

## Why is it important?

As many as one in two people who are currently between the ages of 18 and 65 will be diagnosed with cancer in their lifetime (Ahmed et al, 2015), with breast, prostate, lung and colorectal remaining the most common sites (ONS, 2016). The number of cancer diagnoses is expected to reach over 300,000 a year by 2020 (NHS England, 2016).



1 in 2 people born after 1960 in the UK will be diagnosed with some form of cancer during their lifetime



Cancer is responsible for around 1 in 4 of all deaths in adults aged 35 and over

Cancer is the highest cause of death in England in under 75s. Cancer contributes significantly to the gap in life expectancy between County Durham and England. Higher rates of cancer mortality account for around one-third of this gap. Within County Durham, life expectancy is lower in the most deprived communities and cancer is the biggest contributor to this gap ([See Life Expectancy factsheet](#)). Improvements in diagnosis and treatment mean that more people are likely to survive cancer than die from it. More than half of people diagnosed with cancer today are living for more than 10 years. For many types of cancer, it can be seen as more of a long term condition than a death sentence.

Lifestyle factors contributing to cancer incidence, Achieving World-Class Cancer Outcomes : A strategy for England 2015-2020

### Lifestyle factors



Two in five cancers are preventable. The main impact on the increasing numbers of people being diagnosed with cancer are behavioural, lifestyle and environmental factors.

Despite considerable reductions, smoking tobacco remains the single biggest risk factor for developing cancer. Diet, being overweight or obese, alcohol consumption and UV exposure are also factors which can increase our risk of getting cancer. Workplace exposure to cancer-causing materials and substances also increases risk.

There are several key terms used when describing cancer. These are defined in boxes 1 to 3 below and used throughout the factsheet.

#### Box 1 Prevalence:

Cancer prevalence is a measure of the total number or percentage of people who are alive (either living with or surviving cancer) on a particular date.

#### Box 2 Incidence:

Cancer incidence is the number of new cases of cancer diagnosed for a given period. The statistics are provided as the total number of cases or as directly age-standardised rates (number of cases per 100,000 population) for all ages.

#### Box 3 Premature mortality:

Premature mortality is the number of people who have died from cancer under the age of 75. The statistics are provided as the total number of cases or as directly age-standardised rates (number of cases per 100,000 population).

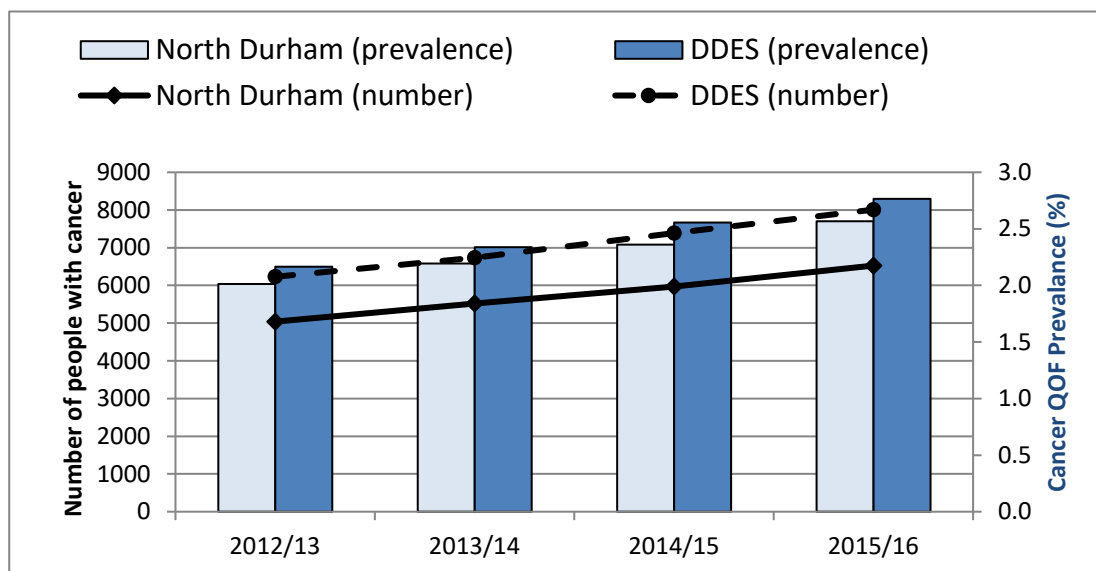
## Durham data – the local picture and how we compare

### Prevalence

Prevalence, the number of people living with cancer (as recorded on GP disease registers), is rising. In 2015/16 there were almost 15,000 people in County Durham living with cancer (Figure 1), which is equivalent to just under 3% of the GP registered population. Estimates suggest that cancer prevalence will continue to rise. If the general population continues to grow and age, and people continue to get and survive cancer in line with recent trends, there will be over 28,000 people living with cancer by 2030 in County Durham, almost doubling the prevalence estimated in 2010.

**Figure 1:** Trend in cancer prevalence (all ages), % and number, 2012/13 to 2015/16, North Durham and Durham Dales, Easington and Sedgfield (DDES) Clinical Commissioning Groups (CCGs)

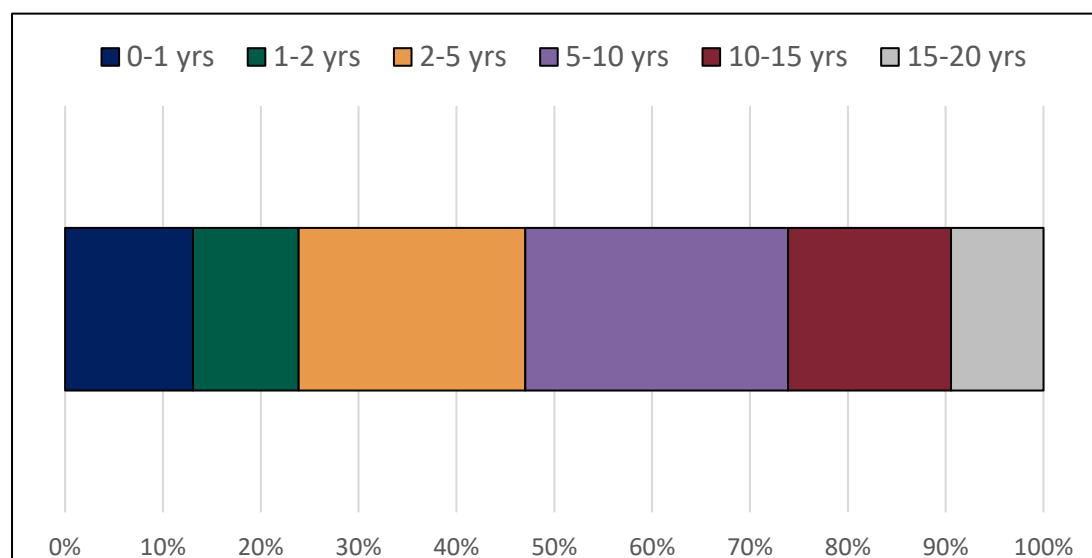
Source: Cancer services profiles, PHE, Fingertips



The Macmillan-NCIN (National Cancer Intelligence Network) Cancer Prevalence Project provides a more granular understanding of the UK cancer population. Over a 20 year period, between 1991 and 2010, it was estimated that in County Durham there were 14,700 people who had been diagnosed with cancer in the past and who are still alive. The total prevalence figures for the 20-year period are a useful indicator of the burden of cancer as a whole, however patient needs and experiences will vary over time after diagnosis.

