 deaths per 100,000 population in South Kent Coast CCG to 43 deaths per 100,000 population in Canterbury and Coastal CCG (Figure 17). Although there was some variation across the alliance, no CCGs in Kent and Medway had mortality rates for female breast cancer that were statistically different from England (34 deaths per 100,000 population).

**Figure 17 – Age-standardised mortality rate of breast cancer by CCG in Kent and Medway Cancer Alliance in 2014, females, all ages**

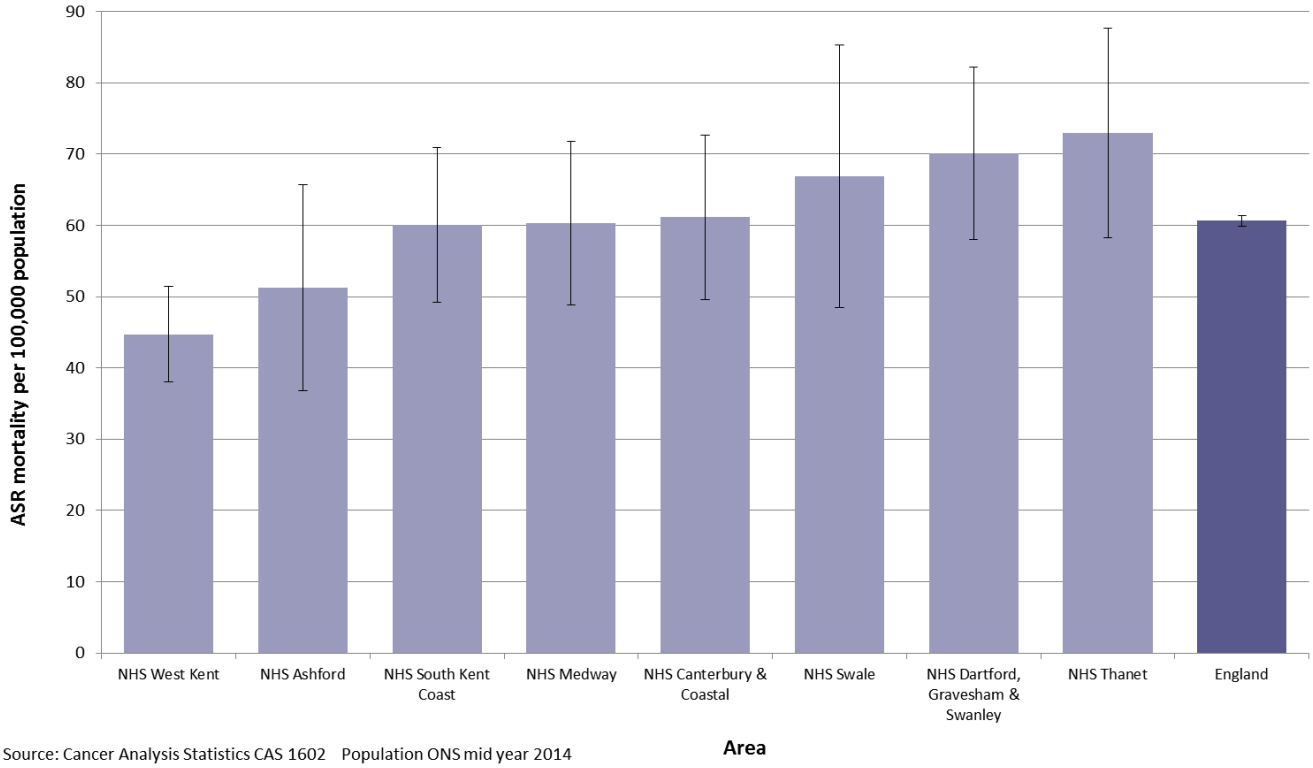



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Lung cancer

The mortality rate for trachea, bronchus and lung cancers in 2014 varied significantly across the CCGs within Kent and Medway Cancer Alliance, from 45 deaths per 100,000 population in West Kent CCG to 73 deaths per 100,000 population in Thanet CCG (Figure 18). The mortality rate for West Kent CCG was 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 Kent and Medway Cancer Alliance in 2014, all persons, all ages**

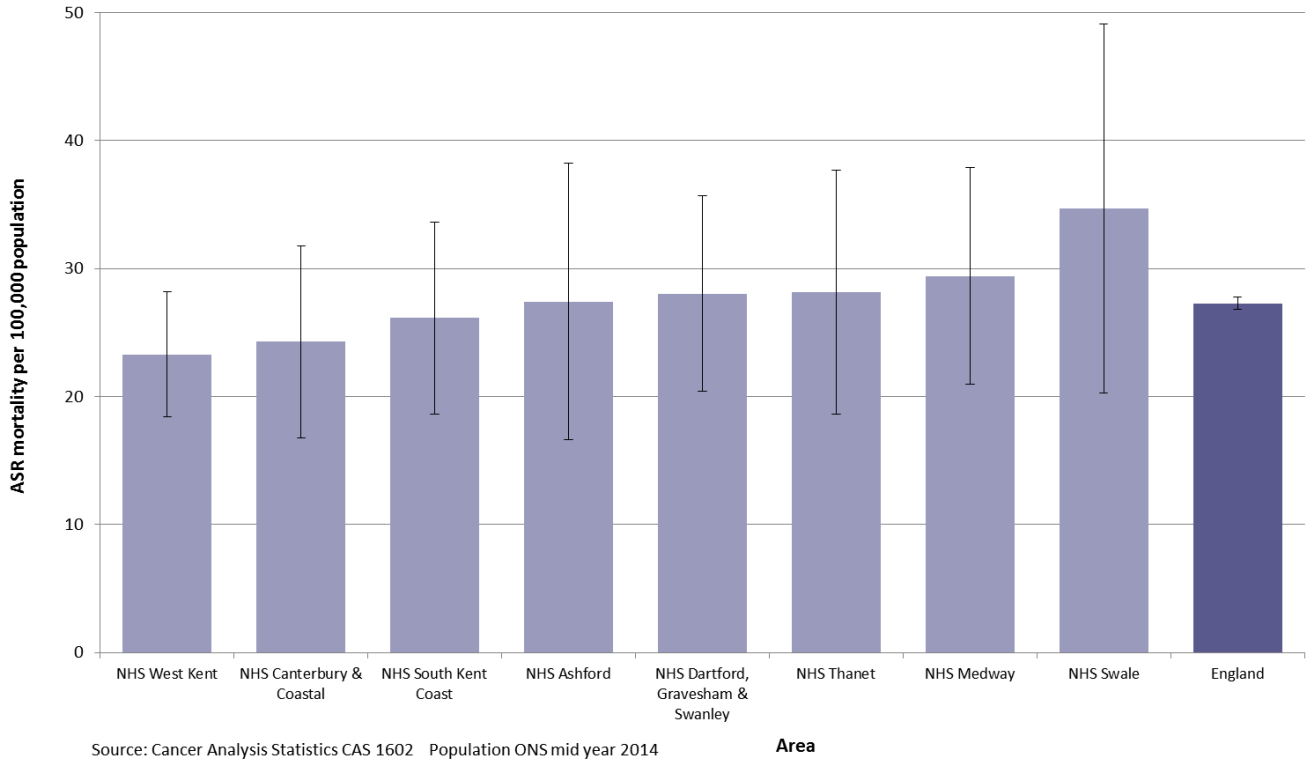



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Colorectal cancer

The mortality rate for colorectal cancer in 2014 showed some non-statistically significant variation across the CCGs within Kent and Medway Cancer Alliance, from 23 deaths per 100,000 population in West Kent CCG to 35 deaths per 100,000 population in Swale CCG (Figure 19). Although there was some variation across the alliance, no CCGs in Kent and Medway had mortality rates for colorectal cancer that were statistically different from England (27 deaths per 100,000 population).

**Figure 19 – Age-standardised mortality rate of colorectal cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages**

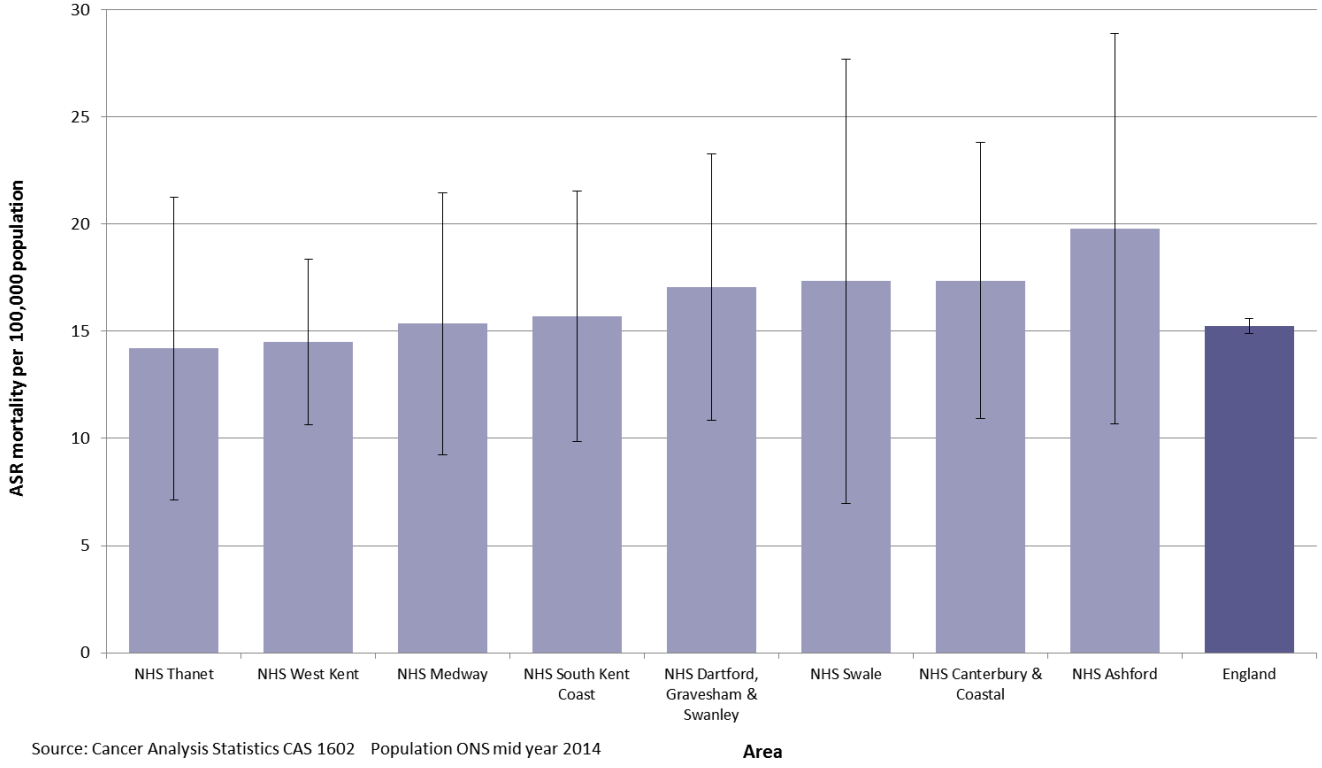



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Pancreatic cancer

The mortality rate for pancreatic cancer in 2014 showed some non-statistically significant variation across the CCGs within Kent and Medway Cancer Alliance, from 14 deaths per 100,000 population in Thanet CCG to 20 deaths per 100,000 population in Ashford CCG (Figure 20). Although there was some variation across the alliance, no CCGs in Kent and Medway had mortality rates for pancreatic cancer that were statistically different from England (15 deaths per 100,000 population).

**Figure 20 – Age-standardised mortality rate of pancreatic cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages**

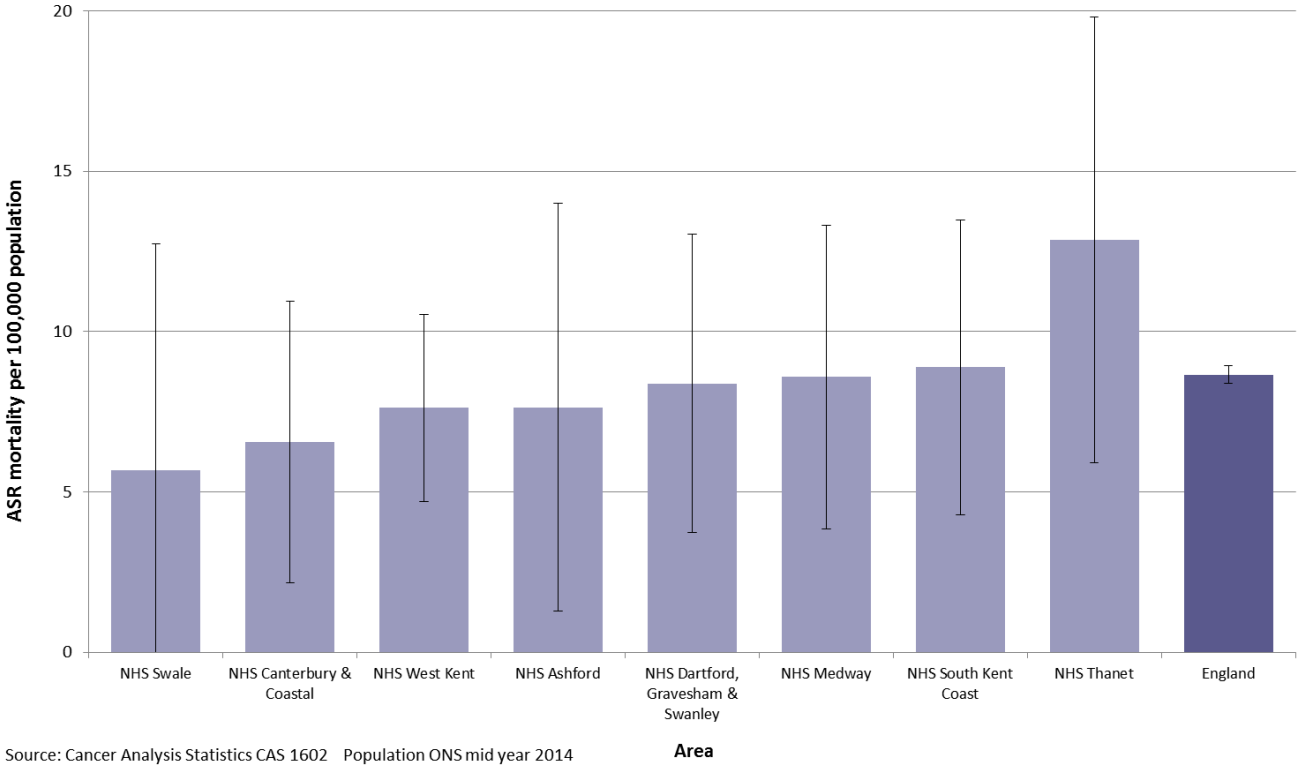



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Liver cancer

The mortality rate for liver cancer in 2014 showed some non-statistically significant variation across the CCGs within Kent and Medway Cancer Alliance, from 6 deaths per 100,000 population in Swale CCG to 13 deaths per 100,000 population in Thanet CCG (Figure 21). Although there was some variation across the alliance, no CCGs in Kent and Medway had mortality rates for liver cancer that were statistically different from England (9 deaths per 100,000 population).

**Figure 21 – Age-standardised mortality rate of liver cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages**

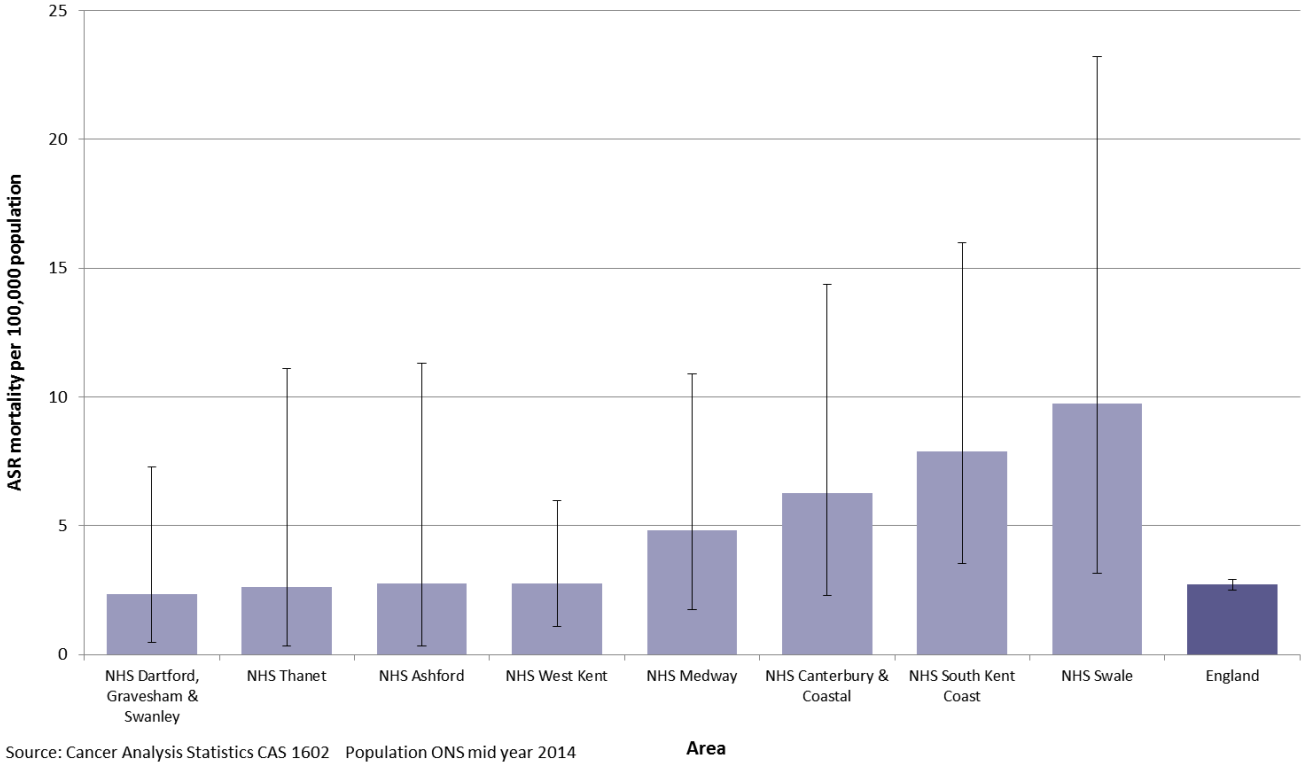



Source: Cancer Analysis Statistics CAS 1602 Population ONS mid year 2014

## Cervical cancer

The mortality rate for cervical cancer in 2014 showed some non-statistically significant variation across the CCGs within Kent and Medway Cancer Alliance, from 2 deaths per 100,000 population in Dartford, Gravesham and Swanley CCG to 10 deaths per 100,000 population in Swale CCG (Figure 22). The mortality rates for South Kent Coast and Swale CCGs were statistically significantly higher than England (3 deaths per 100,000 population).

