



Cancer Health Equity Audit

**County Durham, North Durham CCG
and Durham Dales, Easington and
Sedgefield CCG**

2017

**Katie Dunstan-Smith
Michael Fleming
Kirsty Wilkinson**

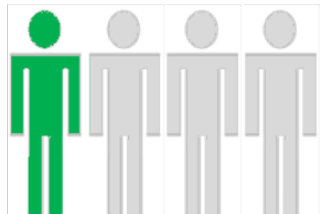
January 2017

Title	A Cancer Health Equity Audit. County Durham, North Durham CCG and Durham Dales, Easington and Sedgefield CCG
Author	Katie Dunstan-Smith (Public Health Intelligence Specialist) Michael Fleming (Public Health Epidemiologist) Kirsty Wilkinson (Macmillan Public Health Portfolio Lead)
Date	January 2017
Purpose	To systematically identify and measure inequality in cancer by assessing the distribution of cancer incidence and mortality relative to deprivation with County Durham. To make recommendations based on the findings to ensure that action is agreed and incorporated into systems with planning, policy and practice in order to improve cancer care.
Contact details	katie.dunstan-smith@durham.gov.uk

Infographic	1
Key findings	2
Summary of analyses 1	3
Summary of analyses 2	6
1. Introduction	8
1.1 What is cancer?	8
1.2 National and local policy	11
1.3 What are health inequalities?	12
1.4 What is health equity audit?	13
1.5 Measuring cancer: glossary and definitions	14
1.6 Data quality, availability and limitations	15
2. Profiling County Durham	16
2.1 Demography	16
2.2 Deprivation and lifestyle	17
2.3 National and local trends	19
2.4 Benchmarking County Durham	20
3. Incidence and premature mortality analysis	22
3.1 All cancers: CCG trends	22
3.2 All cancers – MSOA and inequality analysis	25
3.3 Lung cancer – CCG trends	32
3.4 Lung cancer MSOA and deprivation analysis	35
3.5 Breast cancer – CCG trends	37
3.6 Breast cancer - MSOA and deprivation analysis	40
3.7 Bowel cancer – CCG trends	42
3.8 Bowel cancer – MSOA and deprivation analysis	45
3.9 Prostate cancer – CCG trends	47
3.10 Prostate cancer – MSOA and deprivation analysis	50
4. Staging and routes to diagnosis	52
5. Cancer survival	55
6. GP profiles	57
7. Approaches to reducing early deaths	69
8. Recommendations	69



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 one in four of all deaths in adults aged 35 and over

Key Findings

1. By comparing County Durham to others....

- a) Life expectancy is lower in County Durham than England and higher rates of cancer mortality account for around one-third of this gap.
- b) Within County Durham, life expectancy is lower in the most deprived communities and cancer is the biggest contributor to this gap.
- c) County Durham is not ranked in the worst 10% of local authorities for the rate of deaths under the age of 75 from all cancers or lung, breast or bowel cancer.

2. By looking at within County Durham.....CCGs and small area (MSOA)

- a) Inequality is greater for the rate at which people die from cancer than the rate at which people get cancer.
- b) The rate of new cancer cases is higher in the most deprived communities.
- c) Inequality for males in DDES CCG is widening; the gap between the most and least deprived communities for the rate of new cancer cases has more than doubled.
- d) The rate of cancer deaths under the age of 75 is higher in the most deprived communities.
- e) Inequality has risen sharply for males in North Durham CCG and has widened for females in both CCGs.
- f) In both CCGs, significantly more females are diagnosed with lung cancer than England and the rate of new cases is rising over time.
- g) The rate of new lung cancer cases is strongly linked to deprivation within County Durham.
- h) In both CCGs, significantly more females die under the age of 75 from lung cancer than England and the rate of deaths is rising over time.
- i) The rate of lung cancer death under the age of 75 is linked to deprivation. The relationship is moderate to strong.