**Figure 2:** Persons living with and beyond cancer in 2010 in County Durham by time since diagnosis, diagnosed during the period 1991-2010

Source: Macmillan and PHE

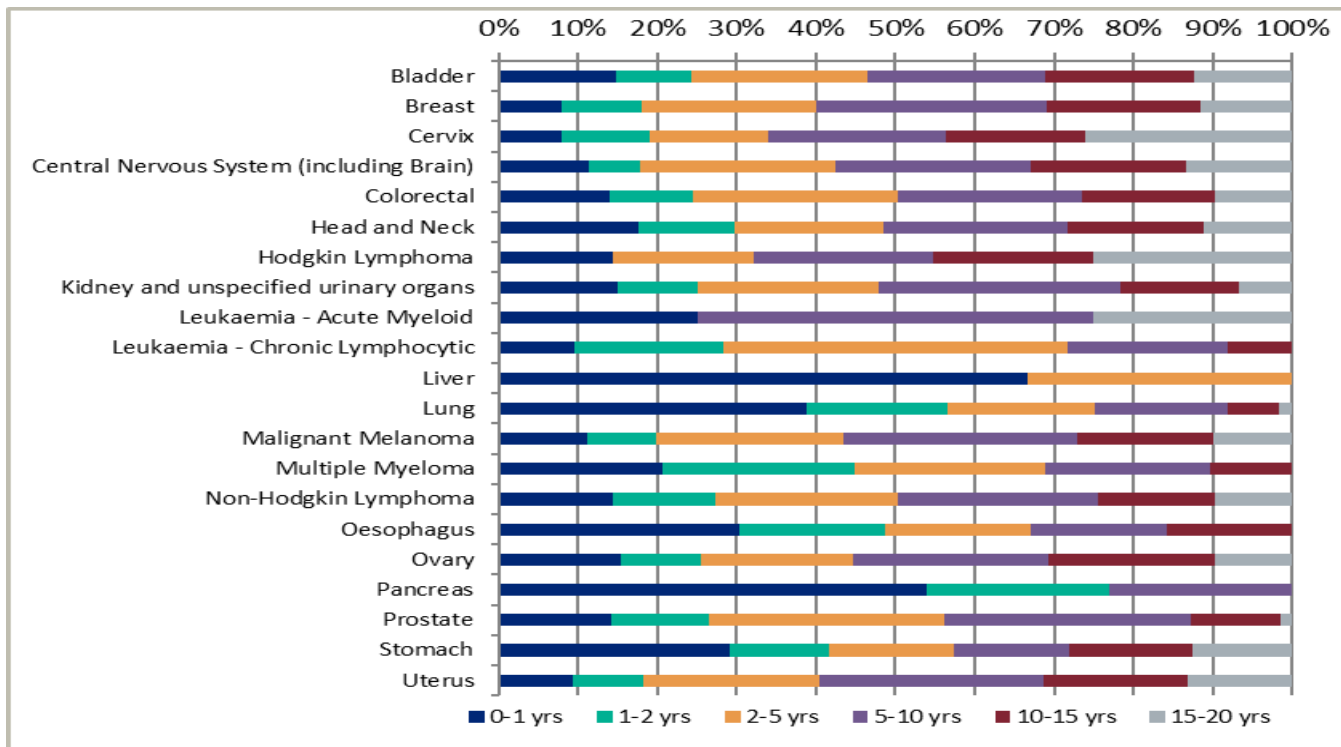


The largest proportion of people living with cancer in County Durham were diagnosed 5-10 years ago.

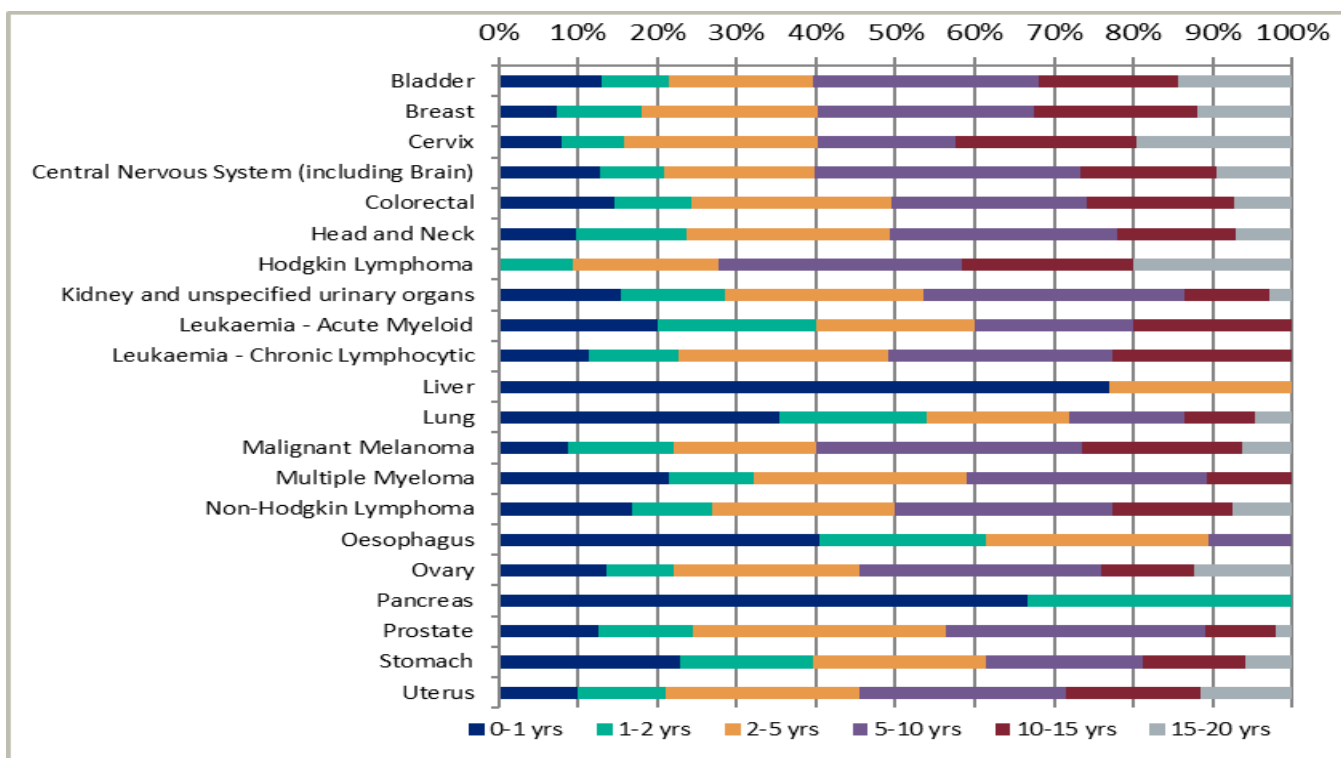
There is variation between the proportion of people recently diagnosed and longer term survivors by cancer type (Figure 3). The breakdown for the 21 common cancer sites for both CCGs are shown below.

**Figure 3:** Persons living with and beyond cancer in 2010 by cancer site and time since diagnosis, diagnosed during the period 1991-2010  
Source: Macmillan and PHE

**DDES CCG**



**North Durham CCG**



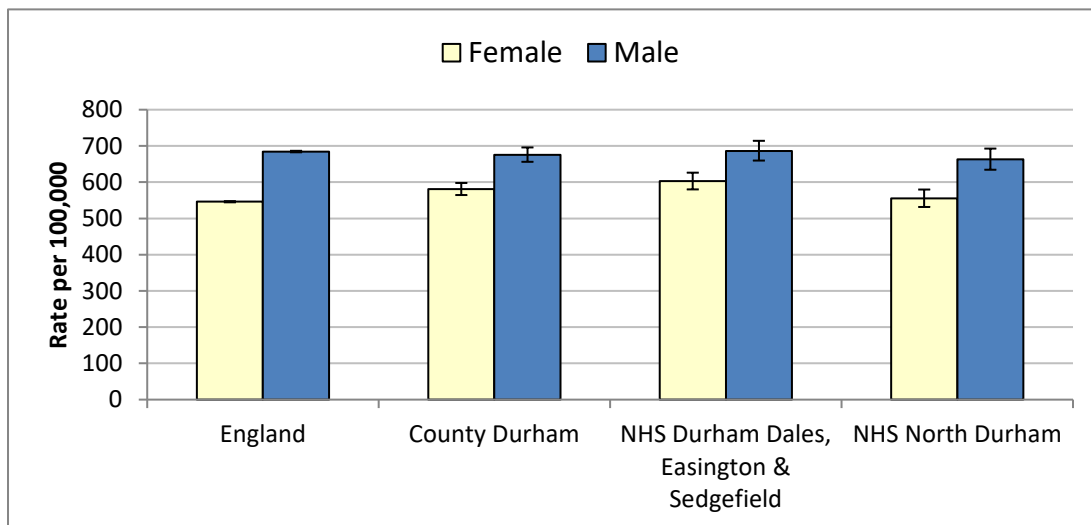
- Large proportions of people living with cancers such as cervical and hodgkin lymphoma are living ten years or more since their diagnosis.
- A large proportion of the population of people living with cancers, such as pancreatic and kidney, were diagnosed less than ten years ago.