**Figure 22 – Age-standardised mortality rate of cervical cancer by CCG in Kent and Medway 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[a]. 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

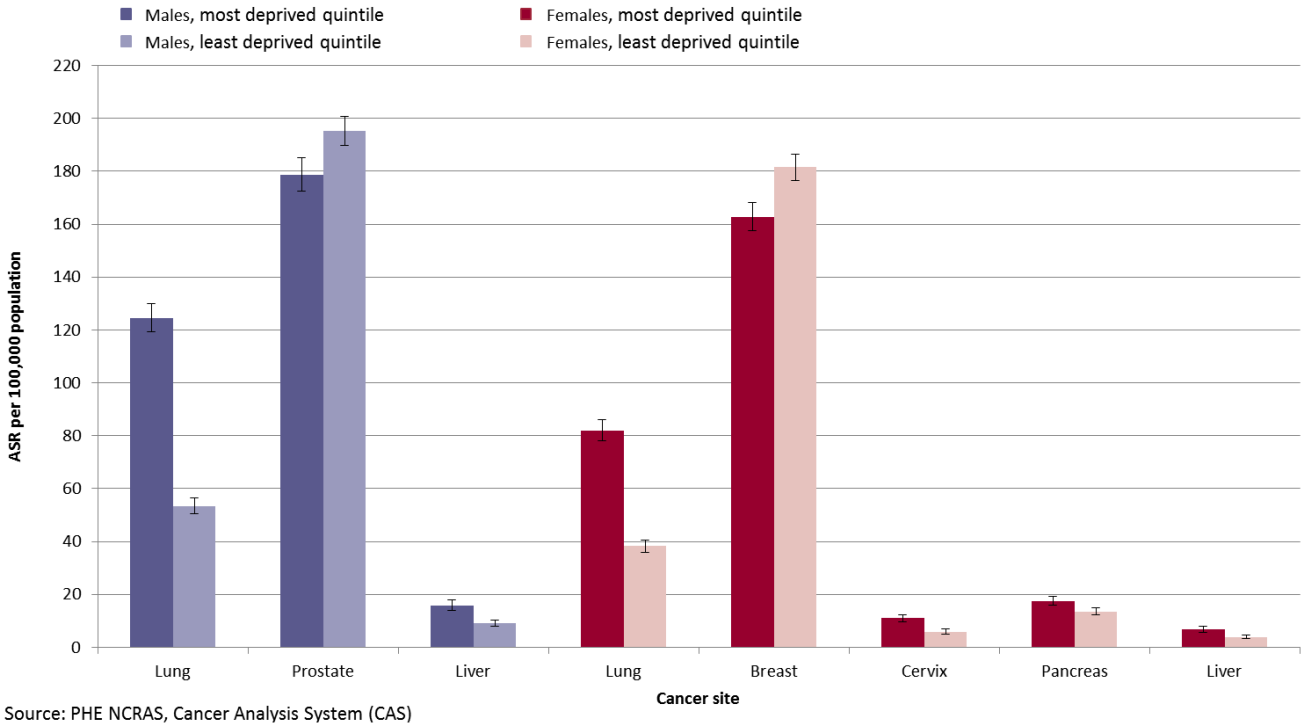
- incidence rates of prostate and breast cancers were statistically significantly higher in the **least deprived** quintile in the South East compared to the most deprived quintile

- 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

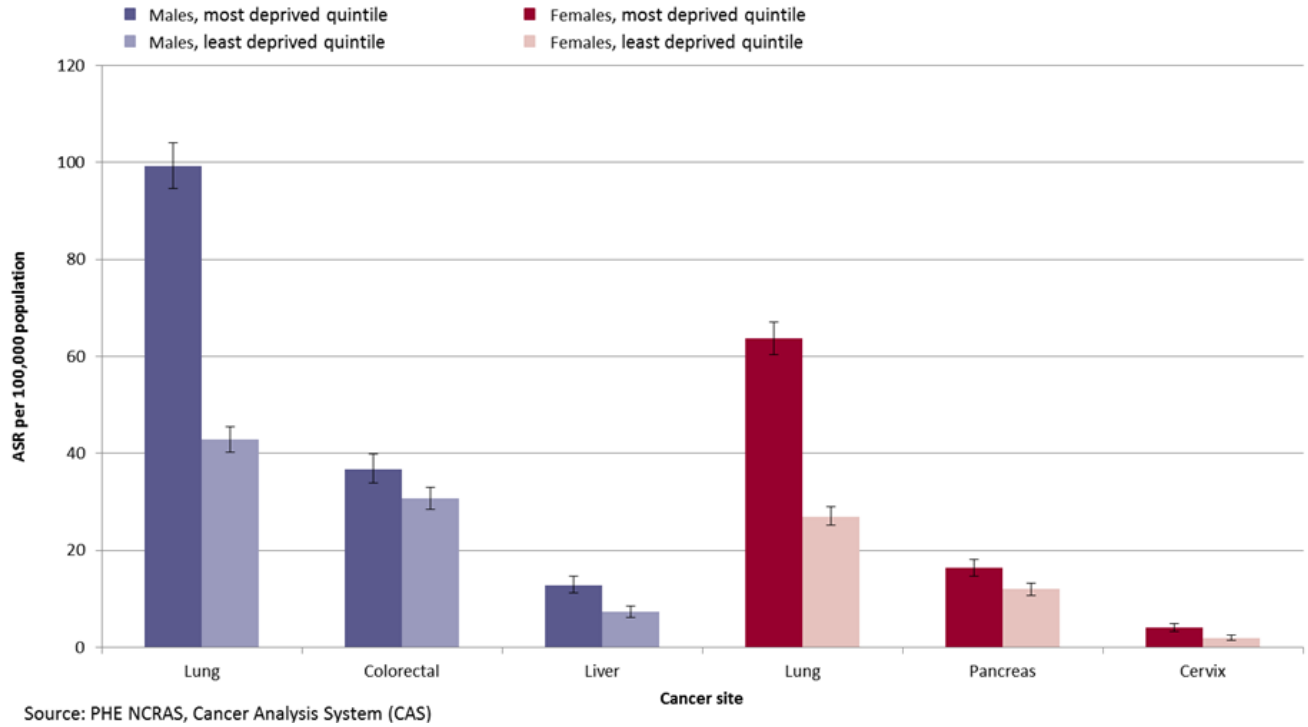
[a] Indices of multiple deprivation 2015, within region quintiles

## 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 Kent and Medway Cancer Alliance of some important lifestyle risk factors including smoking[8], drinking alcohol at an “increasing and higher risk” level[9], excess weight[10], eating fewer than five portions of fruit and vegetables a day (poor diet)[11] and physical inactivity[12]. These risk factors are significantly associated with an increased risk of cancer and other long term conditions.

**Figure 25 – Prevalence of risk factors in Kent and Medway 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 Table 2)[13]. In 2014, 19% of adults were current smokers in the Kent and Medway Cancer Alliance[8]. 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[14], yet awareness of this link among the general population has been found to be poor[15]. It has been classified as a Group 1 carcinogen since 1988[16]. 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)[17]. 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[9]. Figure 27 shows the age-standardised incidence of alcohol related cancers, and Figure 28 shows alcohol-related hospital admissions by local authority across Kent and Medway.

It is thought that more than one in twenty cancers in the UK are linked to excess weight (being overweight or obese)[18]. 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[18]. In 2012-2014, in Kent and Medway 65% of adults were classed as having excess weight[10], similar to the England average (also 65%). Figure 29 shows the prevalence of excess weight among adults for local authorities in Kent and Medway.

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[19]. In 2014, 44% of the population of the Kent and Medway Cancer Alliance did not eat the recommended five portions of fruit and vegetables a day[11], 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 Kent and Medway 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[18]. In 2014 in Kent and Medway Cancer Alliance, 28% of adults were classed as inactive[12], 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.

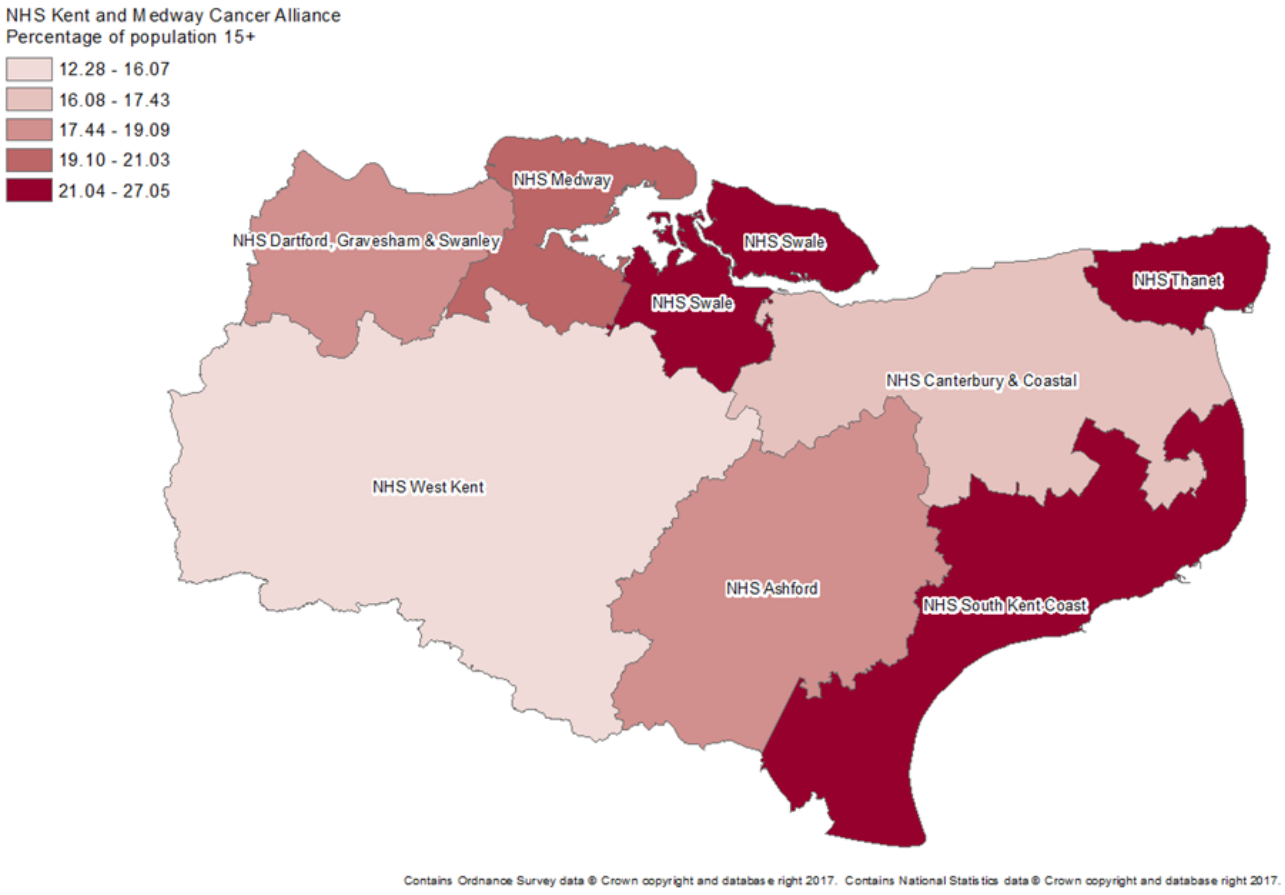
The risk factors for vascular disease are similar to the risk factors for many cancers. If the health checks programme can encourage people to quit smoking, reduce alcohol consumption and maintain a healthy weight through exercise and a healthy diet, it could help reduce cancer incidence.

Between 2013/14 and 2016/17, 32% of the eligible population had received a health check in the South East, statistically significantly lower than the national average of 36%. In Kent and Medway local authorities, approximately 35% of the eligible population had received an NHS Health Check during this period, which was also statistically significantly lower than England.[20]

## Smoking

In 2014, the overall smoking prevalence reported in QOF[8] in the Kent and Medway Cancer Alliance was 19% (persons aged 15+). QOF reported smoking prevalence varied between CCGs in the cancer alliance (Figure 26) with South Kent Coast CCG, Swale CCG and Thanet CCG being in the highest quintile of CCGs in England for smoking prevalence. West Kent CCG was in the lowest 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.

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



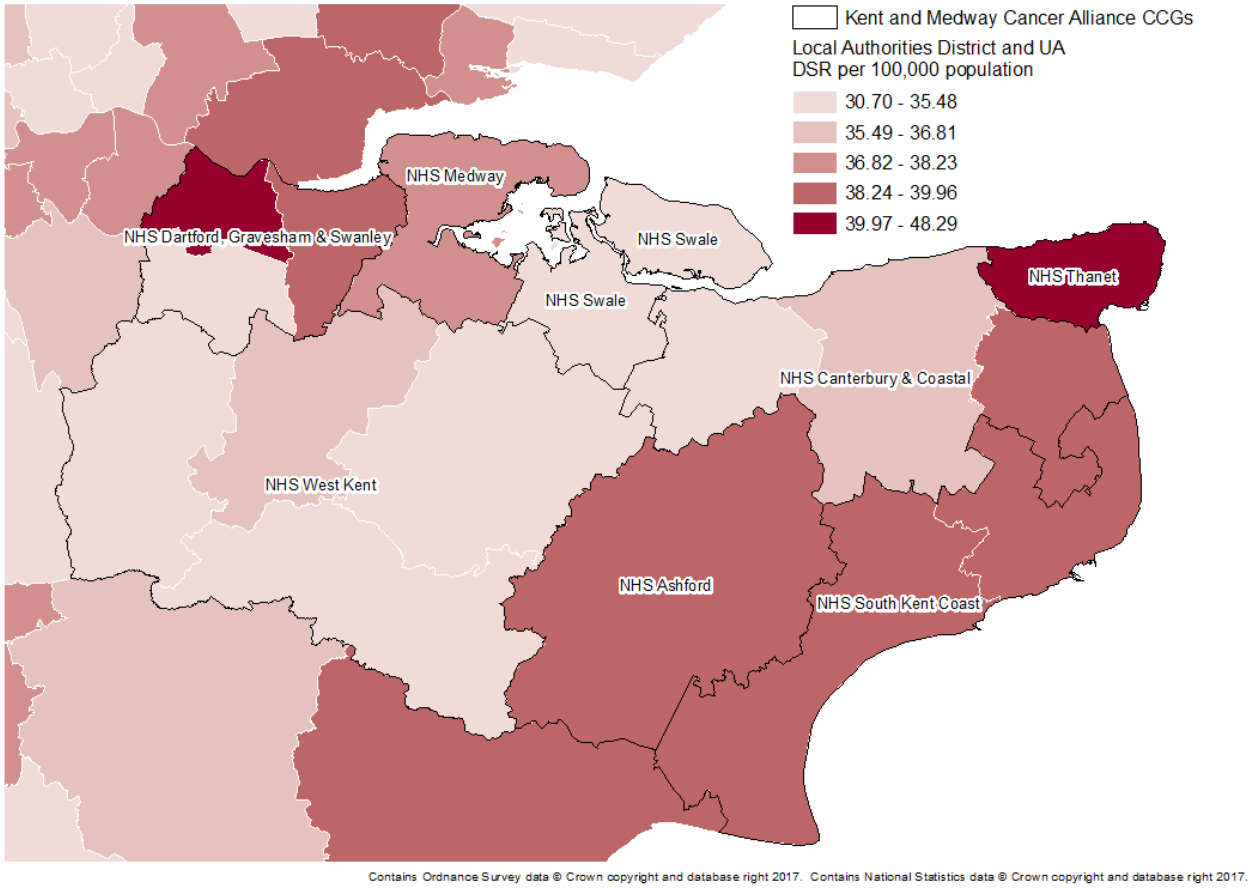

Looking at data from the 2016 Annual Population Survey, the smoking prevalence in persons aged 18+ for the South East was 14.6%, which was statistically significantly lower than the England average (15.5%). Medway, with an adult smoking prevalence of 19%, was the only local authority in Kent and Medway Cancer alliance with a smoking prevalence statistically significantly higher than the England or South East averages[21]. However its smoking prevalence had fallen from 26% in 2012.

## Alcohol

Over 2013-15 there were estimated to be almost 9,500 new cases[a] of alcohol-related cancers across the South East[22]. 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 Kent and Medway (as the data is not currently available for CCGs). No districts in Kent and Medway had incidence rates statistically significantly different from England (or from each other), but Thanet and Dartford had incidence rates of approximately 40 per 100,000 (in the highest national quintile). Maidstone, Sevenoaks and Swale had incidence rates of approximately 35 per 100,000 and Tunbridge Wells had a rate of 34 per 100,000. These four districts were in the lowest national quintile.

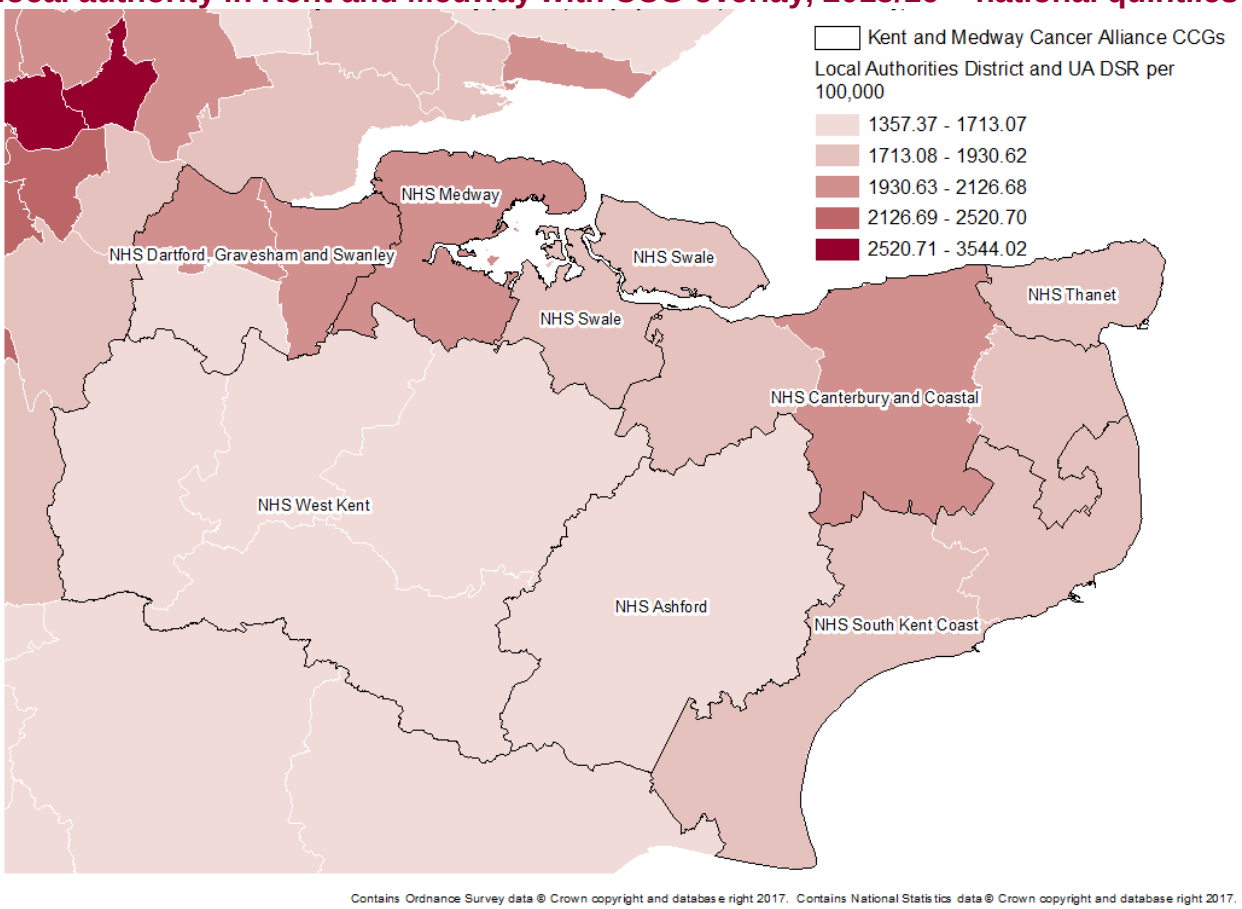
**Figure 27 – Incidence of alcohol-related cancers per 100,000 population (directly standardised rates) by local authority in Kent and Medway, 2013-15 with CCG overlay – national quintiles**




[a] 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[22]. 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). All districts in Kent and Medway had statistically significantly lower admission rates than the England average. However, there was significant variation between them, with the highest rate in Gravesham (2,085 per 100,000) and the lowest rate in Tunbridge Wells (1,357 per 100,000). No local authorities in Kent and Medway were in the highest national quintile for alcohol-related hospital admissions (Figure 28).

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

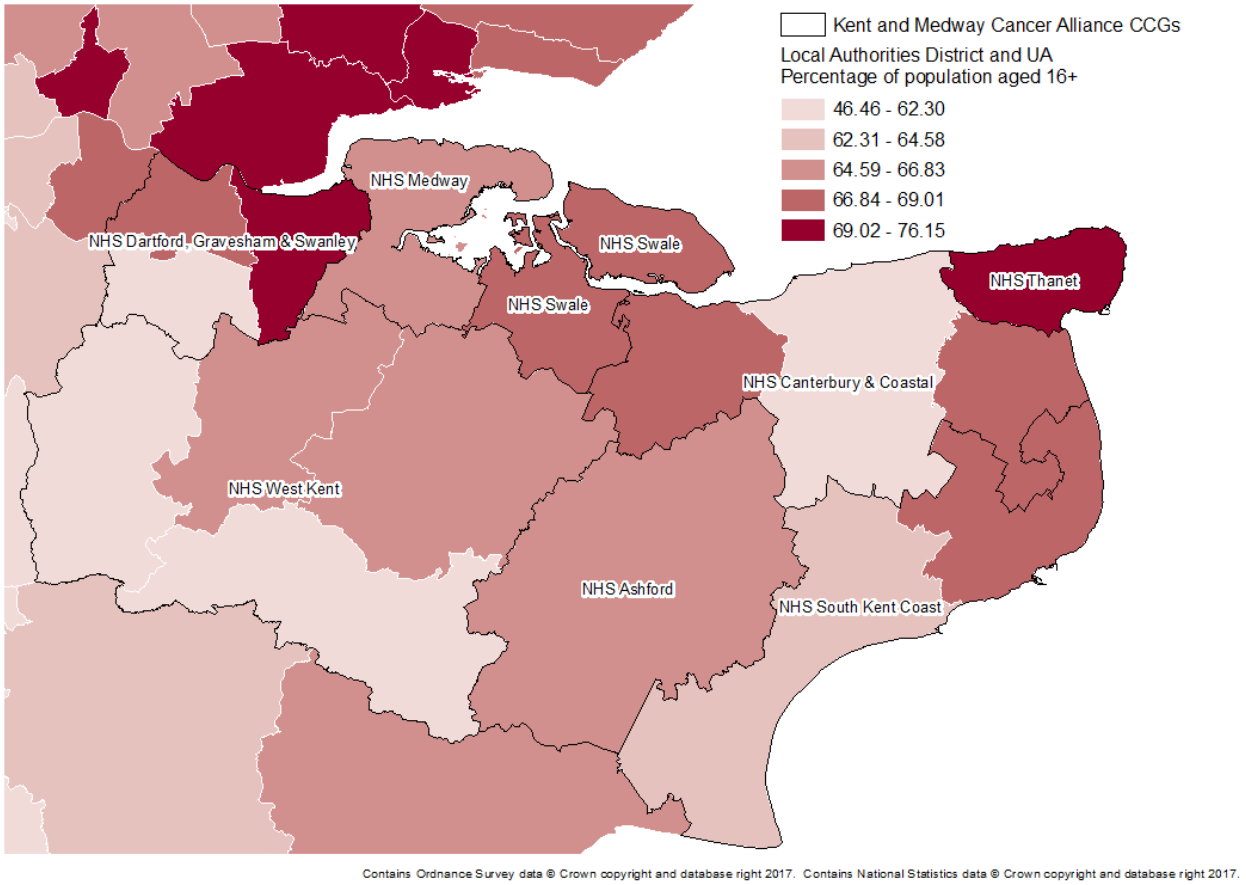



[a] Broad Definition - Admissions to hospital where the primary diagnosis or any of the secondary diagnoses are an alcohol-attributable code

## Excess weight

In 2012-2014, 65% of adults were classed as having excess weight in Kent and Medway[10]. This is statistically significantly higher than the average for the South East (63%), and several local authorities in Kent and Medway had statistically higher proportions of adults with excess weight than England (Thanet, Gravesham, Swale, Dartford and Dover). Figure 29 shows that Thanet and Gravesham were in the highest national quintile with 71% and 70% of their populations having excess weight. Sevenoaks had the lowest percentage of adults with excess weight in Kent and Medway (58%)[20].

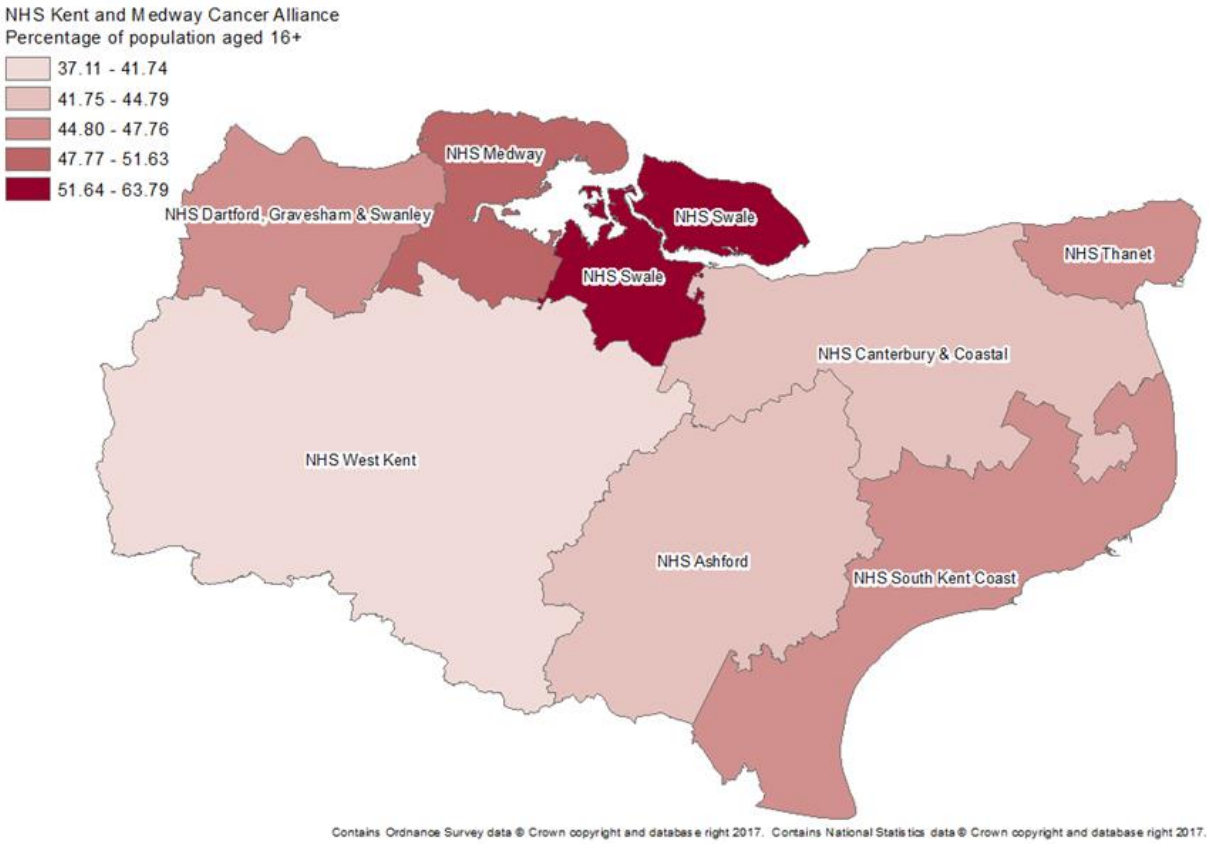
**Figure 29 – Percentage of the population (aged 16+) with excess weight by local authority in Kent and Medway, 2013-15 with CCG overlay – national quintiles**



## Poor diet

In 2014, 44% of adults in the Kent and Medway Cancer Alliance reported they had NOT eaten the recommended five portions of fruit and vegetables on a usual day[11]. This is better than the England average (46.5%). CCG-level data from 2014 (Figure 30) shows that Swale CCG had the lowest consumption of fruit and vegetables (worst national quintile) and West Kent CCG had the highest consumption (best national quintile). In Kent and Medway Cancer Alliance in 2015, Medway and Swale were the only local authorities with statistically significantly lower consumption of fruit and vegetables than England[20].

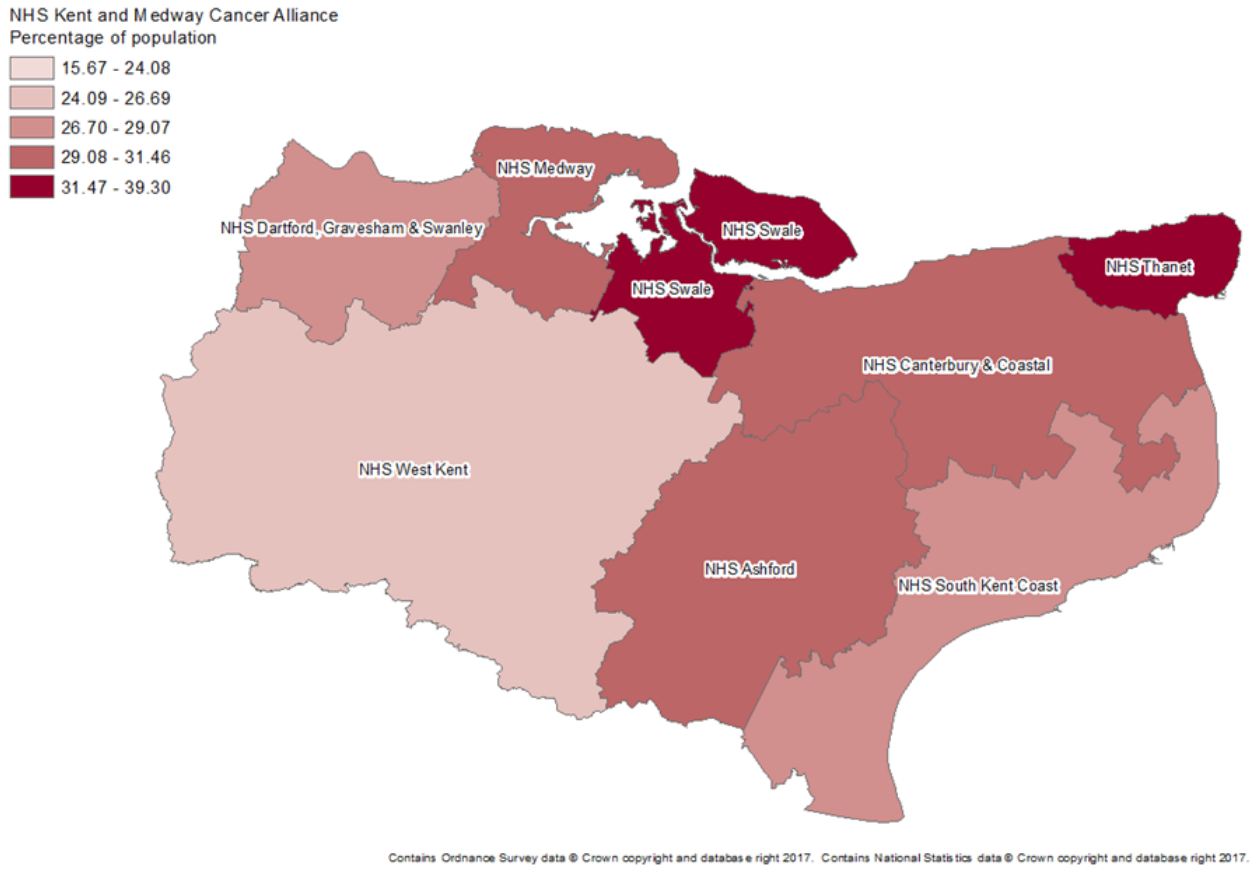
**Figure 30 – Percentage of the adult population (aged 16+) NOT achieving the recommended "5-a-day" consumption of fruit and vegetables, by CCG in Kent and Medway Cancer Alliance in 2014 – national quintiles**



## Physical inactivity

In 2014, 28% of adults were classed as inactive in Kent and Medway Cancer Alliance[12]. This was similar to the England average (28%). Levels of physical inactivity varied between the CCGs (Figure 31). Swale CCG and Thanet CCG had the highest proportions of physically inactive adults and were in the highest quintile nationally. West Kent CCG had the lowest proportion of physically inactive adults in Kent and Medway Cancer Alliance and were in the second-lowest national quintile.

**Figure 31 – Percentage of physically inactive adults (aged 16+), by CCG in Kent and Medway Cancer Alliance in 2014 – national quintiles**



# Screening

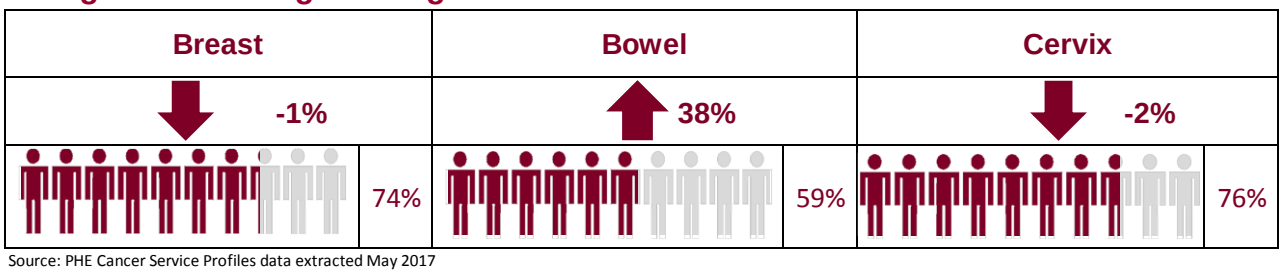
## Screening coverage and uptake

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 Kent and Medway Cancer Alliance in 2015/16 (the latest available CCG level data), 74% of eligible women had received breast cancer screening in the last three years (higher than the England average of 73%), 59% 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 76% 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)[23], which was also higher than the England average of 73% (Figure 32).

In the Kent and Medway Cancer Alliance, coverage of breast cancer screening decreased 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 38% 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 2% between 2009/10 and 2014/15. This is in line with national trends.

**Figure 32 – Screening coverage in Kent and Medway Cancer Alliance in 2015/16 and change in screening coverage 2009/10 to 2015/16**



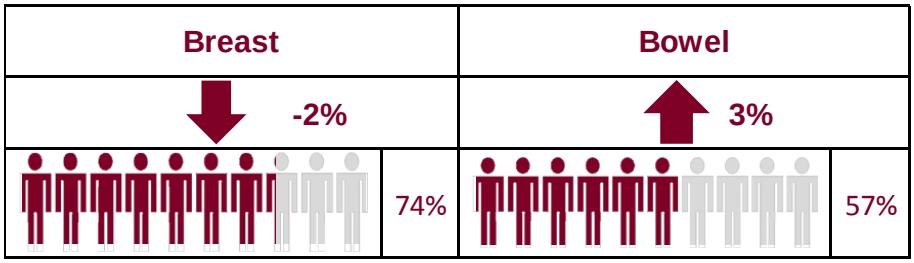

Source: PHE Cancer Service Profiles data extracted May 2017

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)

[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

In the Kent and Medway Cancer Alliance, uptake of breast cancer screening was 74% in 2015/16, a fall of 2% since 2009/10. The uptake of bowel cancer screening in 2015/16 was 57%, a rise of 3% since 2009/10 (Figure 33).

**Figure 33 – Screening uptake in Kent and Medway Cancer Alliance in 2015/16 and change in screening uptake 2009/10 to 2015/16**



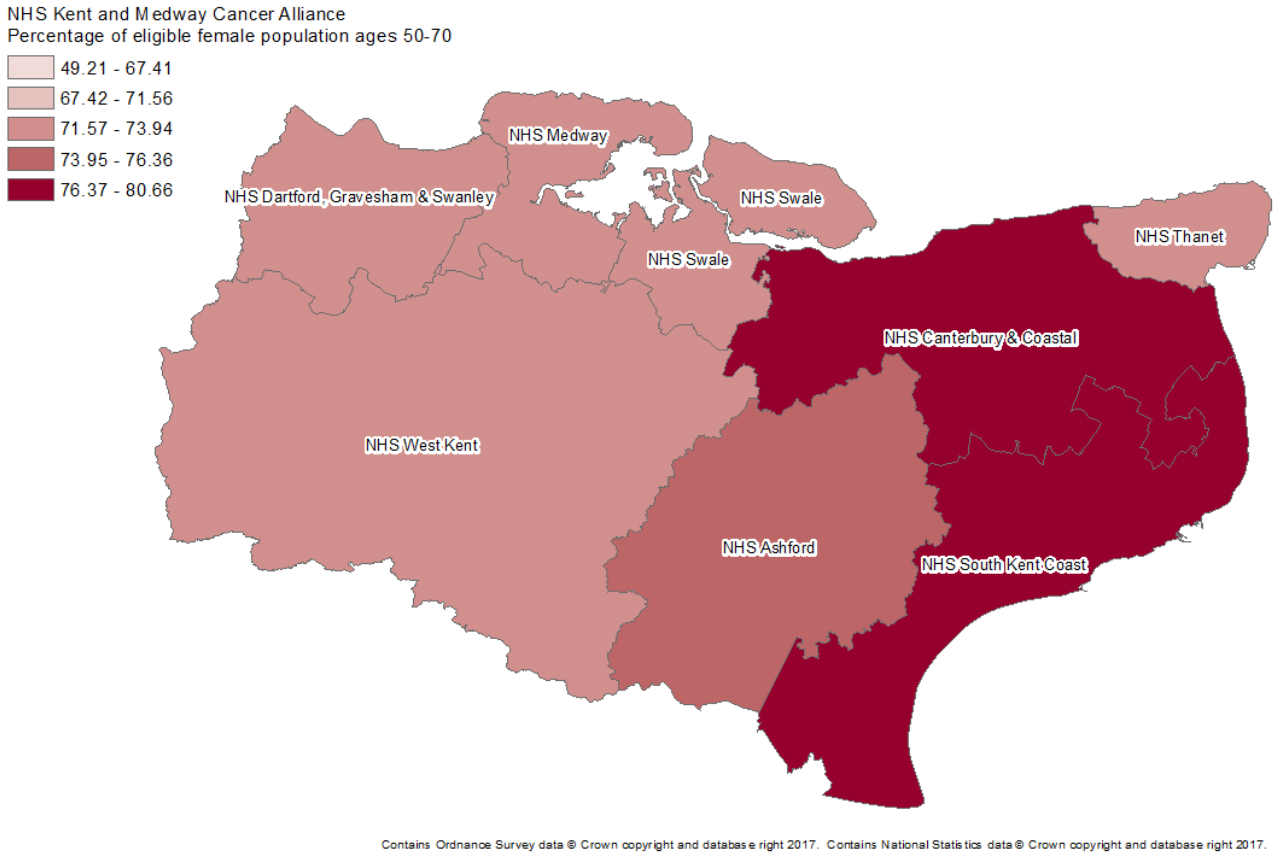

Source: PHE Cancer Service Profiles data extracted May 2017

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

## Breast cancer screening

Over 2015/16, screening coverage for breast cancer (females aged 50-70) was statistically significantly better than the England average (73%) for three CCGs in Kent and Medway: Canterbury and Coastal CCG (77%), South Kent Coast CCG (77%) and Ashford CCG (75%). The other CCGs were not statistically different from England[23]. Figure 34 shows how CCGs in Kent and Medway Cancer Alliance were distributed across the highest three national quintiles for breast cancer screening coverage.