## Incidence

Between 2012 and 2014, around 3,000 new cases of cancer were diagnosed in County Durham per year.

**Figure 4:** Incidence rate per 100,000, with 95% confidence intervals, all cancers, 2012-14

Source: CancerStats, PHE



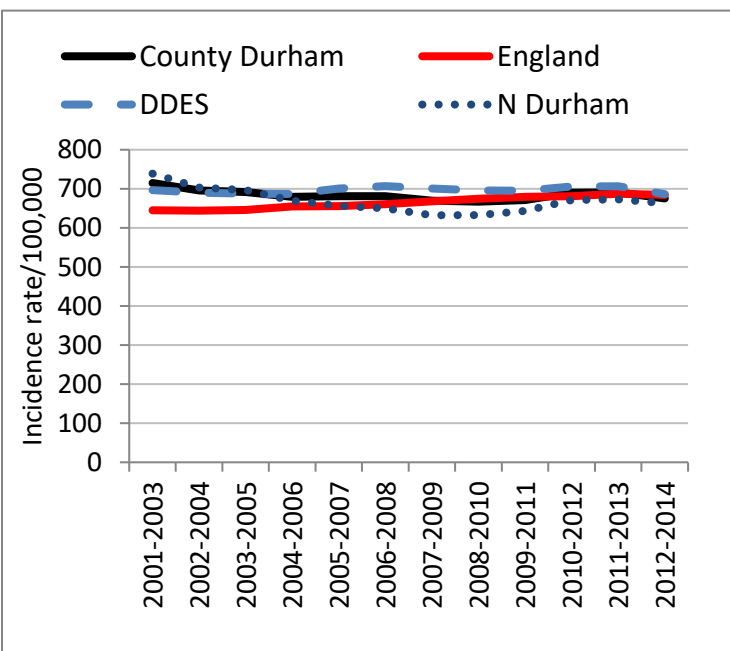
- For all areas, the rate at which men are diagnosed with cancer is significantly higher than for women.
- The rate at which women get cancer in County Durham and DDES CCG is significantly higher than the England rate. There is no significant difference for women between North Durham CCG and England.
- There is no significant difference in the rate at which men get cancer in England compared to County Durham, DDES CCG or North Durham CCG.

In County Durham, the rate of new cancer cases is increasing for females but decreasing for males. Between 2001 and 2014, female cancer incidence rose in County Durham in line with national trends: England (12.2%), County Durham (11.5%), DDES CCG (15.8%) and North Durham (6.3%). For the same period, male cancer incidence decreased locally in contrast to a national rise: England (6.2%), County Durham (-5.5%), DDES CCG (-1.5%), North Durham (-10.3%) (Figure 5).

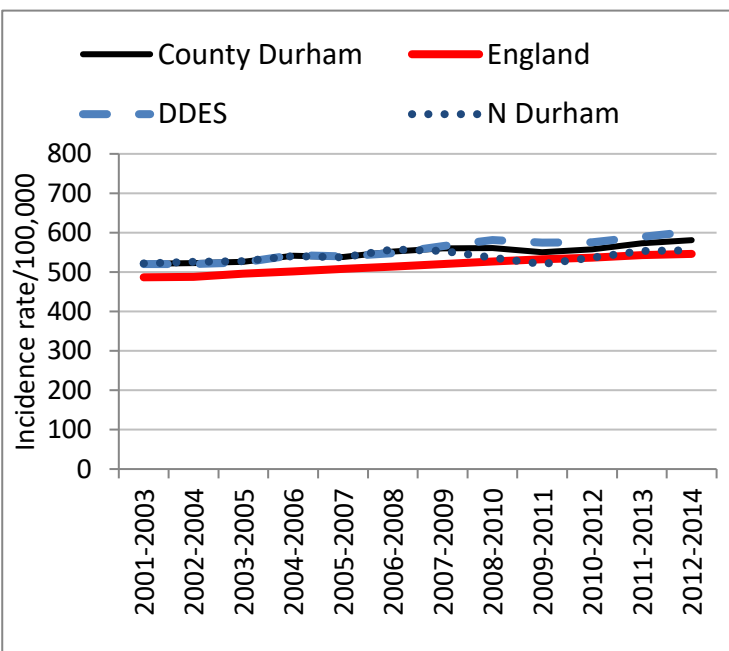
**Figure 5:** Trend in male and female incidence (all cancers) 2001-03 to 2012-14, County Durham, DDES and North Durham CCGs

Source: CancerStats, PHE

### Men



### Women



**Figure 6:** Absolute and relative gaps in cancer incidence rates per 100,000, comparing 2001-03 to 2012-14, all cancers

Source: CancerStats, PHE

	Men		Women	
	2001-03	2012-14	2001-03	2012-14
Average number of cases diagnosed in County Durham per year	1,312	1,575	1,288	1,591
Absolute gap between County Durham and England	70.2	-8.7	34.3	34.9
Relative gap (%)	10.9	-1.3	7.0	6.4

- Male absolute and relative gaps, between County Durham and England, have reduced for males.
- There has been little change in either gap for females.

**Absolute inequality gap:** Simply the difference between the value for County Durham and the value for England.

**Relative inequality gap:** Calculated by dividing the absolute gap by the value in the standard or less deprived area, in this case England. This measure allows comparison between different indicators.

Incidence has been examined for the four key cancer sites. More detail can be found in the Cancer Health Equity Audit (2017). The time periods used for this analysis are five-year pooled. The latest data available are 2010-2014 and comparisons over time use 2001-2005 as the baseline.

#### Lung cancer

- An average of 523 cases of lung cancer are diagnosed in County Durham each year.
- Rates of lung cancer incidence are significantly higher in County Durham than England for both men and women.
- Lung cancer incidence is significantly higher for males than females in England, County Durham and DDES and North Durham CCGs.
- Female lung cancer incidence has increased over time in all areas, including England, whereas there has been a decrease in all areas for males.

#### Breast cancer

- An average of 401 cases of female breast cancer are diagnosed in County Durham each year. Less than five cases of male breast cancer cases in County Durham were diagnosed each year.
- Rates of breast cancer incidence in women are significantly lower than England in County Durham, DDES CCG and North Durham CCG.
- Whilst breast cancer incidence is rising nationally, there has been little change for County Durham and variation at CCG level - a decrease in DDES CCG and a rise in North Durham CCG.

#### Bowel cancer

- An average of 366 cases of bowel cancer are diagnosed in County Durham each year.
- There is no statistical difference in rates of bowel cancer incidence between England and either County Durham, DDES CCG or North Durham CCG.
- Bowel cancer incidence is significantly higher for males than females in England, County Durham, DDES CCG and North Durham CCG.
- Whilst bowel cancer incidence is rising nationally for males and females, there have been decreases for County Durham and at CCG level. The decreases have been greater for males than for females.

## Prostate cancer

- An average of 314 cases of prostate cancer are diagnosed in men in County Durham each year.
- Compared to England, rates of prostate cancer incidence in men are significantly lower in County Durham, DDES CCG and North Durham CCG.
- Whilst prostate cancer incidence is rising nationally, there has been a decrease for County Durham and variation at CCG level - an increase in DDES CCG and a decrease in North Durham CCG.

## Premature cancer mortality

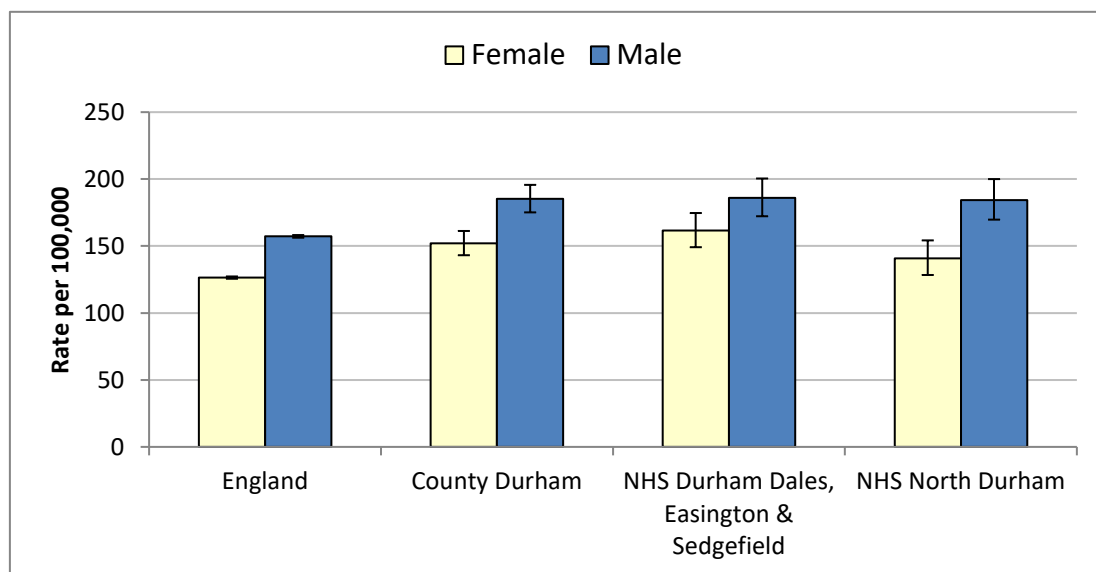
Between 2012 and 2014, 1,600 County Durham residents died from cancer per year. Of these almost 50% died prematurely (under 75 years); 800 deaths per year. In this period, cancer accounted for around 42% of all premature deaths in County Durham. This is over double that of the next biggest killer, cardiovascular disease (CVD), which accounted for around 20%.

Figure 7 below compares the England under-75 mortality rate from cancer with County Durham and DDES and North Durham CCGs.

- For England, County Durham and North Durham CCG, the rate at which men die under the age of 75 from cancer is significantly higher than for women. There is no significant difference between men and women for DDES CCG.
- The rate at which women die from cancer, under the age of 75, in County Durham, DDES and North Durham CCGs is significantly higher than the England rate.
- The rate at which men die from cancer under the age of 75, in County Durham DDES and North Durham CCG, is significantly higher than the England rate.

**Figure 7:** Premature mortality rate per 100,000, with 95% confidence intervals, all cancers, 2012-14

Source: CancerStats, PHE



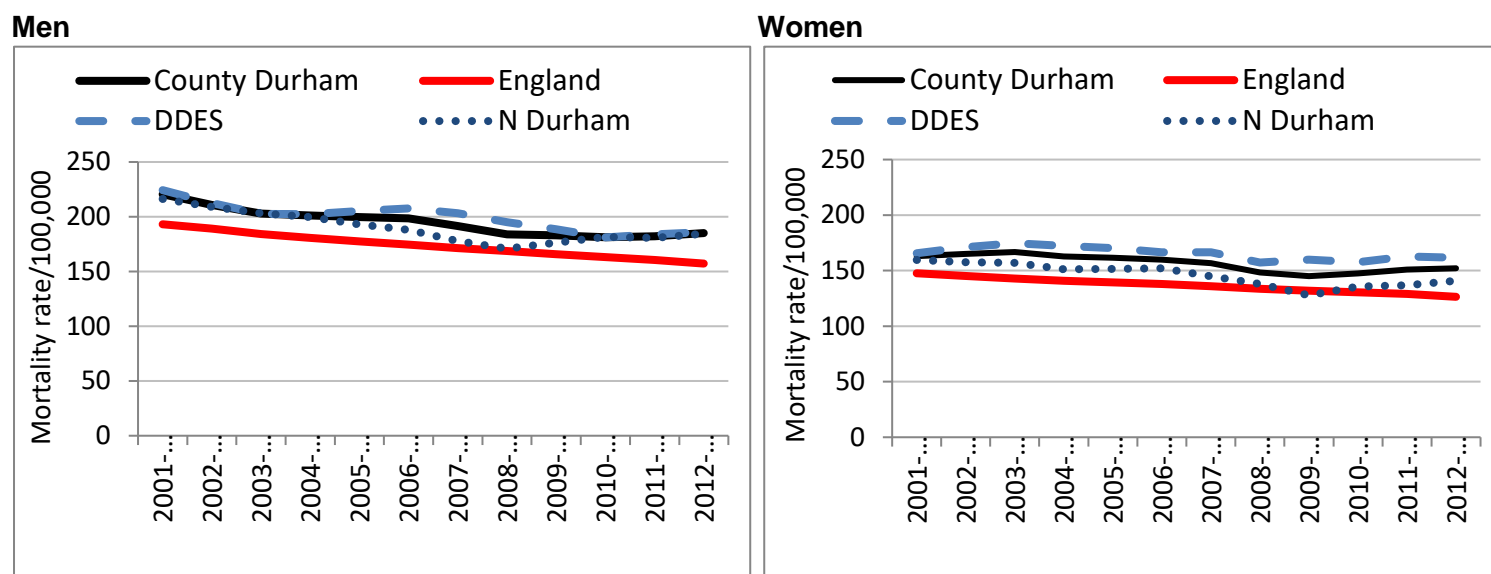
Premature cancer mortality in County Durham has been reducing over time for men and women (Figure 8 below).

- Between 2001 and 2014, reductions in female mortality rates were greater for England (-16.2%) than County Durham (-9.7%)
- Between 2001 and 2014, reductions in male mortality were similar locally (-19.3%) and nationally (-20%).

Despite these reductions, premature mortality rates remain significantly and consistently higher in County Durham than England.

**Figure 8:** Trend in male and female premature mortality 2001-03 to 2012-14, County Durham, DDES and North Durham CCGs

Source: CancerStats, PHE



N.B. The latest complete time period of data at County Durham and CCG level is 2012-14. The time period 2013-2015 is available at County Durham level through the Public Health Outcomes Framework but the data have not been released on CancerStats for the CCG areas.

**Figure 9:** Absolute and relative gaps in cancer incidence rates per 100,000, comparing 2001-03 to 2012-14, all cancers

Source: CancerStats, PHE

	Men		Women	
	2001-03	2012-14	2001-03	2012-14
Average number of premature deaths in County Durham per year	430	429	351	371
Absolute gap between County Durham and England	27.4	27.9	15.4	25.5
Relative gap (%)	14.2	17.8	10.4	20.2

- Male absolute and relative gaps, between County Durham and England, have shown little overall change between the two time periods.
- The absolute and relative gaps between England and County Durham have widened for women.

The Segment Tool, developed by PHE, provides an insight into what it would mean in terms of additional years of life if the gap with England was removed. If County Durham had the same cancer mortality rates (all ages) as England, there would be gains in years of life expectancy as follows: 0.46 years for men (equivalent to 346 fewer excess deaths) and 0.49 years for women (equivalent to 329 excess deaths).