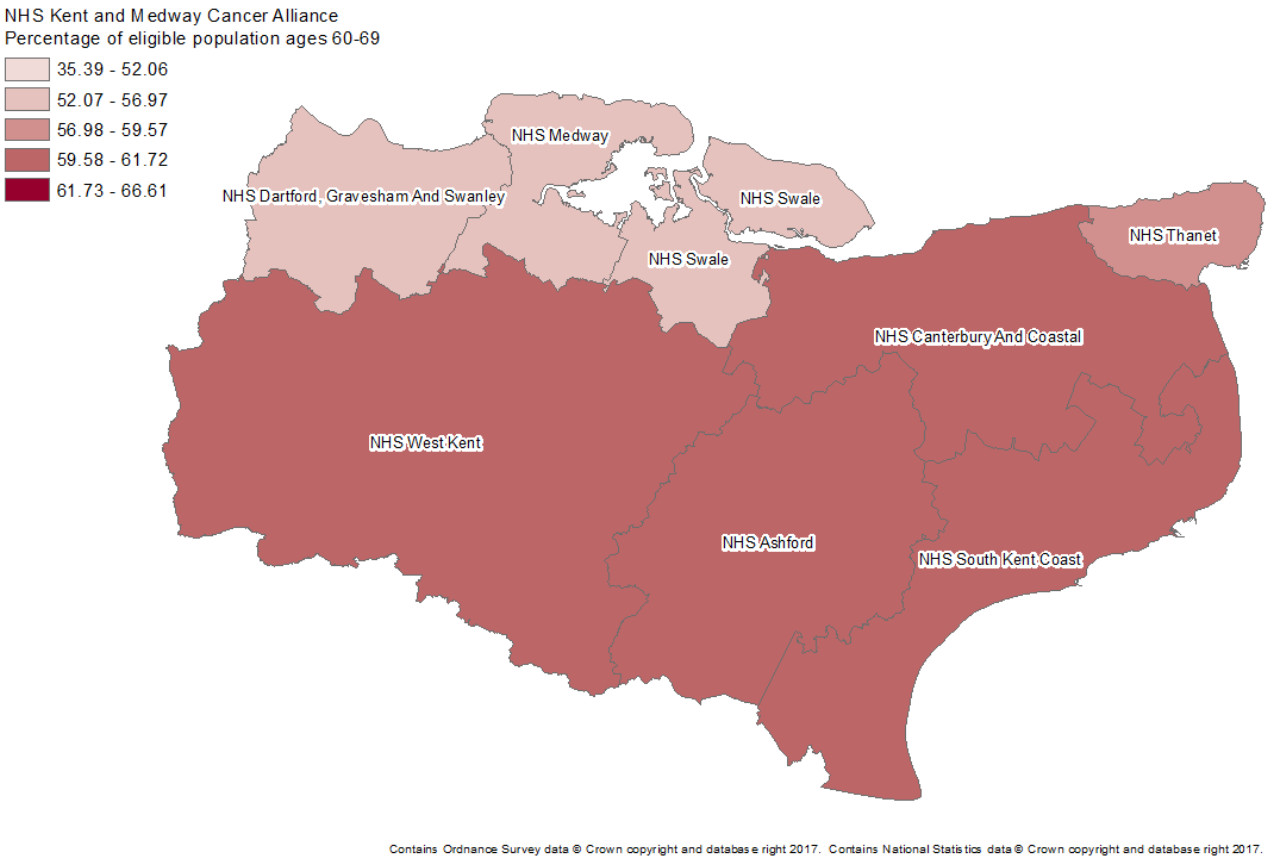
**Figure 34 – Percentage of eligible women (aged 50-70) screened for breast cancer in last 36 months (3 year coverage), by CCG in Kent and Medway Cancer Alliance, 2015/16 – national quintiles**



## Bowel cancer screening

Over 2015/16 screening coverage for bowel cancer (persons aged 60-69) was statistically significantly better than the England average (58%) for four CCGs: West Kent CCG (61%), Ashford CCG (61%), South Kent Coastal CCG (60%) and Canterbury & Coastal CCG (60%). Thanet CCG and Swale CCG were statistically similar to England. Medway CCG (57%) and Dartford, Gravesham & Swanley CCG (56%) were statistically lower than the England average[23]. Figure 35 shows how CCGs in Kent and Medway Cancer Alliance were distributed across the middle three national quintiles for bowel cancer screening coverage.

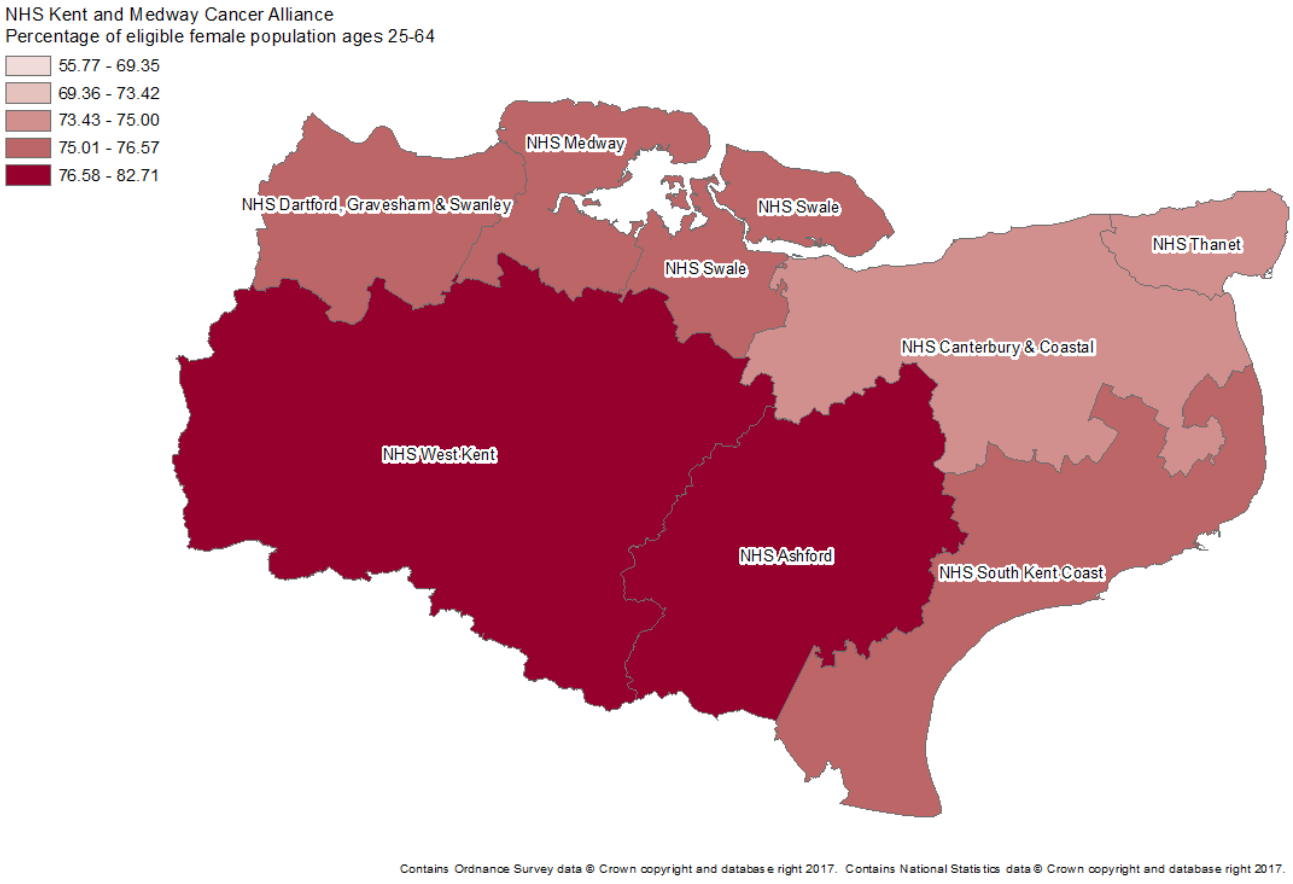
**Figure 35 – Percentage of eligible population (aged 60-69) screened for bowel cancer in last 30 months (2.5 year coverage), by CCG in Kent and Medway Cancer Alliance, 2015/16 – national quintiles**



## Cervical cancer screening

Over 2015/16 screening coverage for cervical cancer was statistically significantly higher in all CCGs of the Kent and Medway Cancer Alliance than the England average (73%)[23]. Figure 36 shows how CCGs in Kent and Medway Cancer Alliance were distributed across the highest three national quintiles for cervical cancer screening coverage. The highest coverage was in West Kent CCG (78%) and the lowest in Canterbury and Coastal CCG (74%).

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



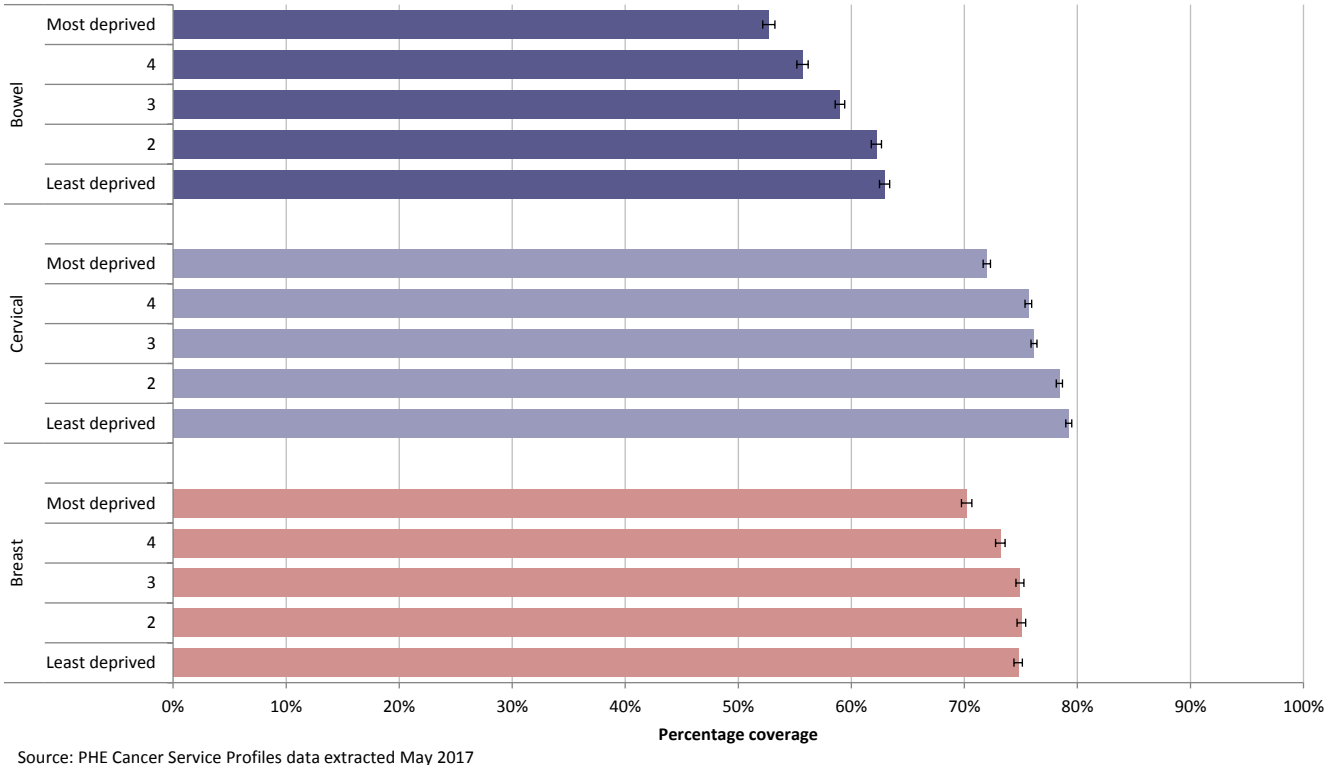
## Screening coverage by deprivation

Figure 37 shows screening coverage for the three cancer screening programmes by deprivation quintile of GP practices within the Kent and Medway Cancer Alliance[23]. 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 4.6% gap in coverage between those registered with GP practices in the most and least deprived areas. Bowel cancer showed the greatest difference with a 10.2% gap in coverage between the most and least deprived. The gap for cervical cancer screening was 7.3%.

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 Kent and Medway Cancer Alliance, 2015/16 – local quintiles**




Source: PHE Cancer Service Profiles data extracted May 2017

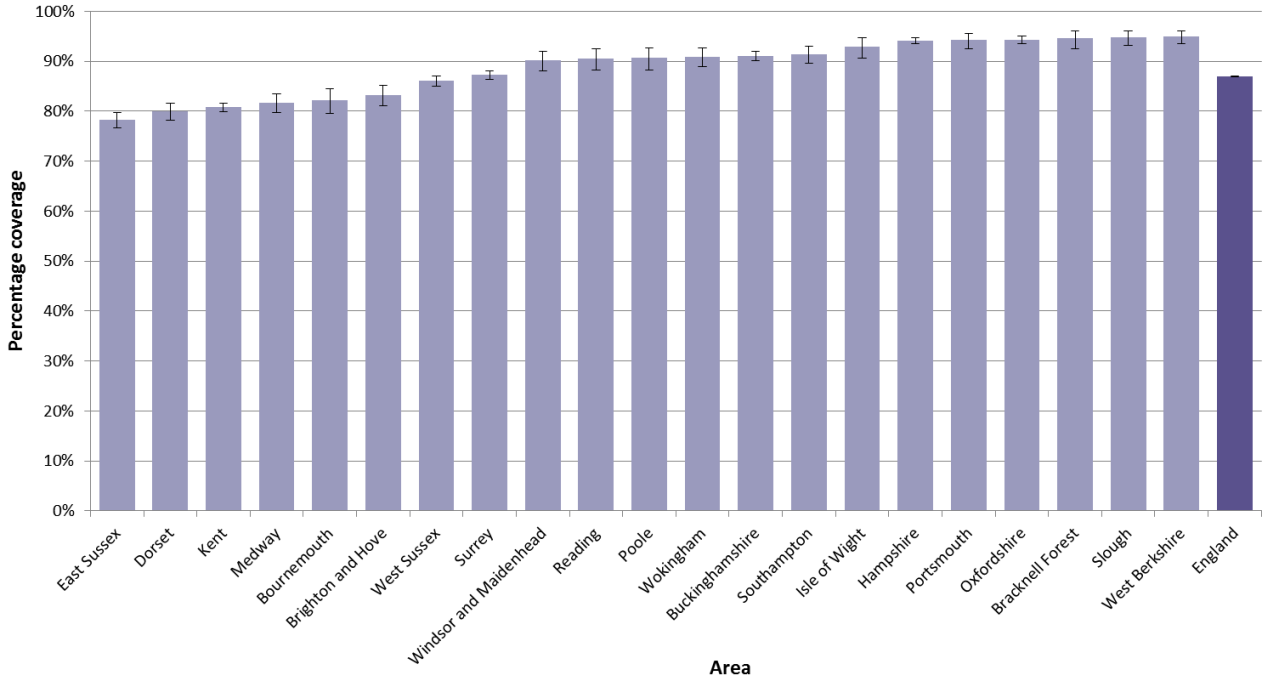
## Human Papilloma Virus (HPV) vaccination

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[24].

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 (Figure 38). 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 81% in the county of Kent and 82% in Medway, both statistically significantly lower than the averages for England and the South East.

**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 Kent and Medway Cancer Alliance by broad route of diagnosis for breast, colorectal, lung and prostate cancers (sourced from PHE NCRAS routes to diagnosis 2006-2013 workbooks)[25]. 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:

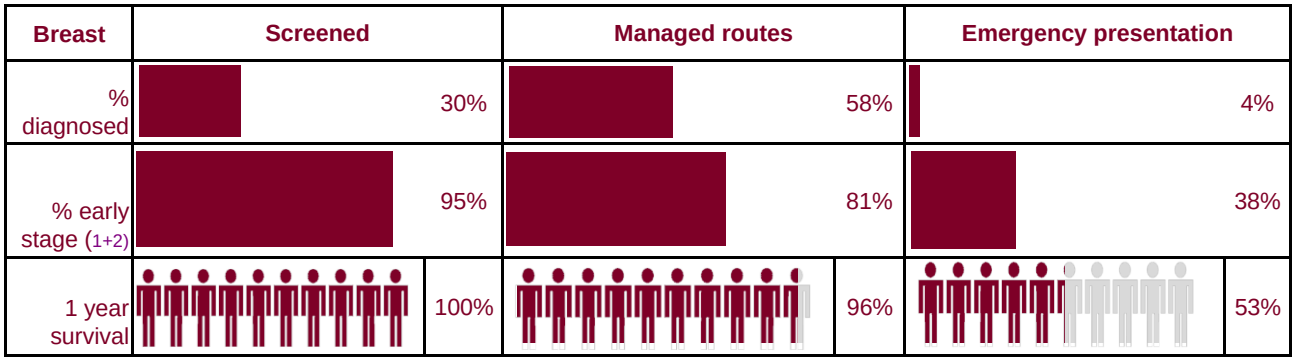
- the proportions of patients in England whose diseases were diagnosed at stage one or two in 2013
- the one-year survival in England (over 2006-2013)[25]

## Breast cancer

In 2006-2013 in Kent and Medway Cancer Alliance, 30% of breast cancer patients were diagnosed through screening, 58% through managed routes (two week wait or GP referral) and 4% 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%)[26] (Figure 39).

**Figure 39 – Proportion of diagnoses of breast cancer by route for CCGs in Kent and Medway 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**



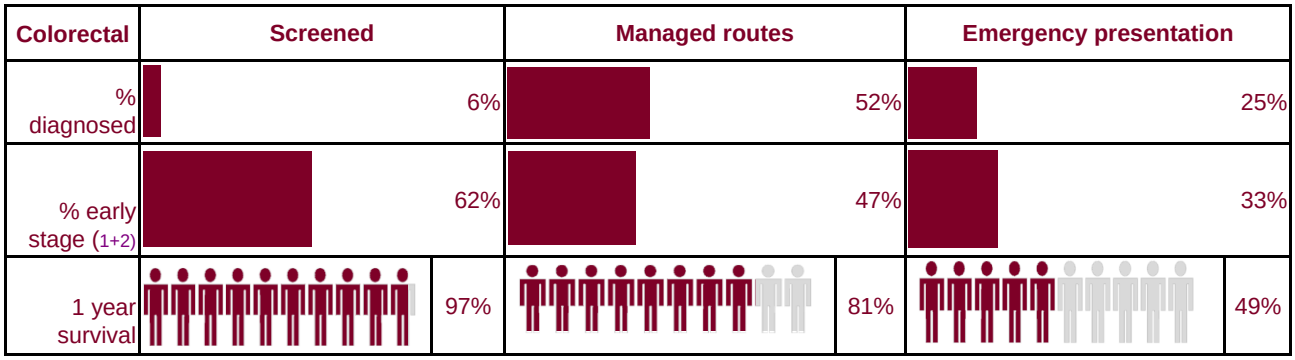

Source: PHE NCRAS Routes to Diagnosis by stage 2012-13 workbook and PHE NCRAS Route to Diagnosis 2006-2013 workbook

## Colorectal cancer

In 2006-2013 in Kent and Medway Cancer Alliance, 6% of colorectal cancer patients were diagnosed through screening, 52% through managed routes (two week wait or GP referral) and 25% 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%)[26] (Figure 40).

**Figure 40 – Proportion of diagnoses of colorectal cancer by route for CCGs in Kent and Medway 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

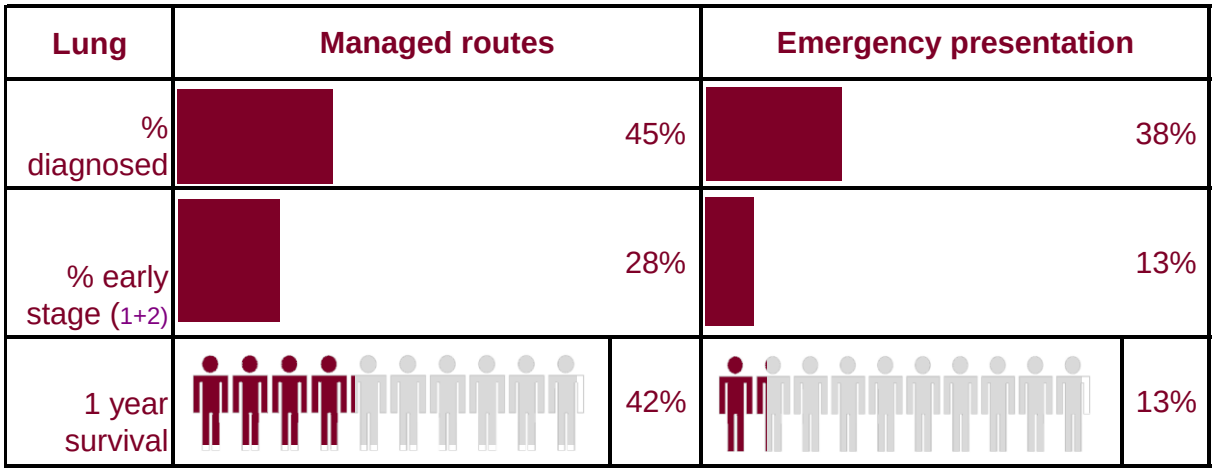
In 2006-2013 in Kent and Medway Cancer Alliance, 45% of lung cancer patients were diagnosed through managed routes (two week wait or GP referral) and 38% through emergency presentations.

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%)[26] (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 Kent and Medway 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**



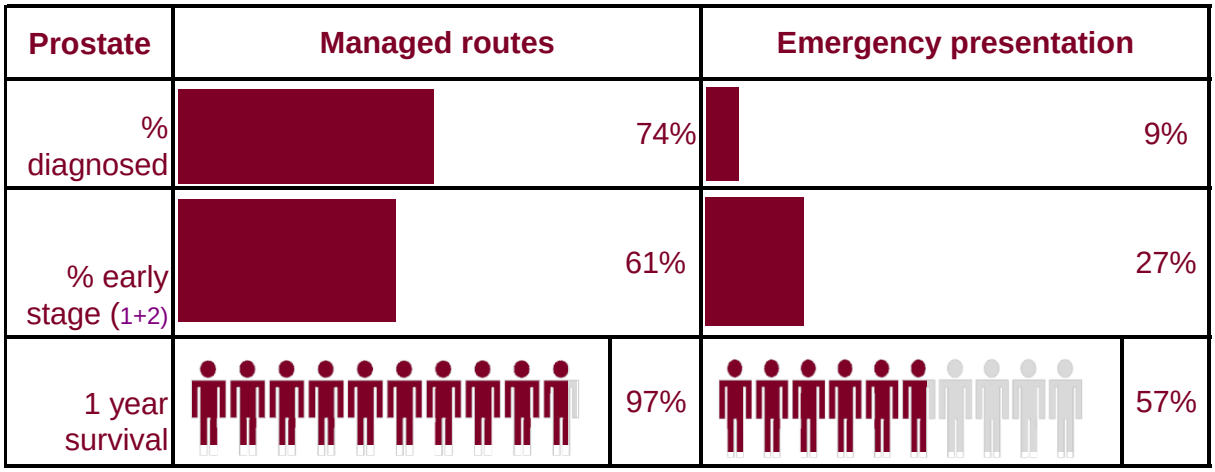

Source: PHE NCRAS Routes to Diagnosis by stage 2012-13 workbook and PHE NCRAS Route to Diagnosis 2006-2013 workbook

## Prostate cancer

In 2006-2013 in Kent and Medway Cancer Alliance, 74% of prostate cancer patients were diagnosed through managed routes (two week wait or GP referral) and 9% 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%)[26] (Figure 42).

**Figure 42 – Proportion of diagnoses of prostate cancer by route for CCGs in Kent and Medway 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**

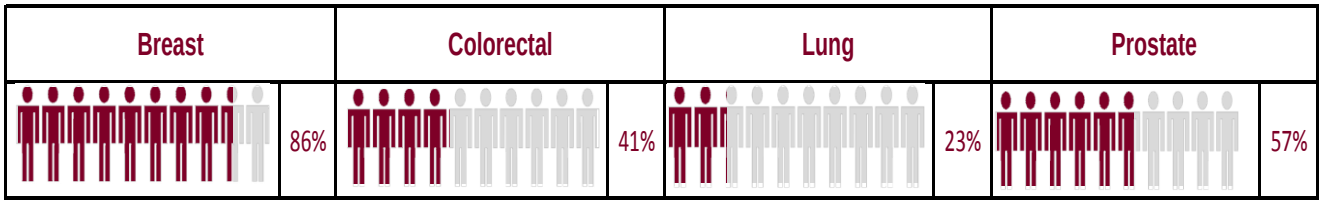



Source: PHE NCRAS Routes to Diagnosis by stage 2012-13 workbook and PHE NCRAS Route to Diagnosis 2006-2013 workbook

# 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 Kent and Medway Cancer Alliance in 2015. There was considerable variation, with 86% of breast cancer patients diagnosed at an early stage, 57% of prostate cancer patients, 41% of colorectal cancer patients and only 23% of lung cancer patients[27].

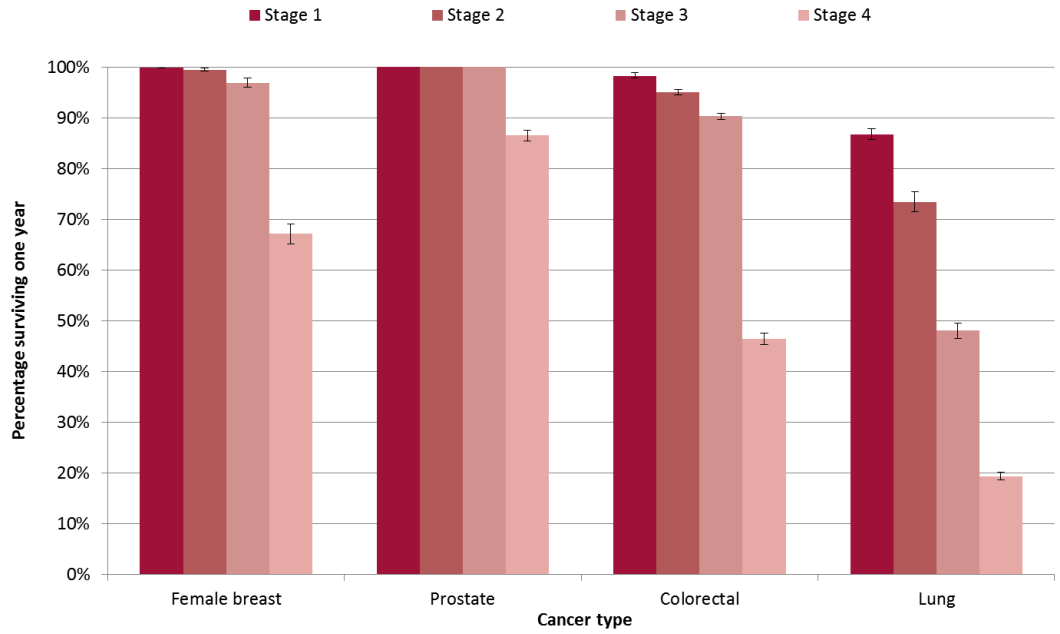
**Figure 43 – Proportion of all tumours with stage recorded diagnosed at an early stage (stage 1 or 2) by cancer type, Kent and Medway Cancer Alliance in 2015**




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[28]. 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**

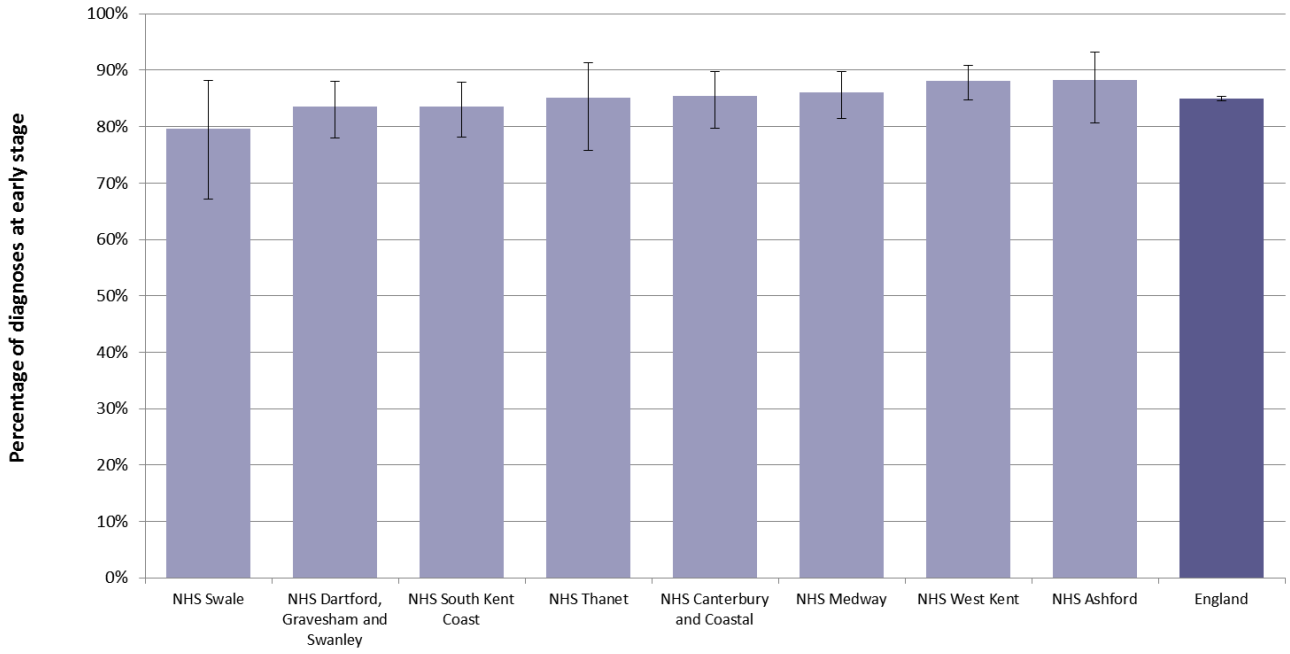



Source: PHE NCRAS Cancer Survival by Stage 2012 - non-imputed workbook

## Breast cancer

Across the Kent and Medway Cancer Alliance, the percentage of female breast cancer cases diagnosed at stages 1 or 2 in 2015 did not show statistically significant differences between CCGs, none of which was statistically significantly different from the England average (85%) (Figure 45).

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



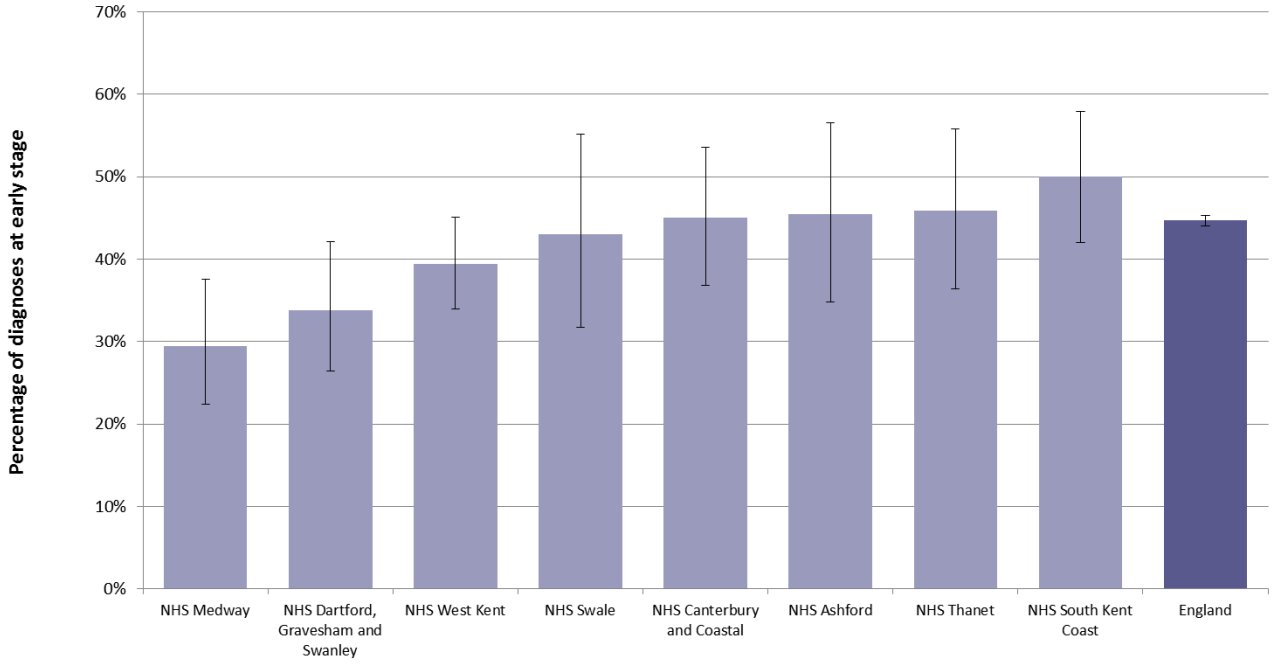

*Percentages represent the proportion of those cases with stage recorded.

Source: Cancer Analysis Statistics CAS 1612

## Colorectal cancer

Across the Kent and Medway Cancer Alliance, the percentage of colorectal cancer cases diagnosed at stages 1 or 2 in 2015 showed some statistically significant differences between CCGs, with Medway CCG (29%) and Dartford, Gravesham & Swanley CCG (34%) statistically significantly lower than the England average (45%). South Kent Coast CCG had the highest proportion of colorectal cancer cases diagnosed at stages 1 or 2 (50%), but this was not statistically significantly different from the England average (Figure 46).

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



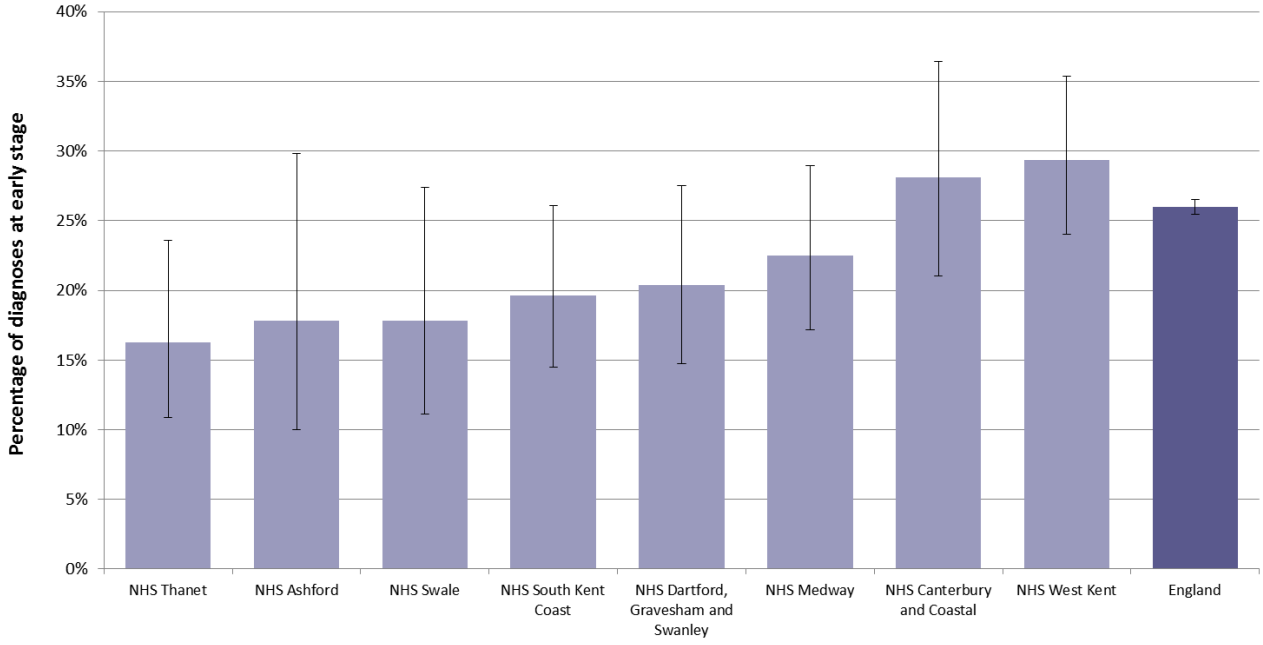

*Percentages represent the proportion of those cases with stage recorded.

Source: Cancer Analysis Statistics CAS 1612

## Lung cancer

Across the Kent and Medway Cancer Alliance, the percentage of lung cancer cases diagnosed at stages 1 or 2 in 2015 did not show statistically significant differences between CCGs, none of which was statistically significantly different from the England average (26%) (Figure 47).

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



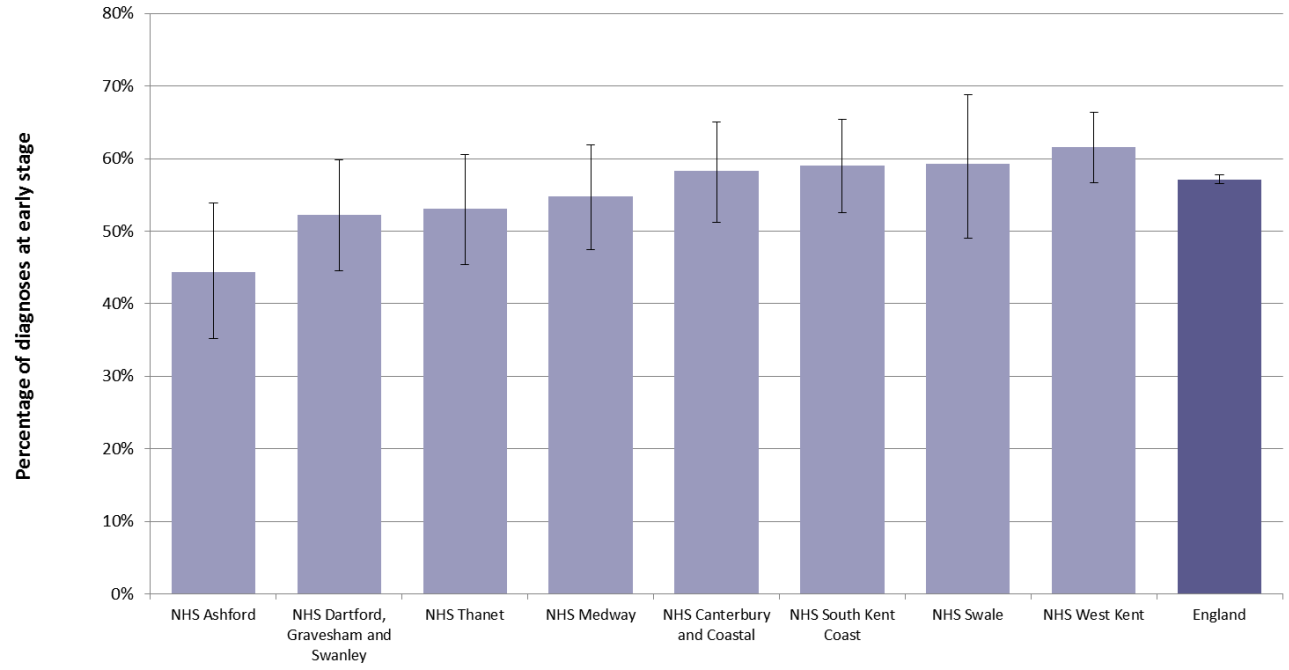

*Percentages represent the proportion of those cases with stage recorded.