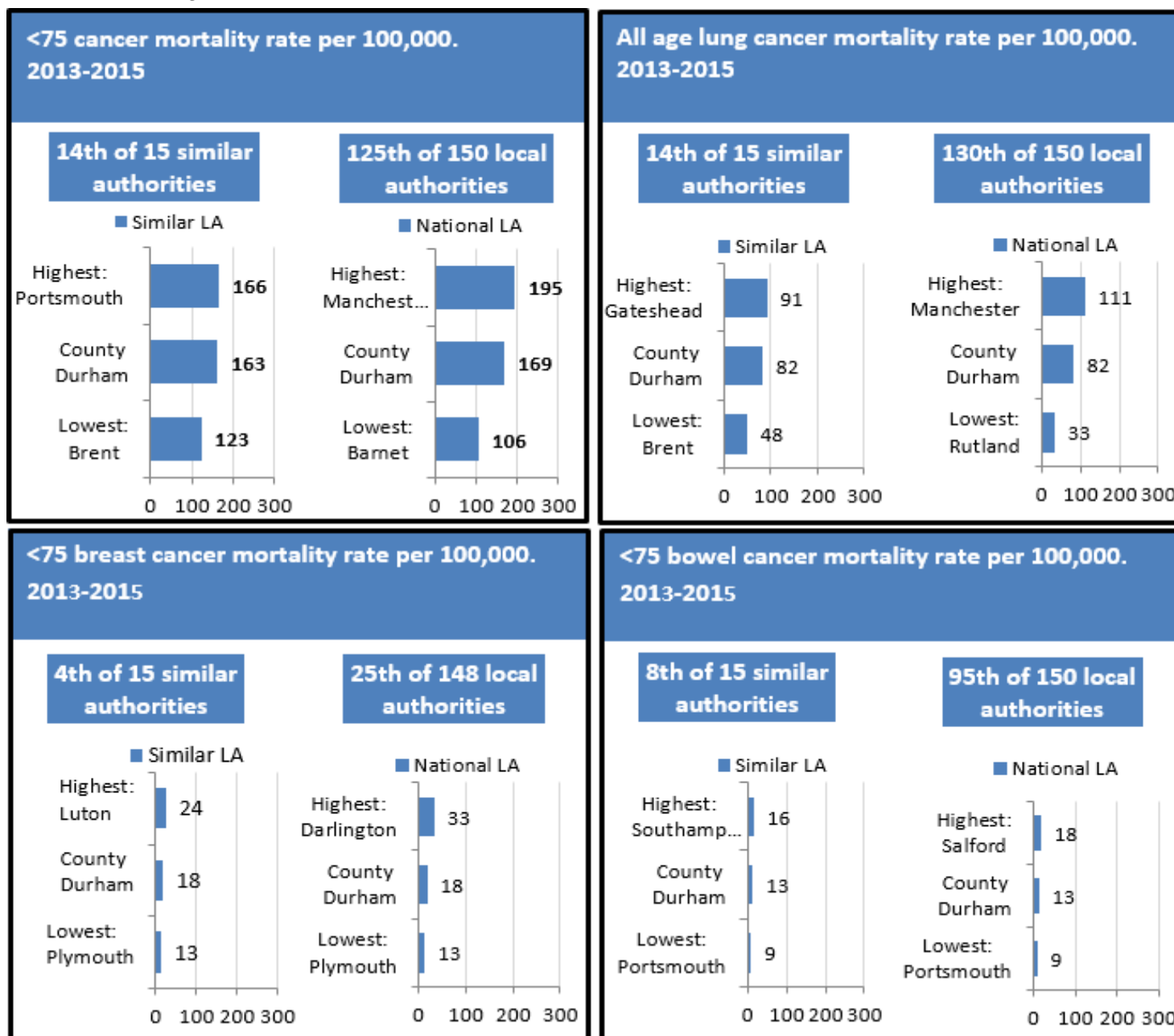
### Benchmarking premature mortality

When looking at any health profile for County Durham, the natural comparison is how it compares against the England average. Whilst this is vital for understanding the wider picture of health and which areas are of particular concern, it often shows County Durham performing significantly worse than England for most indicators. This type of comparison can be misleading as it does not consider the social or economic nature of an individual area. Benchmarking County Durham against similar local authorities gives local context, enabling a more detailed look at whether local people's health is better, worse or similar to like authorities.

PHE's Longer Lives is drawn from the Public Health Outcomes Framework (PHOF) and focuses on premature death. County Durham is compared against the other 150 local authorities nationally, and 15 similar local authorities. Local authorities in the same socio-economic bracket (identified as 'similar') are: Brent, Bristol, Enfield, Gateshead, Greenwich, Leeds, Luton, Plymouth, Portsmouth, Sefton, Sheffield, Southampton, Wakefield and Wirral.

**Figure 10:** Various cancer mortality rates, persons, 2013-15, compared to similar local authorities and all local authorities

Source: PHE Longer Lives, 2016



- Compared to similar local authorities, County Durham is ranked second highest for rates of premature cancer mortality for all cancers and lung cancer.
- Nationally, County Durham is not in the worst decile (10%) of LAs for any of the selected mortality measures.

Trends in premature mortality have been examined for the four key cancer sites. More detail can be found in the Cancer Health Equity (2017). The time periods used for this analysis are five-year pooled periods. The latest data available are 2010-2014 and comparisons over time use 2001-2005 as the baseline.

#### Lung cancer

- An average of 214 people per year in County Durham die prematurely as a result of lung cancer.
- Compared to England, rates of male and female lung cancer premature mortality are significantly higher in County Durham.
- Lung cancer premature mortality is significantly higher for males than females in England, County Durham and DDES and North Durham CCGs.
- Female lung cancer premature mortality has increased in all areas over time, including England, whereas there has been a decrease in all areas for males.



## Breast cancer

- An average of 54 women per year in County Durham die prematurely as a result of breast cancer. The number of male premature deaths from breast cancer in County Durham is suppressed due to disclosure control (the numbers are less than 5 per year).
- Rates of breast cancer premature mortality in County Durham, DDES CCG and North Durham CCG are statistically similar in women and are significantly lower in County Durham and DDES and North Durham CCGs.
- Rates of premature mortality from breast cancer have decreased in all areas over time, including England.

## Bowel cancer

- An average of 66 people per year in County Durham die prematurely as a result of bowel cancer.
- There is no statistical difference in rates of female bowel cancer incidence between England and either County Durham, DDES CCG or North Durham CCG. For males, premature mortality rates are significantly higher than England in County Durham and DDES CCG.
- Bowel cancer premature mortality is significantly higher for males than females in England, County Durham, DDES CCG and North Durham CCG.
- Rates of premature mortality from bowel cancer have decreased in all areas for males and females over time, including England.

## Prostate cancer

- An average of 32 men per year in County Durham die prematurely as a result of prostate cancer.
- Lung cancer premature mortality is significantly higher for males in County Durham than England and North Durham CCG.
- Whilst there has been a national decrease in prostate cancer premature mortality, there has been an increase in County Durham and variation at CCG level: little change in DDES CCG and an increase in North Durham CCG.

## Cancer, Inequality and Deprivation in County Durham

Drives to reduce cancer incidence and premature mortality at an area level (i.e. County Durham) take no account of inequalities within areas. Health inequalities can be defined as differences in health status or in the distribution of health determinants between different population groups (WHO, 2013). They arise from differences in socio-economic and environmental factors which influence people's behaviour, the opportunities available to them, the choices they make, their risk of poor health and their resilience.

Often inequalities are geographical, with health status or outcomes worse in more deprived areas (the social gradient). For example, whilst premature mortality from cancer is decreasing, it is possible that this could be alongside widening inequalities both within and between areas.

In order to understand more of this socio-economic dimension to inequalities in health, the Index of Multiple Deprivation (IMD) 2015 is used to show how health measures vary by deprivation within County Durham.

The Slope and Relative Indices of Inequalities (SII and RII) describe the size of the gap between the least and most deprived Middle Super Output Areas (MSOA); these have been calculated for all cancer incidence and premature mortality.

### **Relative rank:**

Calculated by ranking MSOAs according to ID2015 score and assigning a relative rank, based on a proportion of MSOA population.

### **Slope Index of Inequality (SII):**

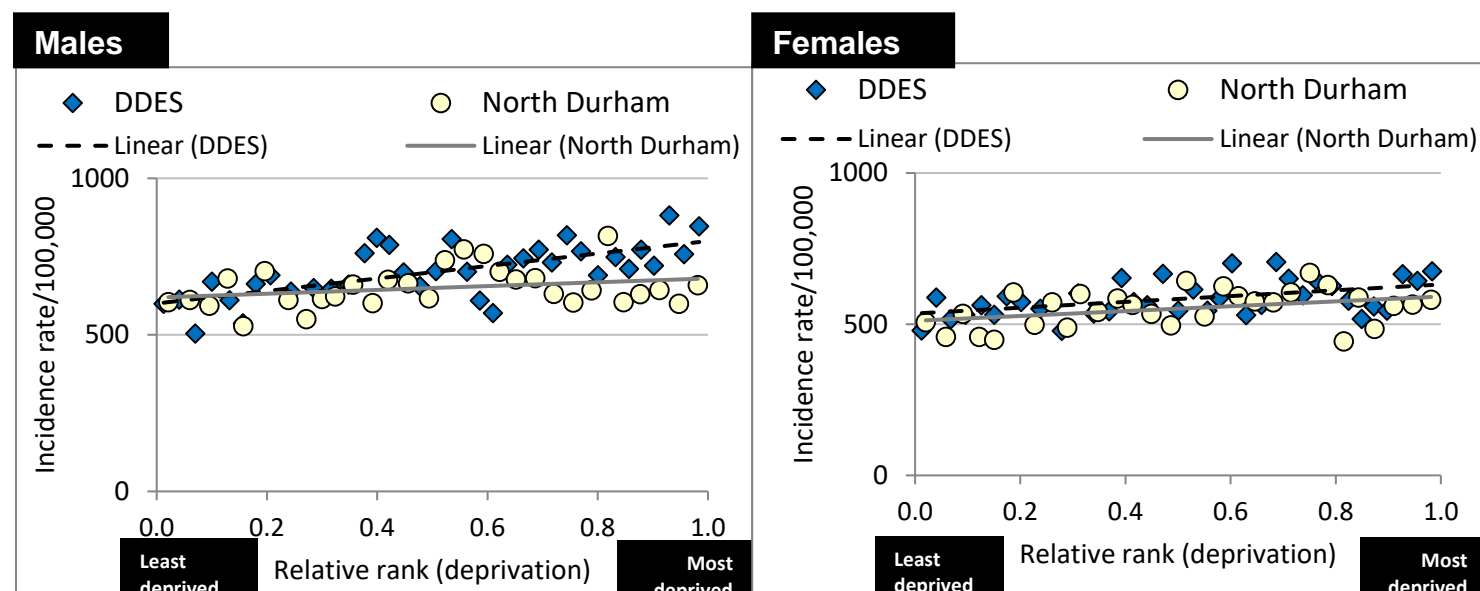
The difference between the most and least deprived MSOAs.

### **Relative Index of Inequality (RII):**

The size of the gap between the least and most deprived wards, expressed as a percentage of the average rate over all MSOAs.

**Figure 11:** Incidence (2008-12) rates per 100,000, all cancers, by Middle Super Output Area (MSOA) and relative rank of deprivation (ID2015), County Durham, North Durham CCG and DDES CCG

Source: PHE, DCCPHI



The charts in Figure 11 show that the distribution of all cancer incidence across North Durham and DDES CCGs is unequal. It is higher in the more deprived areas. The size of the gaps between the least and most deprived MSOAs can be seen in Figure 12 below.

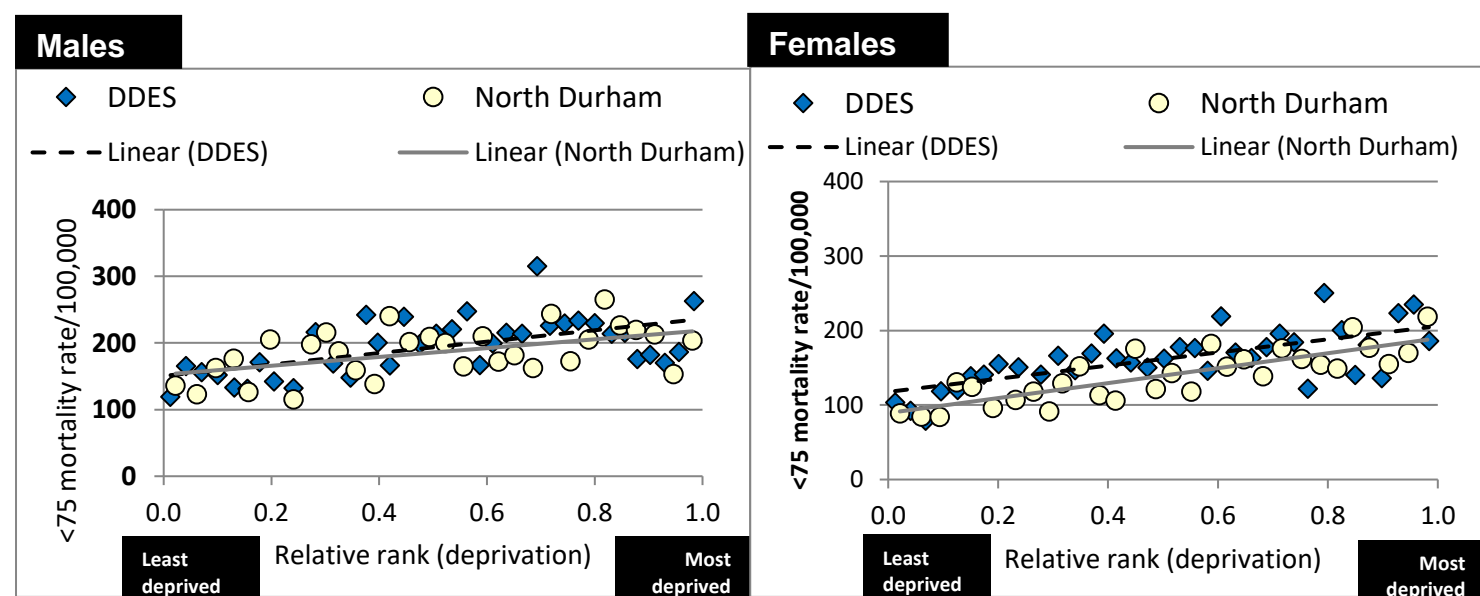
**Figure 12:** Summary of key inequalities for all cancer incidence within County Durham, DDES and North Durham, 2008-2012

2008-2012			
	Mean (rate per 100,000)	SII (rate per 100,000)	RII (%)
Males			
County Durham	683.7	155.3	22.7
DDES	706.7	201.2	28.5
North Durham	656.1	50.8	7.7
Females			
County Durham	567.7	99.2	17.5
DDES	583.5	100.1	17.2
North Durham	548.9	76.5	13.9

Source: PHE, DCCPHI

**Figure 13:** Premature mortality (2010-14) rates per 100,000, all cancers, by MSOA and deprivation (ID2015), County Durham, North Durham CCG and DDES CCG

Source: Primary Care Mortality Database (PCMD), NHS Digital



- The charts in Figure 13 show that the distribution of premature cancer mortality across North Durham and DDES CCGs is unequal. It is higher in the more deprived areas. The size of the gaps between the least and most deprived MSOAs can be seen in Figure 14 below.
- The Segment tool, developed by PHE, shows that if County Durham's residents in the most deprived quintile had the same cancer mortality rates as the least deprived quintile there would be gains in years of life expectancy; 1.6 years for men (equivalent to 219 excess deaths) and 1.98 years for women (equivalent to 234 excess deaths).

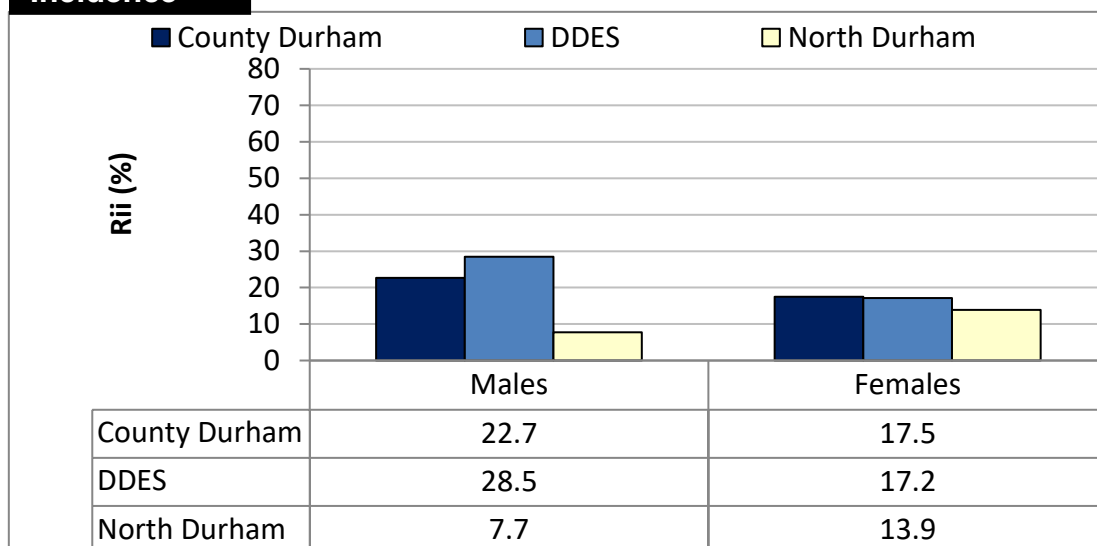
**Figure 14:** Summary of key inequalities for all cancer premature mortality within County Durham, DDES and North Durham, 2010-2014

Source: PHE, DCCPHI

	2010-2014		
	Mean (rate per 100,000)	SII (rate per 100,000)	RII (%)
Males			
County Durham	183.4	78.8	43.0
DDES	185.9	88.2	47.5
North Durham	180.7	63.3	35.0
Females			
County Durham	148.4	104.4	70.3
DDES	158.0	91.3	57.8
North Durham	137.3	100.7	73.3