Source: Cancer Analysis Statistics CAS 1612

## Prostate cancer

Across the Kent and Medway Cancer Alliance, the percentage of prostate cancer cases diagnosed at stages 1 or 2 in 2015 showed little statistically significant differences between CCGs, with only Ashford CCG (44%) statistically significantly lower than the England average (57%). West Kent CCG had the highest proportion of prostate cancer cases diagnosed at stages 1 or 2, at 62%, but this was not statistically different from the England average (Figure 48).

**Figure 48 – Percentage of prostate cancer cases diagnosed at an early stage (stages 1 or 2) in Kent and Medway 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[a] between 2003-2007 and 2008-2012 for three main cancer types for males and females in South East England. 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 Kent and Medway 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 Kent and Medway 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 Kent and Medway Cancer Alliance in 2014.

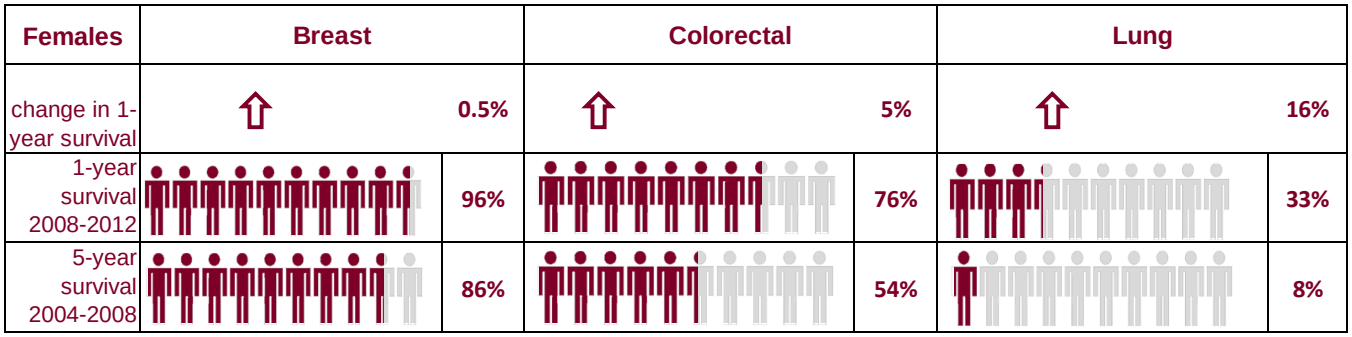
Prostate cancer had the highest one-year and five-year survival rates in males. Over 2008-2012, one-year survival in the South East was 96%, which was similar to the England average (also 96%). Over 2004-2008, five-year survival in the South East was

[a] relative survival compares the survival of people diagnosed with cancer to survival in the general population

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

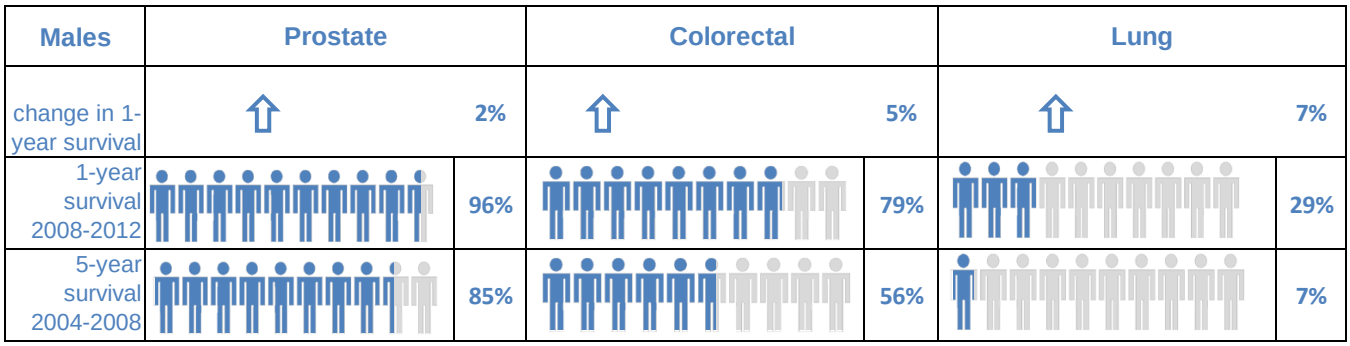
All cancers presented showed an improvement in one-year survival between 2003-2007 and 2008-2012, with the greatest improvement in lung cancer.

**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**




Datasource: CancerStats core survival templates

**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**

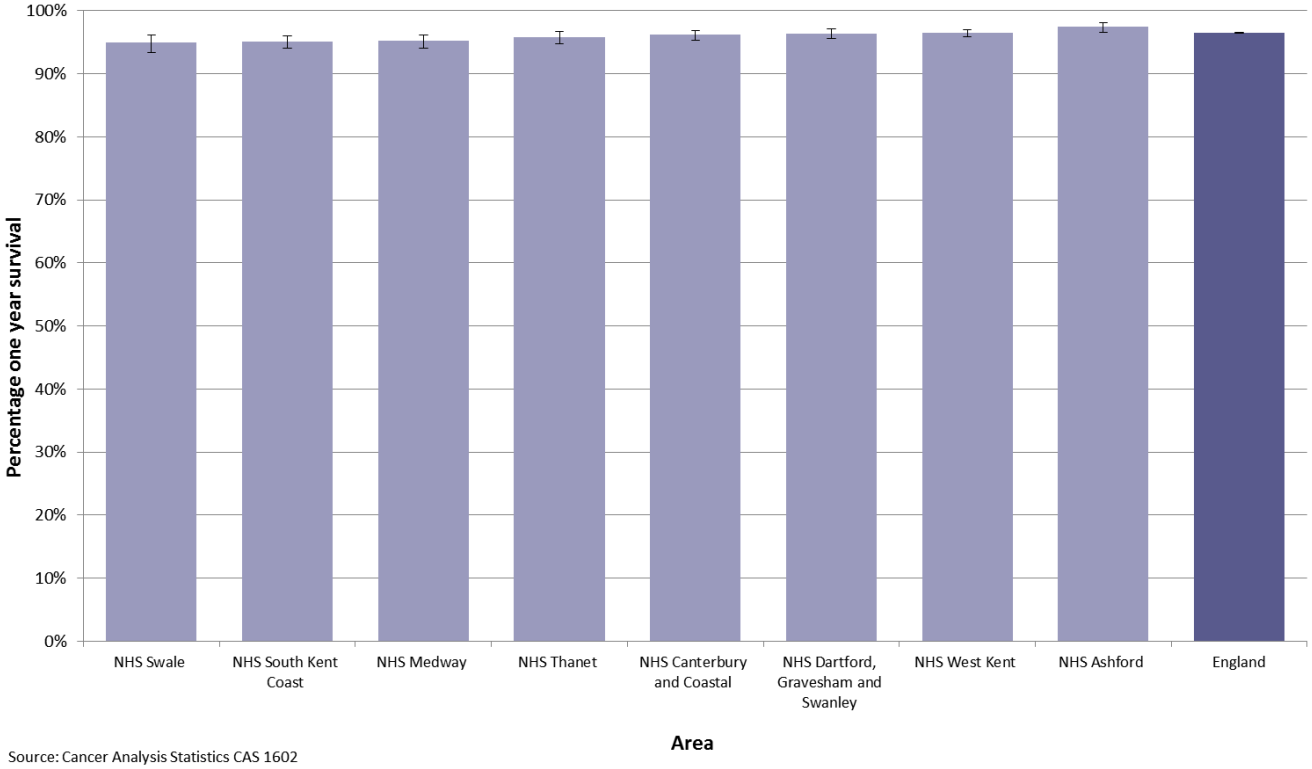



Datasource: CancerStats core survival templates

## Breast cancer survival

The one-year survival for female breast cancer in 2014 showed little statistically significant variation across the CCGs within Kent and Medway Cancer Alliance, ranging from 95% in Swale CCG to 98% in Ashford CCG (Figure 51)[29]. One-year survival was statistically significantly lower than the England average (97%) in Swale CCG, South Kent Coast CCG (95%) and Medway CCG (95%). 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 Kent and Medway Cancer Alliance by CCG in 2014, females, all ages**

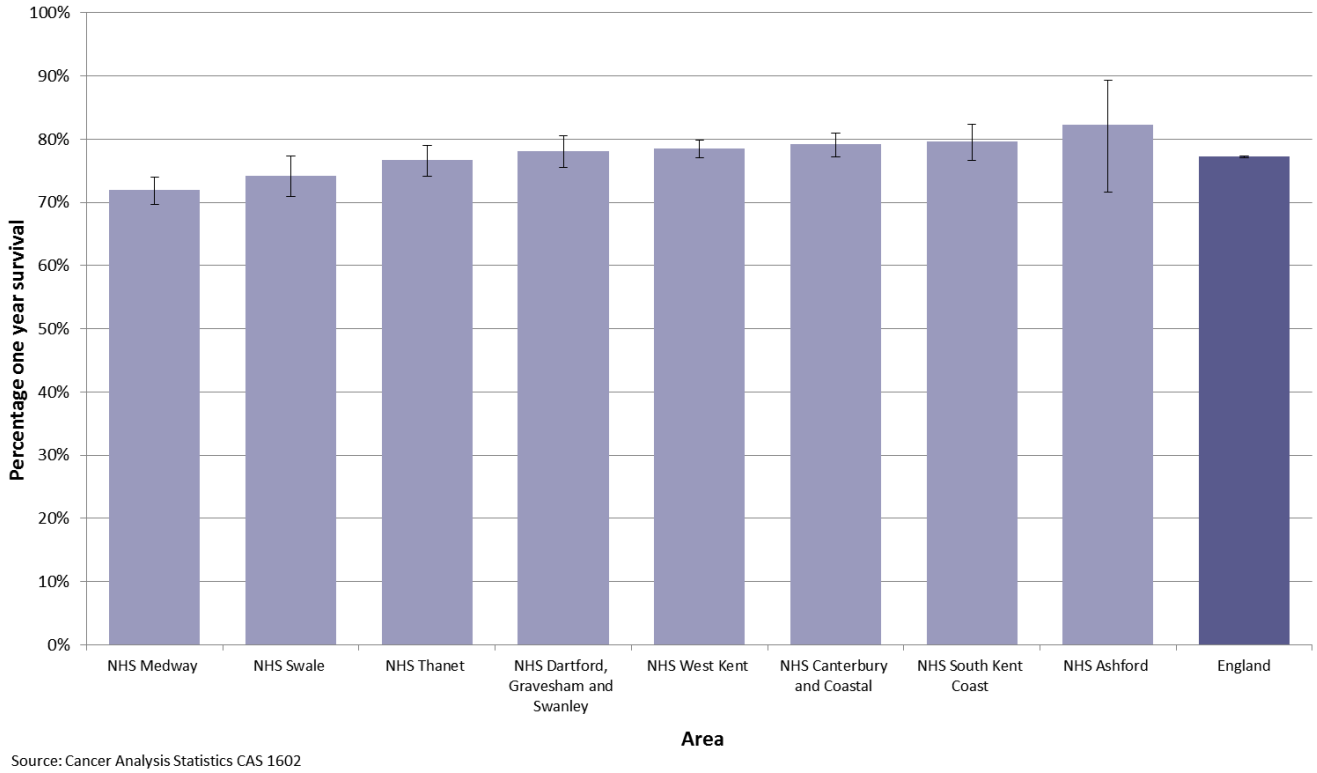



Source: Cancer Analysis Statistics CAS 1602

## Colorectal cancer survival

The one-year survival for colorectal cancer in 2014 showed little statistically significant variation across the CCGs within Kent and Medway Cancer Alliance, ranging from 72% in Medway CCG to 82% in Ashford CCG (Figure 52)[29]. One-year survival was statistically significantly lower than the England average (77%) in Medway CCG.

**Figure 52 – Percentage one-year survival for colorectal cancer in Kent and Medway Cancer Alliance by CCG in 2014, persons, all ages**

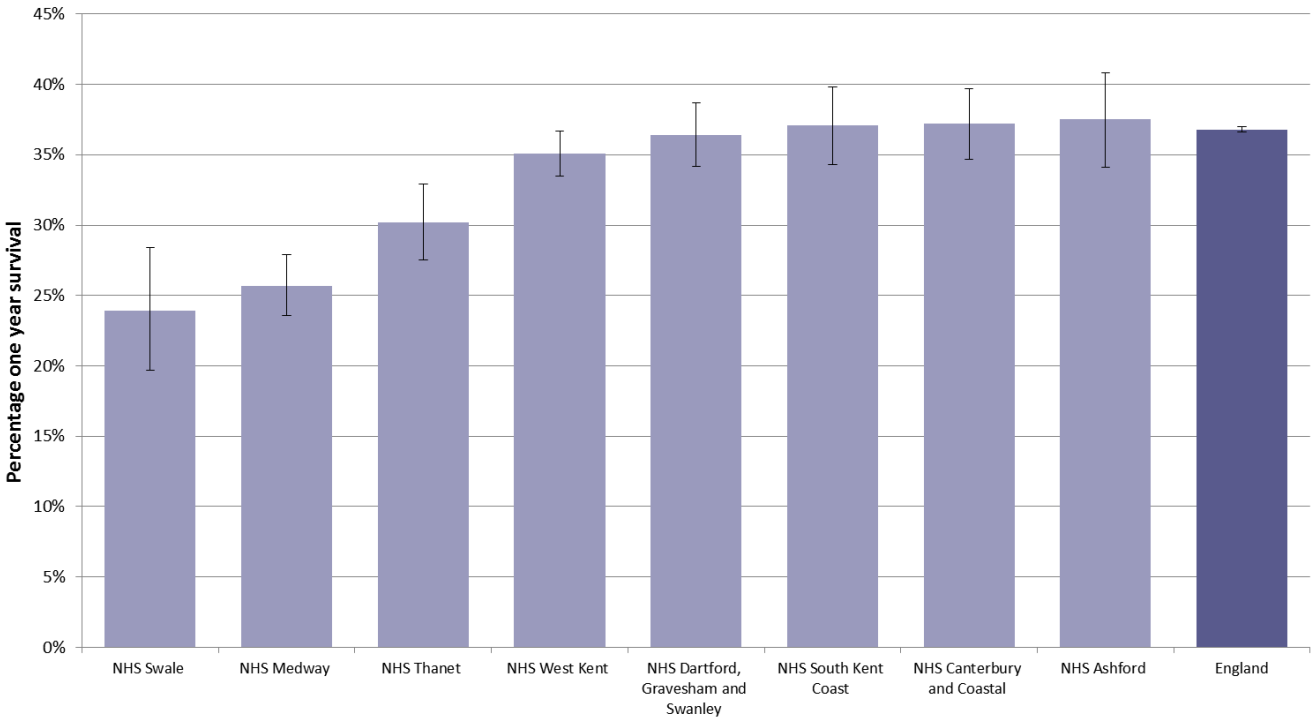



Source: Cancer Analysis Statistics CAS 1602

## Lung cancer survival

The one-year survival for lung cancer in 2014 showed some statistically significant variation across the CCGs within Kent and Medway Cancer Alliance, ranging from 24% in Swale CCG to 38% in Ashford CCG (Figure 53)[29]. One-year survival was statistically significantly lower than the England average (37%) in Swale CCG, Medway CCG (26%) and Thanet CCG (30%). 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 Kent and Medway Cancer Alliance by CCG in 2014, persons, all ages**




Source: Cancer Analysis Statistics CAS 1602

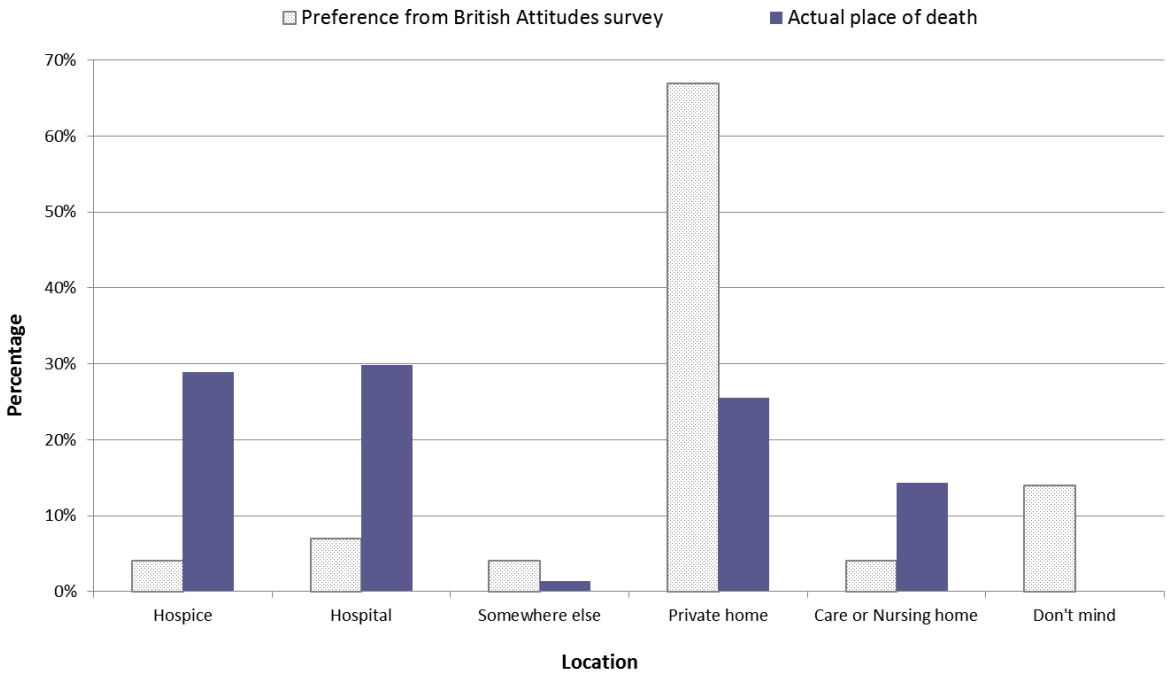
# Place of death

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[30].

Figure 54 shows the place of death for cancer patients from the Kent and Medway Cancer Alliance, who died[31] between 2013-2015. This is presented alongside preferred place of death for England from the 2012 British Social Attitudes survey[30].

In the Kent and Medway Cancer Alliance, 26% of cancer patients died in a private home. A further 14% of cancer patients died in a nursing or care home which may also be considered their home; 30% died in hospital and 29% died in a hospice.

**Figure 54 – Comparison of preferred place of death (British Attitudes Survey for England 2012) with actual place of death for Kent and Medway 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[32] was published in 2015 and followed by the government's response in 2016. This response included a set of commitments (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"[33].