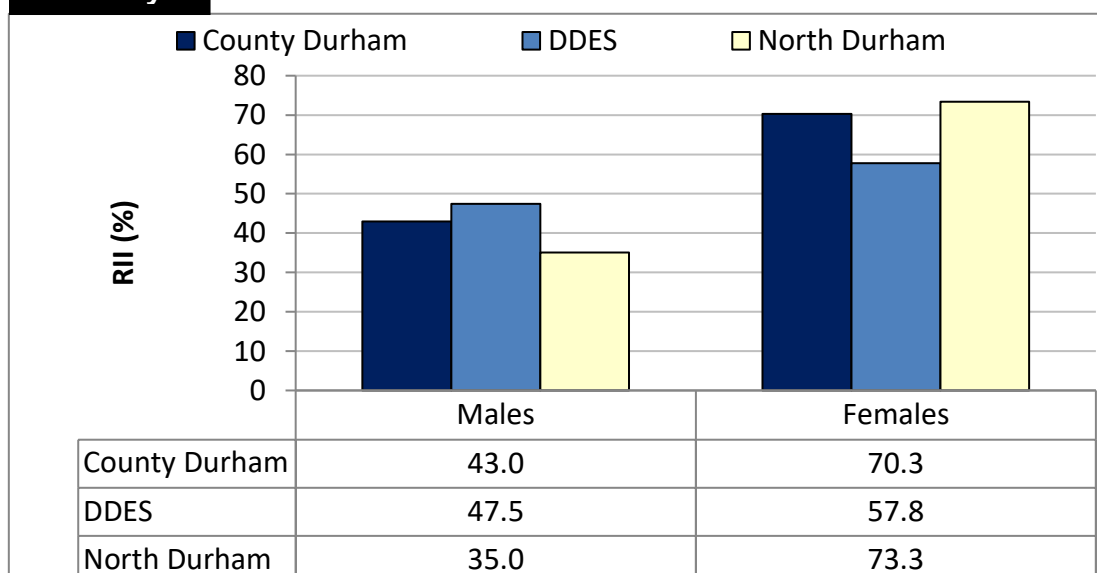
The above inequality analysis shows that inequality is greater for the rate at which people die from cancer than the rate at which people get cancer across County Durham and both CCGs.

### Incidence



Cancer incidence is greater in the more deprived areas for all areas, for men and women.

### Mortality



For premature mortality, the size of this gap increases in all areas for men and women.

The increase in the size of the gap is bigger for women than men

For some cancer types, incidence and mortality rates are strongly associated with the level of socio-economic deprivation experienced by that area. More detail can be found in the Cancer Health Equity Audit (2017). The key findings are:






- The incidence rates for bowel, prostate and female breast cancer are weakly correlated with deprivation.
- Lung cancer incidence is strongly correlated with deprivation.
- Premature mortality rates for bowel, prostate and female breast cancer are weakly correlated with deprivation.
- Lung cancer premature mortality is strongly correlated with deprivation.

## Screening

The UK has three screening programmes for cancer: bowel, breast and cervical. Cancer screening plays an important part in detecting cancers at an early, more treatable stage, and for cervical and bowel cancer screening, preventing cancers from developing in the first place. Screening can be measured in terms of coverage or uptake. Coverage is used here and is defined as the percentage of eligible people in a population at a given point of time who are screened adequately within a specified period (this depends on their age and the screening programme). Uptake is a measure of programme activity.

**Figure 15:** Cancer screening coverage rates, County Durham, North East and England, 2016

Source: PHE, Fingertips

Cancer screening coverage:	County Durham	% change since 2010	North East	England
Breast cancer	 78%	 1.8%	77.3%	75.5%
Cervical cancer	 77%	 2%	75.2%	72.7%
Bowel cancer	 61%	— *	59.4%	57.9%

better than England

\*It is not possible to calculate a trend for bowel cancer screening coverage, as only two time periods are available.

- For the three UK screening programmes, County Durham has consistently achieved significantly higher coverage rates than England.
- More than 1 in 5 people are not screened and the proportion has decreased since 2010 for breast and cervical screening.

## Staging and routes to diagnosis

Cancers detected at an early stage are often easier to treat and show better survival than later stage cancers. Several measures for early diagnosis exist, some of which include the route a patient was diagnosed by. The stage of a cancer means how far it has grown and spread. It is normally worked out according to the size of the primary tumour; whether the cancer has spread to any nearby lymph nodes; whether the cancer has spread to another part of the body. The stage at which a cancer is detected can affect the outcome of the disease in terms of survival time and also quality of life. The likelihood of cancer treatment being successful increases with earlier detection. This in turn increases the length of cancer survival.

Lack of symptom awareness applies to affluent and disadvantaged groups but is more acute in disadvantaged groups. Surveys of public awareness, anticipated delay and perceived barriers to seeking medical advice suggest that males, younger people, and those from lower socio-economic groups and minority ethnic groups have lower levels of awareness of early symptoms and signs.

Cancers are staged using an international classification system. For most types of cancer there are 4 stages, with stage 1 being an early cancer and stage 4 an advanced cancer. Late stage (between stages 3 or 4) cancer is associated with poor survival outcomes and influences treatment plans for patients.

**Figure 16:** Percentage of cancers diagnosed by stage, Breast, Bowel and Lung, 2012-14  
 Source: National Cancer Registration and Analysis Service (NCRAS), PHE

	Cancer	Staging		
		1 & 2	3 & 4	Unknown
<b>DDES</b>	Breast	78.8	15.4	5.8
	Bowel	37.4	48.2	14.4
	Lung	24.5	70.9	4.6
<b>North Durham</b>	Breast	78.7	14.0	7.2
	Bowel	31.1	56.7	12.2
	Lung	25.8	68.7	5.6
<b>England</b>	Breast	75.8	13.5	10.7
	Bowel	38.7	48.4	12.9
	Lung	22.6	67.5	9.9

Focusing on DDES CCG, North Durham CCG and England, rates of diagnosis of:

- Breast cancers at stages 1 and 2 in DDES and North Durham CCGs (both 79%) are marginally higher than England (76%).
- Lung cancers at stages 1 and 2 are higher in DDES (24.5%) and North Durham (25.8%) than England (22.6%).
- Bowel cancers at stages 1 and 2 are lower in North Durham (31.1%) than DDES (37.4%) and England (38.7%).

Given the relatively large proportion of cancers still diagnosed at a late stage, both locally and nationally, (Figure 16) there remains a need for continued awareness campaigns, promotion of healthy lifestyle choices, screening and access to appropriate diagnostics for General Practices.

### Survival

Cancer survival is the proportion of people surviving after a given interval (such as one year or five years) following their diagnosis of cancer. 'Relative' survival is the most commonly used method. It provides an estimate of the percentage of patients still alive while taking into account other, non-cancer related causes of death (e.g. the percentage of patients that would be expected to have died from other causes during that period if they did not have cancer). One-year relative survival has been used as an indicator of early diagnosis, since death before one year could be due to the disease being diagnosed at a late stage. Five year survival rates for cancer following diagnosis can give an indication of the success of treatment. Late diagnosis is a major factor in poor survival rates.

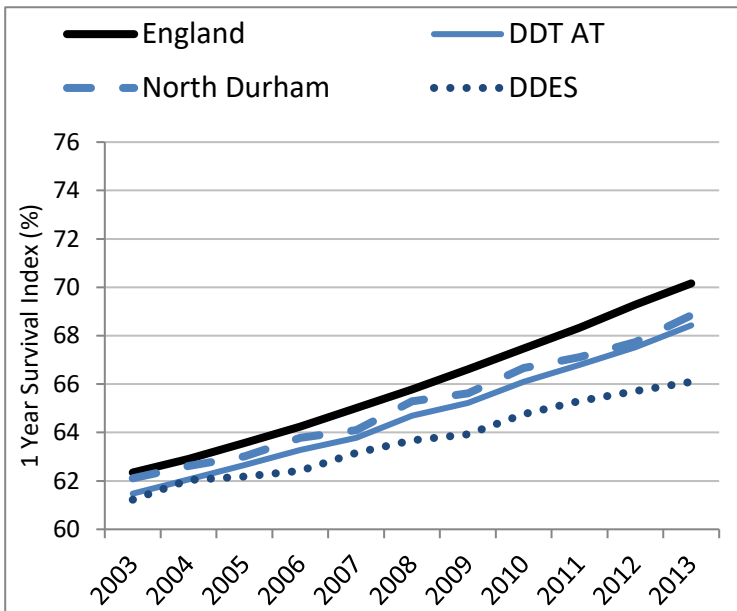
**Figure 17:** One-year survival index (%), (1) all cancers and (2) three cancers combined (breast, colorectal and lung), DDES CCG, North Durham CCG, Darlington, Durham and Tees Area Team (DDT AT) and England, based on patients diagnosed up to 2014