**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 Kent and Medway 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 Kent and Medway Cancer Alliance area, cancer incidence has increased over the past ten years. There have been increasing numbers of new cases of all the cancers featured in this report, with particularly large increases in prostate and breast cancers. 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 Kent and Medway Cancer Alliance.

In the Kent and Medway Cancer Alliance area it is estimated that the number of people living with and beyond a cancer diagnosis will increase to 90,900 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 19% across the Kent and Medway Cancer Alliance with considerable variation between CCGs.

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 rates in Kent and Medway were in Dartford and Thanet. 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 Kent and Medway, with the highest rates in Gravesham and the lowest in Tunbridge Wells.

Over 2012-14, 65% of adults were classed as having excess weight in Kent and Medway. This is higher than the average for the South East. There was considerable variation between local authorities in Kent and Medway, with the highest proportions of adults with excess weight in Thanet and Gravesham and the lowest in Sevenoaks.

In 2014 in the Kent and Medway Cancer Alliance, 44% 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 local authority data from 2014 showed that Swale and Medway had the lowest rates of fruit and vegetable consumption in Kent and Medway.

In 2014 in the Kent and Medway Cancer Alliance, 28% of adults were classed as physically inactive (similar to the England average), with the highest proportions of inactive adults in Swale and Thanet 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 Kent and Medway Cancer Alliance approximately 35% 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 uptake of one dose of HPV vaccine was 81% in the county of Kent and 82% in Medway, both statistically significantly lower than the averages for England and the South East.

## 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 Kent and Medway Cancer Alliance was slightly higher than the England average for breast, colorectal and cervical cancers. Since 2009/10, there has been a slightly greater fall in breast cancer screening coverage in Kent and Medway Cancer Alliance compared to England. Bowel cancer screening coverage appears to be static at about 59% of the eligible population, and the fall in cervical screening coverage is similar to the England average.

All CCGs in Kent and Medway Cancer Alliance had similar or better breast cancer screening coverage compared to the England average, and better cervical cancer screening coverage than England. However Medway CCG and Dartford, Gravesham & Swanley CCG had lower coverage of bowel cancer screening.

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 Kent and Medway Cancer Alliance had their cancers diagnosed through emergency presentations for 4% of breast cancers, 9% of prostate cancers, 25% of colorectal cancers and 38% of lung cancers.

In 2015, across Kent and Medway Cancer Alliance patients had their cancers diagnosed at early stages (stage 1 or 2) for 86% of breast cancers, 57% of prostate cancers, 41% of colorectal cancers, but only 23% of lung cancers. There was no statistically significant difference in the proportions of early stage diagnoses between the CCGs for breast and lung cancers. However there was some statistically significant variation in early stage diagnosis for colorectal cancer (with the lowest proportion in Medway CCG) and prostate cancer (with the lowest proportion in Ashford 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 Kent and Medway Cancer Alliance, there was little statistically significant variation in one-year survival for breast cancer or colorectal cancer. However one-year survival for lung cancer was statistically significantly lower in Swale CCG, Medway CCG and Thanet CCG compared to the other CCGs in the alliance, and also lower than the average for England.

## Place of death

Over 2013-2015, across the Kent and Medway Cancer Alliance, 26% of cancer 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 Kent and Medway Cancer Alliance, a further 14% died in a nursing or care home, which may also be considered their home. Across the alliance, 30% of cancer patients died in hospital and 29% 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 Kent and Medway 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 uptake, 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 breast and 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.

# Appendix

## Cancers associated with smoking

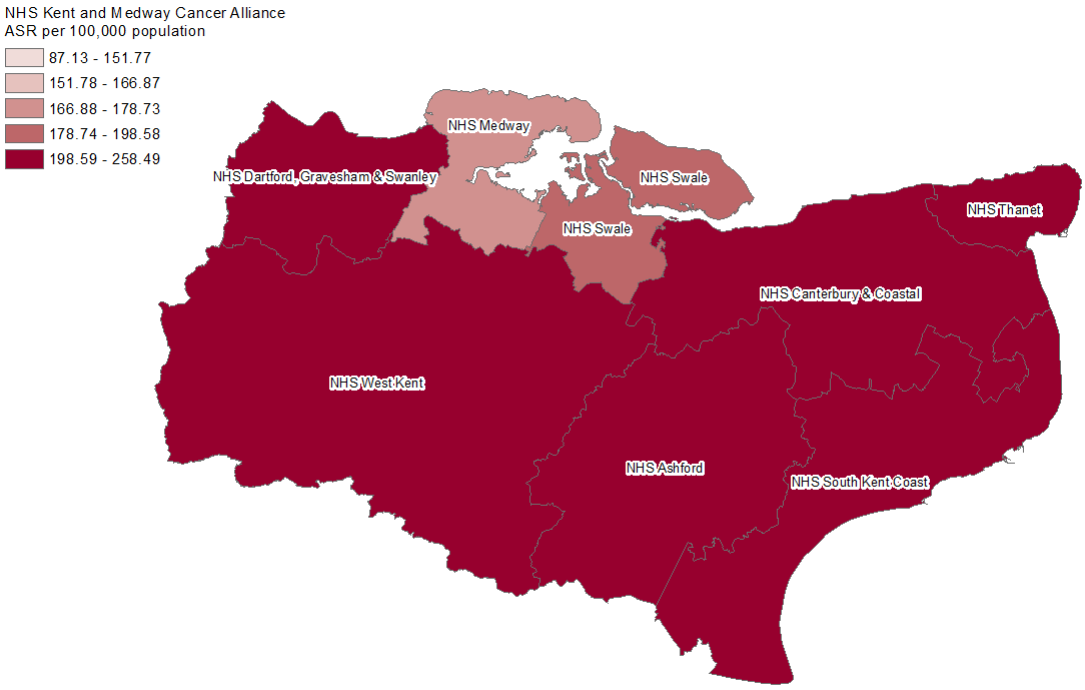
**Table 2 –Sixteen types of cancer associated with smoking**

| |
|---|
| 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)

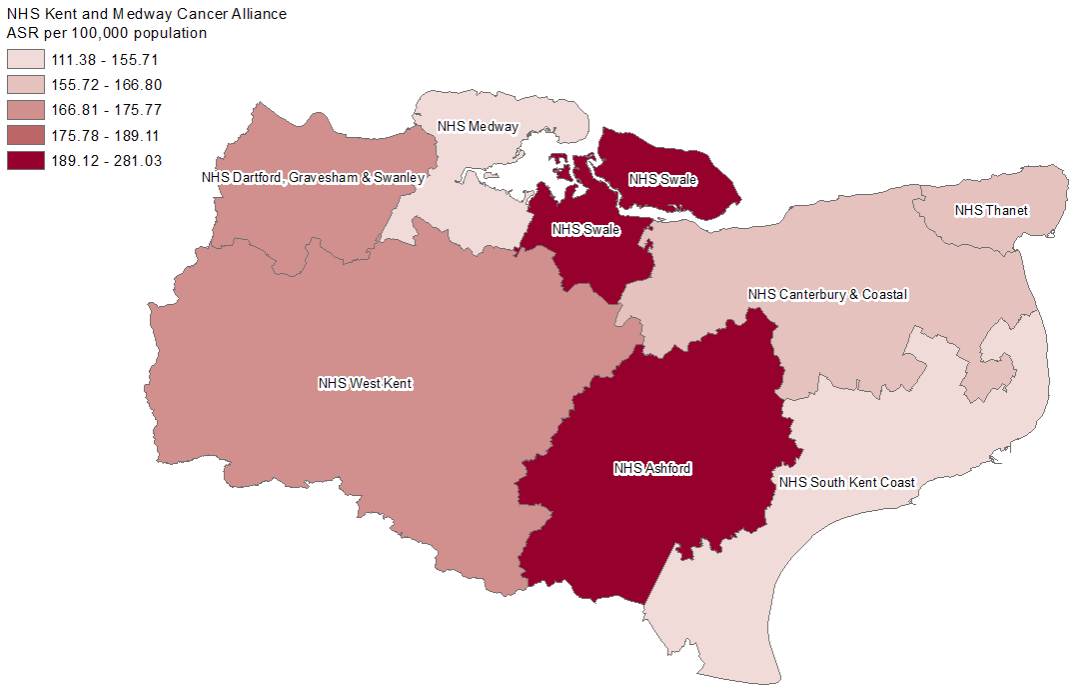
## Maps showing variations in incidence for selected cancers

### Figure 56 – Age-standardised incidence of prostate cancer by CCG in Kent and Medway Cancer Alliance in 2014, males, all ages – national quintiles

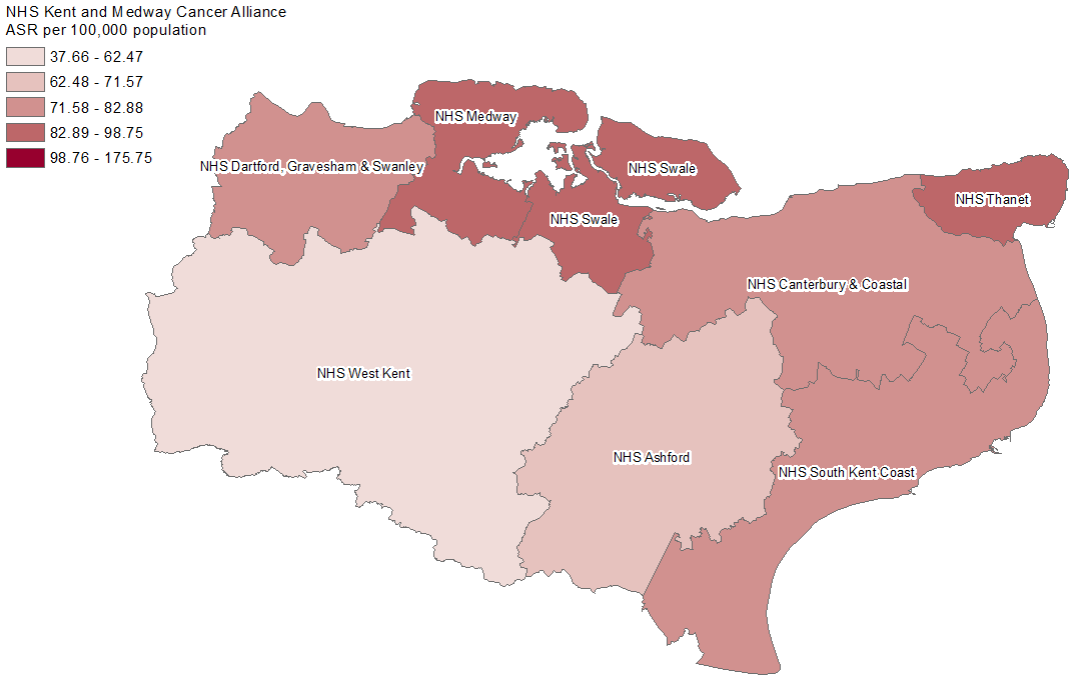





### Figure 57 – Age-standardised incidence of breast cancer by CCG in Kent and Medway Cancer Alliance in 2014, females, all ages – national quintiles

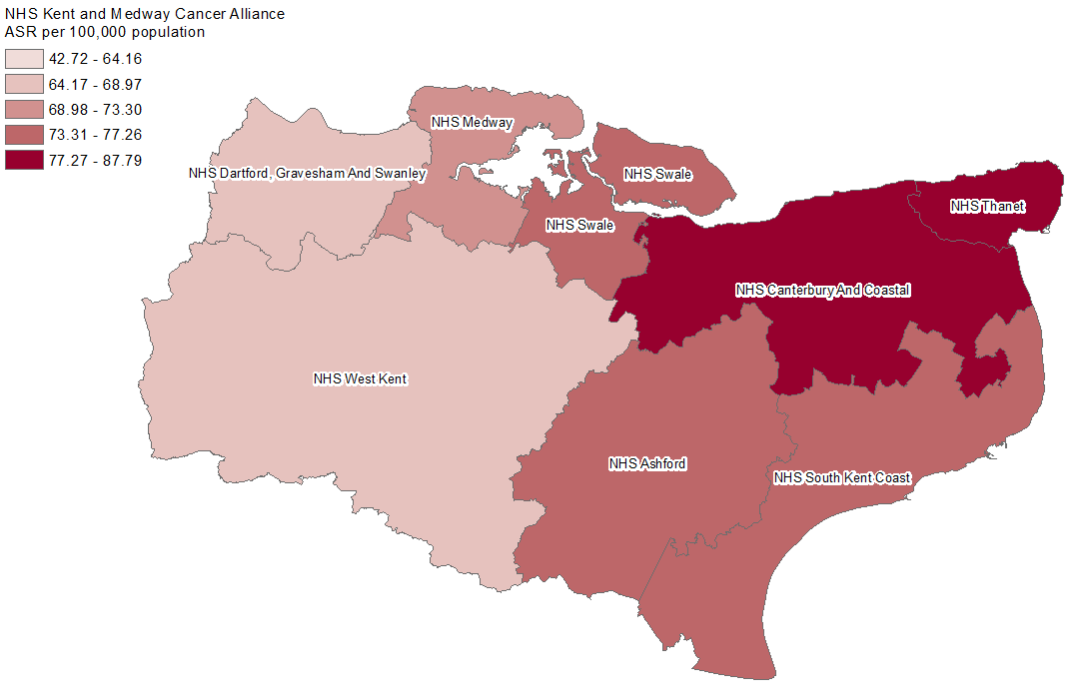


## Figure 58 – Age-standardised incidence of trachea, bronchus and lung cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages – national quintiles

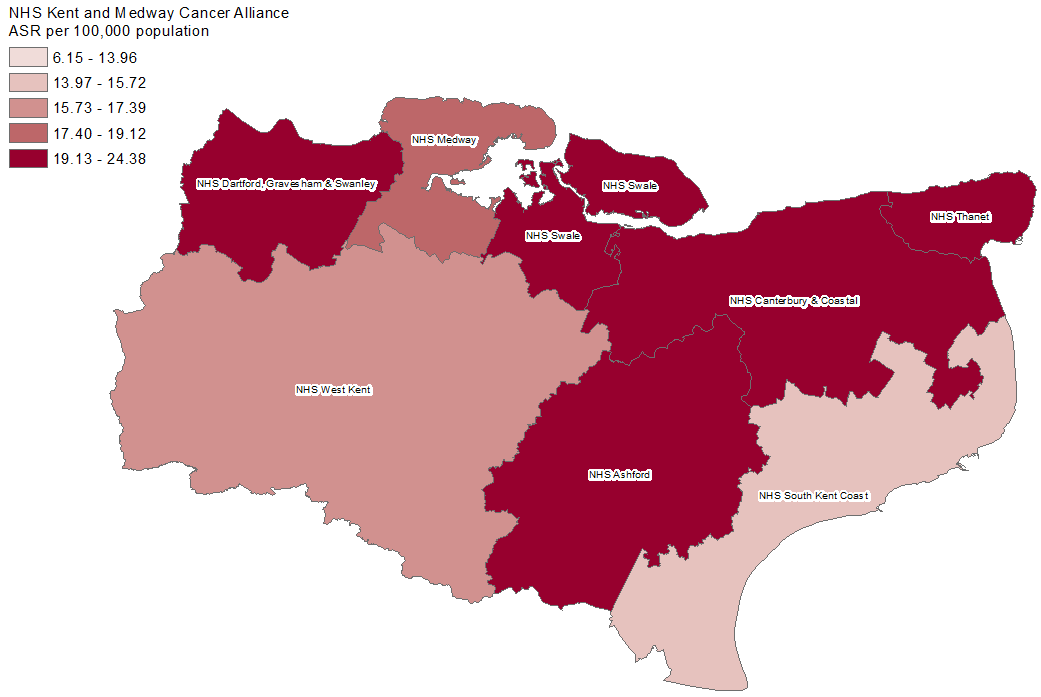





## Figure 59 – Age-standardised incidence of colorectal cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages – national quintiles

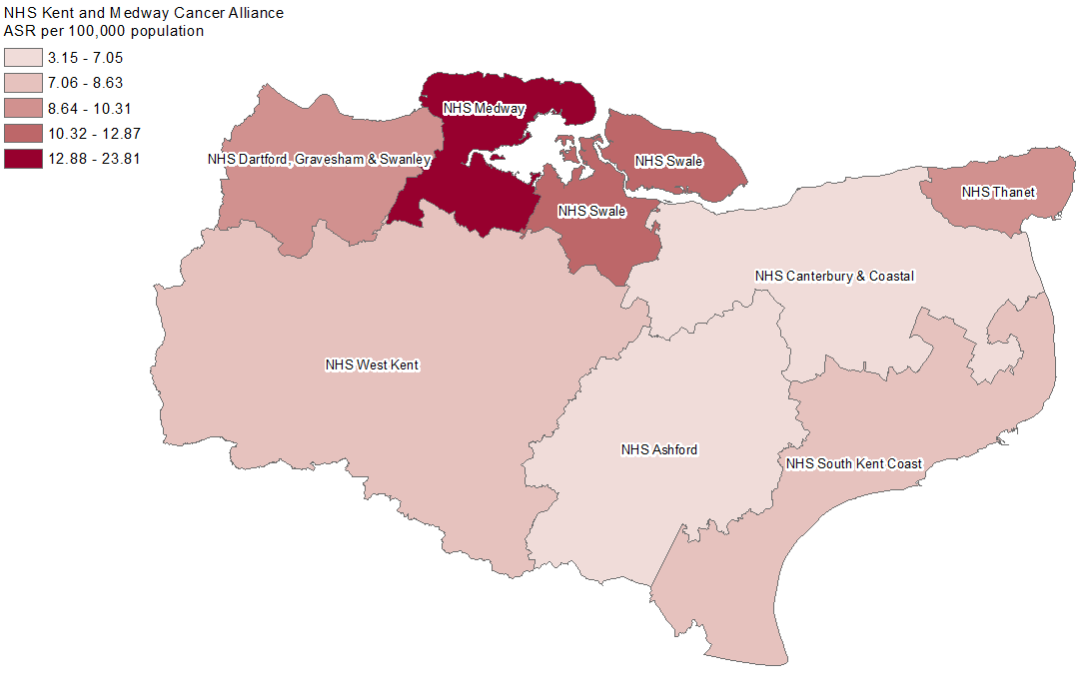


## Figure 60 – Age-standardised incidence of pancreatic cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages – national quintiles

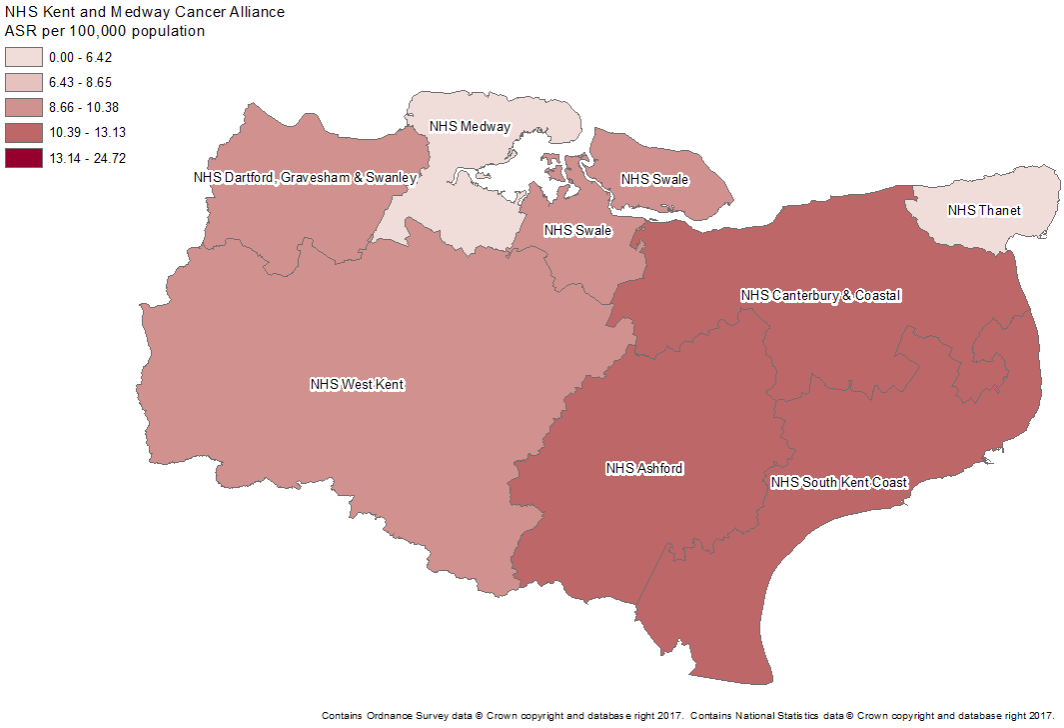





## Figure 61 – Age-standardised incidence of liver cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages – national quintiles

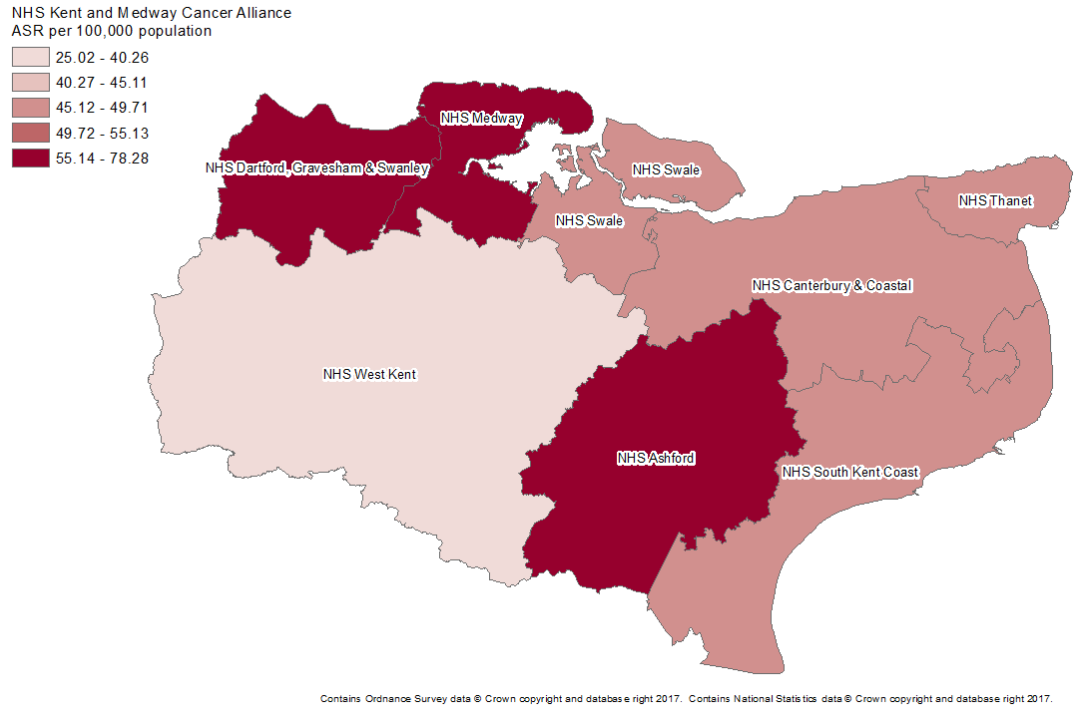


## Figure 62 – Age-standardised incidence of cervical cancer by CCG in Kent and Medway Cancer Alliance in 2014, females, all ages – national quintiles



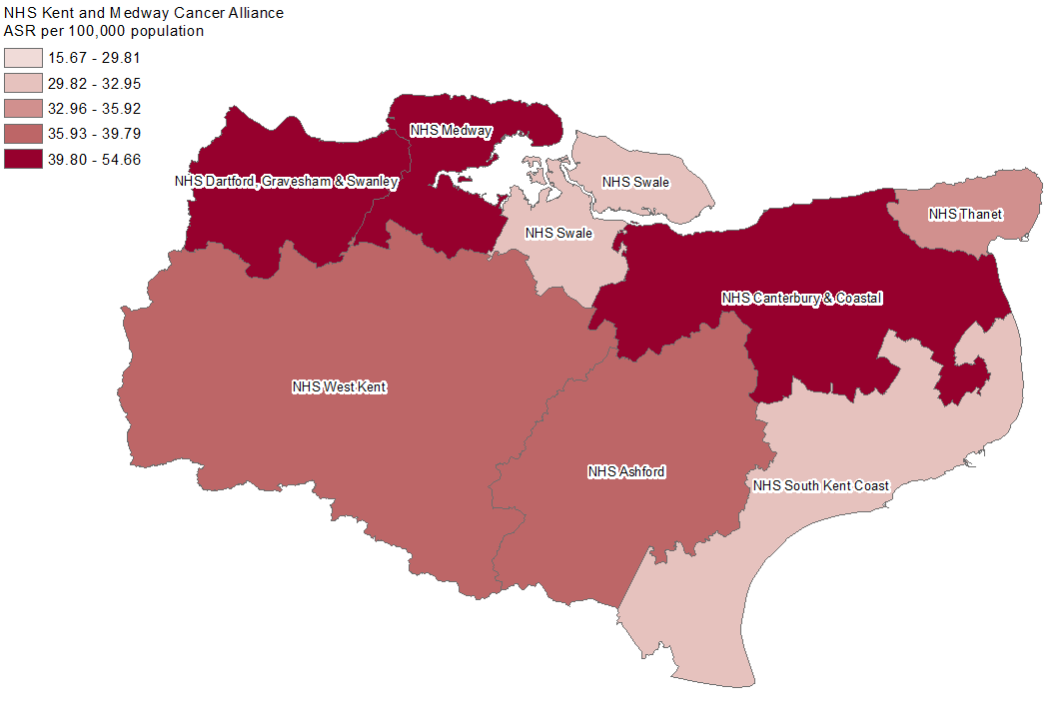
## Maps showing variations in mortality for selected cancers

### Figure 63 – Age-standardised mortality rate of prostate cancer by CCG in Kent and Medway Cancer Alliance in 2014, males, all ages – national quintiles

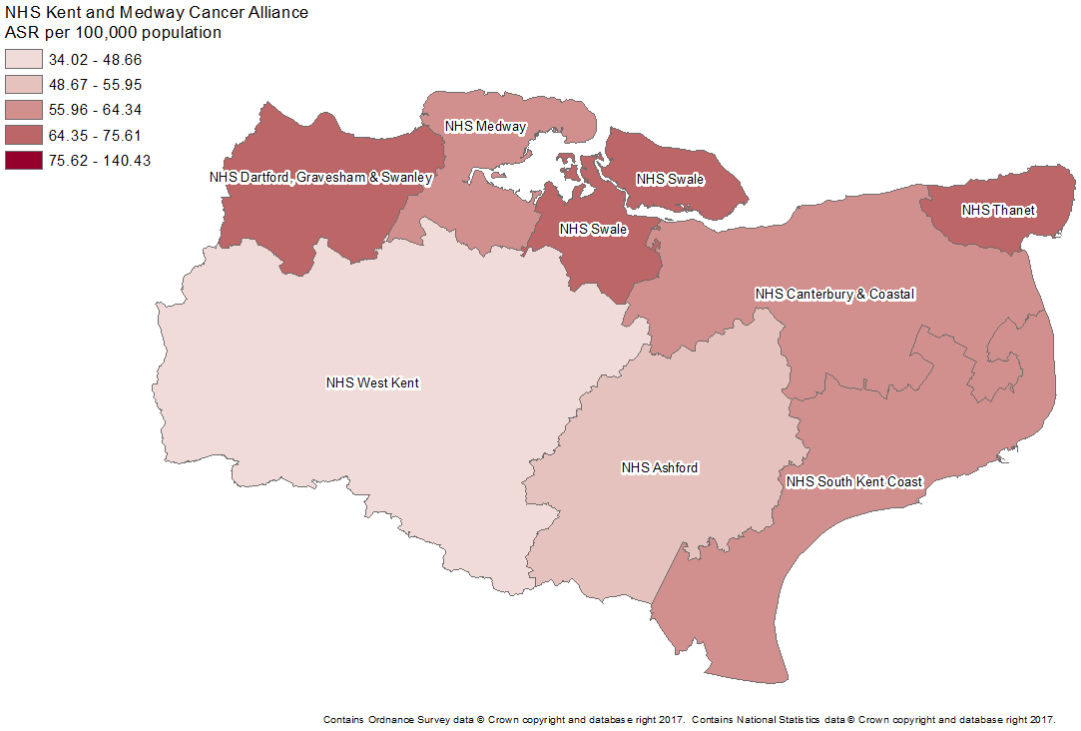





### Figure 64 – Age-standardised mortality rate of breast cancer by CCG in Kent and Medway Cancer Alliance in 2014, females, all ages – national quintiles

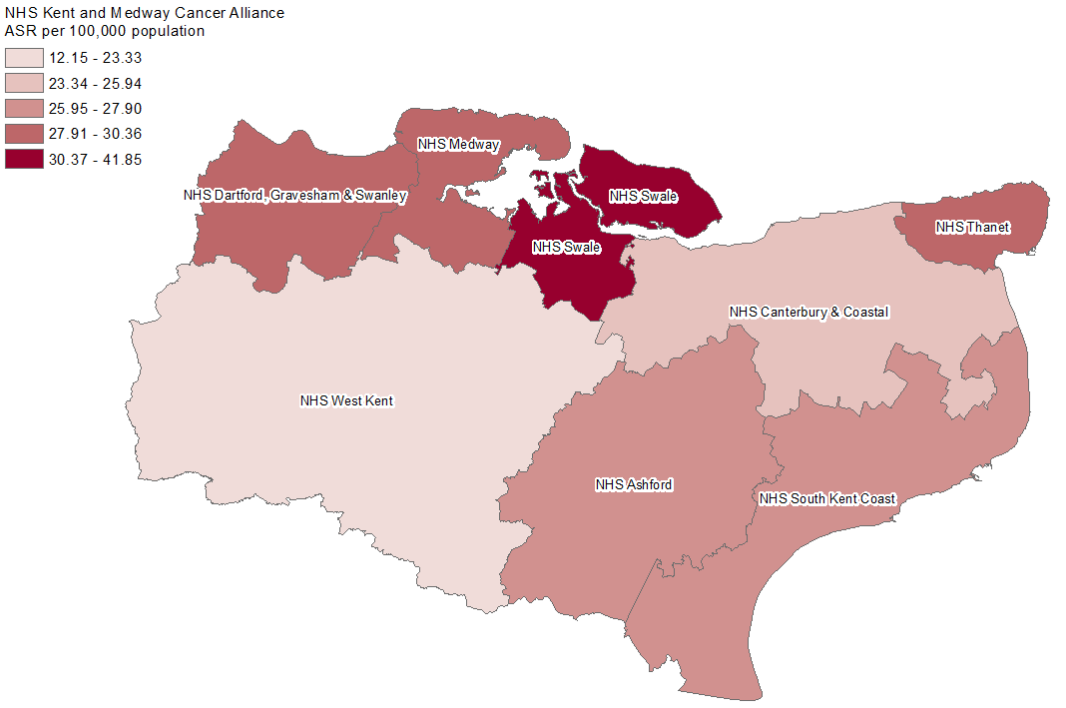


## Figure 65 – Age-standardised mortality rate of trachea, bronchus and lung cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages – national quintiles

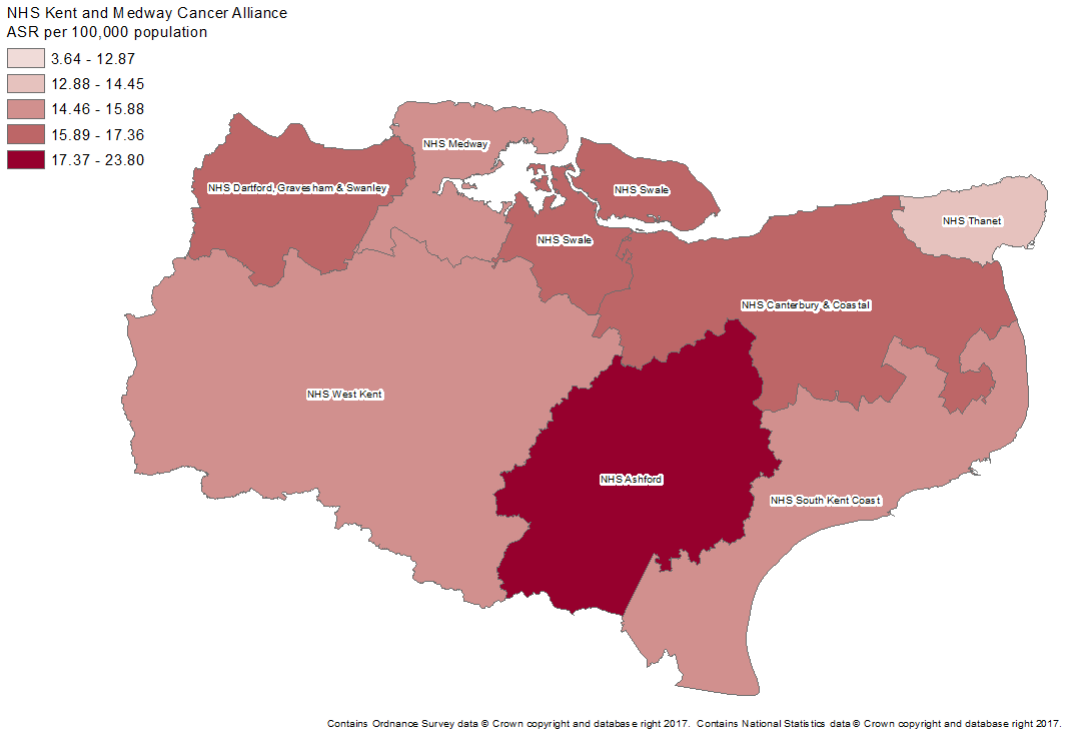





## Figure 66 – Age-standardised mortality rate of colorectal cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages – national quintiles

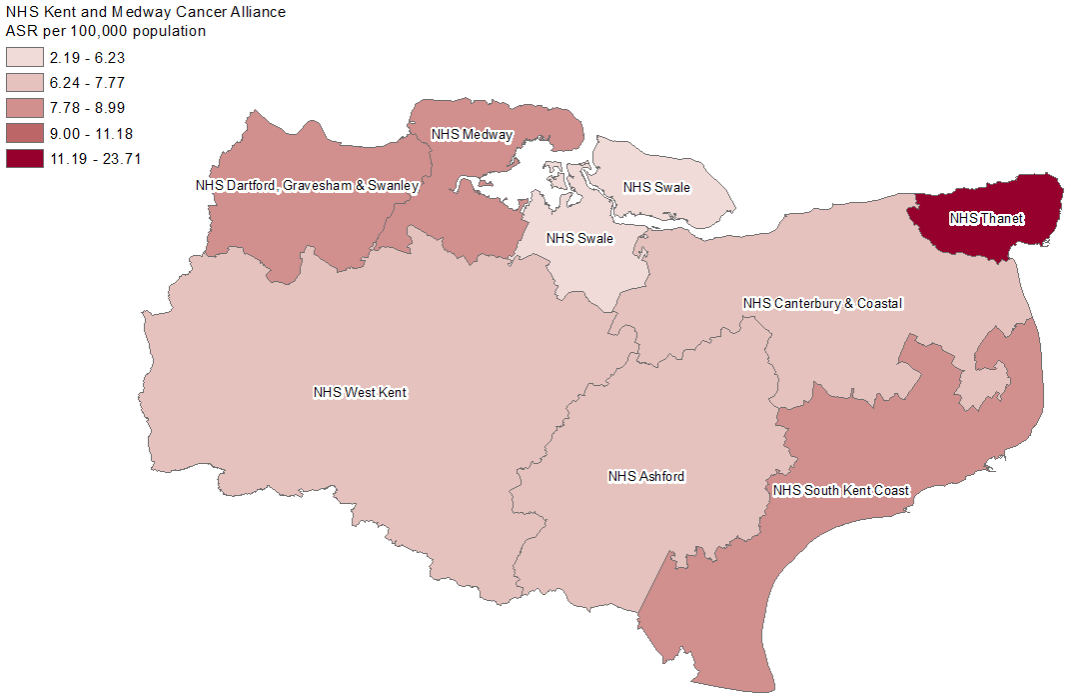


## Figure 67 – Age-standardised mortality rate of pancreatic cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages – national quintiles

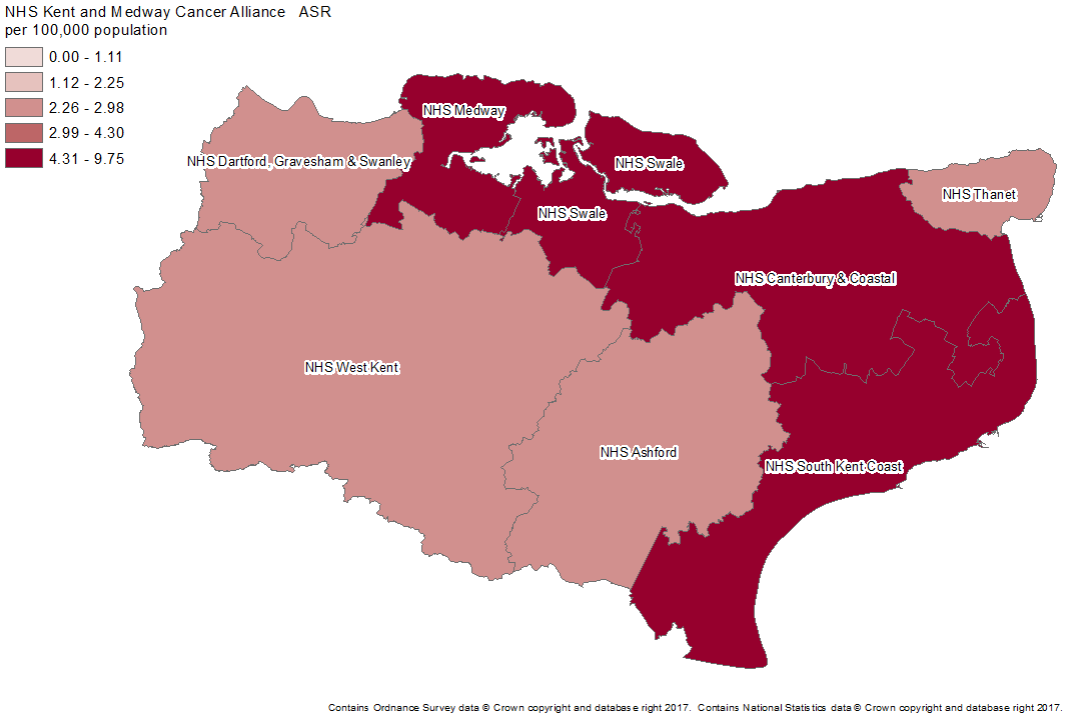





## Figure 68 – Age-standardised mortality rate of liver cancer by CCG in Kent and Medway Cancer Alliance in 2014, all persons, all ages – national quintiles



## Figure 69 – Age-standardised mortality rate of cervical cancer by CCG in Kent and Medway 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 eg 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 (eg 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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