Source: Cancer and End of Life Care Analysis Team, ONS

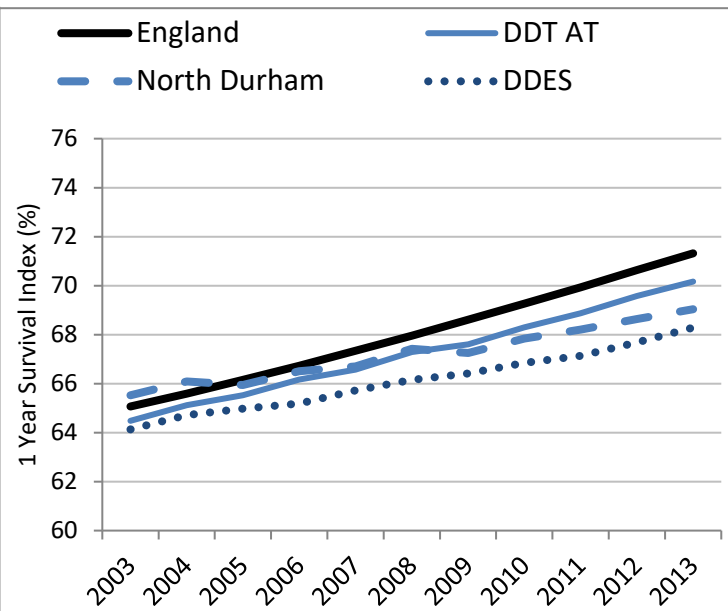
	All cancers		Three cancers combined	
	Increase in survival index (% points)	% increase in survival index	Increase in survival index	% increase in survival index
England	7.8	12.5	6.3	9.6
DDT AT*	7.0	11.3	5.7	8.8
DDES	4.9	8.0	4.2	6.5
North Durham	6.7	10.8	3.5	5.4

\* Durham, Darlington and Tees Area Team

## (1) All cancers



## (2) Three cancers combined



- All cancer survival rates (one year) have been increasing over time in all areas. Proportionally, the increase in the survival index between 2003 and 2013 was 12.5% nationally, compared to increases of 10.8% (North Durham) and 8% (DDES). These increases were proportionally lower than in DDT AT (11.3%).
- The survival rates for three cancers combined (one year) have also been increasing over time in all areas. Proportionally, the increase in the survival index between 2003 and 2013 was 9.6% nationally compared to increases of 5.4% (North Durham) and 6.5% (DDES). These increases were proportionally lower than in DDT AT (8.8%).

## Groups most at risk

Anyone can develop cancer but some people are more at risk than others. There are a number of factors associated with a greater risk of cancer, such as:

### Gender

Men have higher rates of cancer incidence than women. The rate at which women get cancer is increasing over time and at a faster pace than the rate for men. Prostate cancer is the most common cancer in males, followed by lung and bowel cancers; the three together make up 53% of all male cases. Breast cancer is the most common cancer in females, followed by lung and bowel cancers; the three together make up 53% of all female cases.

The rate at which men under the age of 75 die from cancer is higher than the rate for women, however the rates are falling faster for men than women.

### People living in deprived communities

Socially deprived communities currently bear the greatest burden of ill health and disease in County Durham. More people are diagnosed with, and die prematurely from, cancer in more deprived areas. Certain types of cancer, such as lung cancer, are more likely to be diagnosed in the more deprived groups and premature mortality rates are higher.

### Older people

The risk of developing cancer increases with age. Half of all newly diagnosed cancers are in people over the age of 75. There are some cancer types that are more common in younger people than adults, however the majority of types and the most common types (including breast, lung and prostate cancer) are more common in older people.

### People with unhealthy lifestyles

The lifestyle risk factors associated with increased risk of cancer include smoking, drinking alcohol, being obese, physically inactive and eating certain foods.

- Smoking - The links between smoking and cancer are very clear. In the UK about 1 in 5 cancers, and more than 1 in 4 cancer deaths, are linked to smoking. It increases the risk of many cancers, including cancers of the mouth, throat, lung, bladder, kidney, pancreas, bowel, stomach and cervix. About 9 out of 10 people who develop lung cancer are smokers. However, not everyone who smokes will develop lung cancer.

- Alcohol - About 4 in 100 cancers in the UK are linked to alcohol. Drinking more than the recommended limits can increase your cancer risk. Alcohol increases the risk of cancers of the mouth and throat. It is also linked to cancers of the bowel, liver and breast. In general, the more you drink, the higher your risk.
- Obesity - Being overweight increases the risk of several cancers, including cancers of the pancreas, bowel, womb and kidney. It can also increase the risk of breast cancer after the menopause. If you're overweight, getting to a healthy weight is one of the best ways to reduce your risk of cancer.
- Physical activity - Regular physical activity has a role in maintaining a healthy body weight but activity itself can also guard against some forms of cancers, including cancers of the breast (after menopause), bowel and womb. Overall, the evidence shows that people who do the most physical activity can cut their risk of developing bowel cancer by about a quarter.
- Diet - Unhealthy diets can increase the risk of several types of cancer, particularly bowel cancer. Risk can be reduced by eating lots of fruit and vegetables and foods that are high in fibre and less processed, as well as less red meat and less salt.

### **People with inherited faulty genes**

Cancer genes, which may increase a person's risk of developing cancer, can be inherited. There may be a pattern of specific types of cancer running in a family. It is estimated that 2 to 3% of cancer diagnoses can be linked to an inherited gene fault; the vast majority are caused by other factors.

### **People exposed to harmful substances**

Certain substances in the natural environment or workplace can cause cancer - these are known as carcinogens. Exposure to chemicals or radiation usually affects a small number of people. Materials such as asbestos, silica and coal products are now heavily regulated in the workplace to ensure that exposure is within safety limits - however, as cancer can develop over decades, some people were exposed before regulations were implemented.

Natural radiation, such as radon gas and ultraviolet (UV) radiation, is linked to lung cancer and skin cancers respectively. Safe sun exposure reduces the risk of skin cancers such as malignant melanoma.

### **People exposed to certain bacteria and viruses**

A certain number of bacteria and viruses are thought to increase the risk of cancer. This list includes HPV, HIV and Hepatitis B and C and the bacteria H. pylori. Not everyone with one of these viruses or bacteria will go on to develop cancer but, in some instances, risks can be reduced to prevent infection in the first place, for example by vaccination or safe sex.

### **Ethnic groups**

In men, cancer is more common in white and black men than in Asian men. The pattern is different for women; cancer is more common in white females than in black or Asian females.

### **People with learning disabilities**

People with learning disabilities can have multiple chronic health conditions and complex health needs and have more difficulty than others in recognising ordinary health problems and getting treatment for them. This can lead to high rates of unmet need and poorly managed conditions, including cancers (Cancer Research UK; 2006).

People may be far less likely to be aware of, or have the opportunity to engage in, the healthy lifestyle behaviours related to reducing the risk of cancers. Women with learning difficulties have been identified as a group with consistently low uptake of screening programmes.

## **How does this topic link to our strategies and plans?**

Cancer is a cross-cutting theme which is reflected in five of the strategic objectives in the County Durham Health and Wellbeing Strategy:

- Reduce health inequalities and early deaths
- Improve the quality of life, independence and care and support for people with long term conditions
- Improve the mental and physical wellbeing of the population
- Protect vulnerable people from harm
- Support people to die in the place of their choice with the care and support that they need.

Cancer is a cross-cutting theme in the priorities of the Sustainability and Transformation Plans in County Durham. These have been developed by NHS organisations in partnership with Durham County Council and other partners to tackle the following three challenges:

- Improving the health and wellbeing of the population
- Improving the quality of care that is provided
- Improving the efficiency of NHS services.

**Author:**

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**Data sources:**

[Office for National Statistics \(ONS\)](#)

[Fingertips, Public Health England \(PHE\)](#)

[CancerStats, PHE](#)

[Macmillan](#)

[Northern and Yorkshire Knowledge and Intelligence Team, PHE](#)

[National Cancer Registration and Analysis Service, PHE](#)

[National Primary Care Mortality Database \(PCMD\), NHS Digital](#)