3. Staging, survival and practice level variation

- a) It remains difficult to draw conclusions regarding cancer staging due to data quality. Early stage diagnosis increases cancer survival however a relatively large proportion of cancers are still diagnosed at a late stage, both locally and nationally. Around a fifth of cancer patients are diagnosed following an emergency admission to hospital.
- b) The proportion of people surviving one-year following their cancer diagnosis is increasing. Both CCGs have followed this trend however they have not increased as fast as England or the regional area team.
- c) There is significant practice level variation for processes and outcomes related to cancer within the two CCGs and their federations.

Summary of analysis 1

The tables below show how the rates of cancer incidence and premature mortality differ from England and also how rates have changed over time (percentage increase or decrease).

DDES CCG								
Incidence					Mortality			
Cancer type	Significance compared to England		Trend over time		Significance compared to England		Trend over time	
	M	F	M	F	M	F	M	F
All cancers	NS	H	0.2	11.2	H	H	-13.3	-6.2
Lung	H	H	-12.4	32.8	H	H	-24	6.4
Breast	-	L	-	-4.3	-	NS	-	-20.5
Bowel	NS	NS	-5.3	0.5	H	NS	-24.6	-13
Prostate	L	-	3.6	-	NS	-	-0.7	-

North Durham CCG								
Incidence					Mortality			
Cancer type	Significance compared to England		Trend over time		Significance compared to England		Trend over time	
	M	F	M	F	M	F	M	F
All cancers	NS	NS	-7	1.8	H	NS	-12.7	-13.7
Lung	H	H	-27.4	15.9	H	H	-30.8	8.5
Breast	-	L	-	3.6	-	NS	-	-17.5
Bowel	NS	NS	-7.3	-2.1	NS	NS	-21	-26.9
Prostate	L	-	-10.8	-	H	-	13.1	-

	Increasing over time	H	Statistically significantly higher than England
	Reducing over time	L	Statistically significantly lower than England
		NS	Not statistically significantly different to England

The data presented in the table above is summarised in text on the following two pages.

DDES – Four key cancer sites summary

	Lung cancer	Bowel cancer
Incidence	Significantly higher than England for both males and females	No significant difference to England for either males or females
	Decreasing trend for males Increasing trend for females	Decreasing trend for males Little change for females
Premature mortality	Strongly correlated with deprivation Significantly higher than England for both males and females	Weak correlation with deprivation Significantly higher than England for males. No significant differences for women
	Decreasing trend for males Increasing trend for females	Decreasing trend for males and females
	Moderately correlated with deprivation	Weak correlation with deprivation for both CCGs

	Breast cancer	Prostate cancer
Incidence	Significantly lower than England	Significantly lower than England
	Decreasing trend	Increasing trend
	Weak correlation with deprivation	Weak correlation with deprivation
Premature mortality	No significant difference to England	No significant difference to England
	Decreasing trend	Little change in trend
	Weak correlation with deprivation	Weak correlation with deprivation

= poor outcomes

North Durham – Four key cancer sites summary

	Lung cancer	Bowel cancer
Incidence	Significantly higher than England for both males and females	No significant difference to England for either males or females
	Decreasing trend for males Increasing trend for females	Decreasing trend for males and females
Premature mortality	Strongly correlated with deprivation Significantly higher than England for females	Weak correlation with deprivation No significant difference to England for either males or females
	Decreasing trend for males Increasing trend for females	Decreasing trend for males and females
	Strongly correlated with deprivation	Weak correlation with deprivation for both CCGs

	Breast cancer	Prostate cancer
Incidence	Significantly lower than England Increasing trend	Significantly lower than England Decreasing trend
	Weak correlation with deprivation	Weak correlation with deprivation
Premature mortality	No significant difference to England Decreasing trend Moderate correlation with deprivation	Significantly higher in County Durham and North Durham CCG than England Increasing trend Weak correlation with deprivation

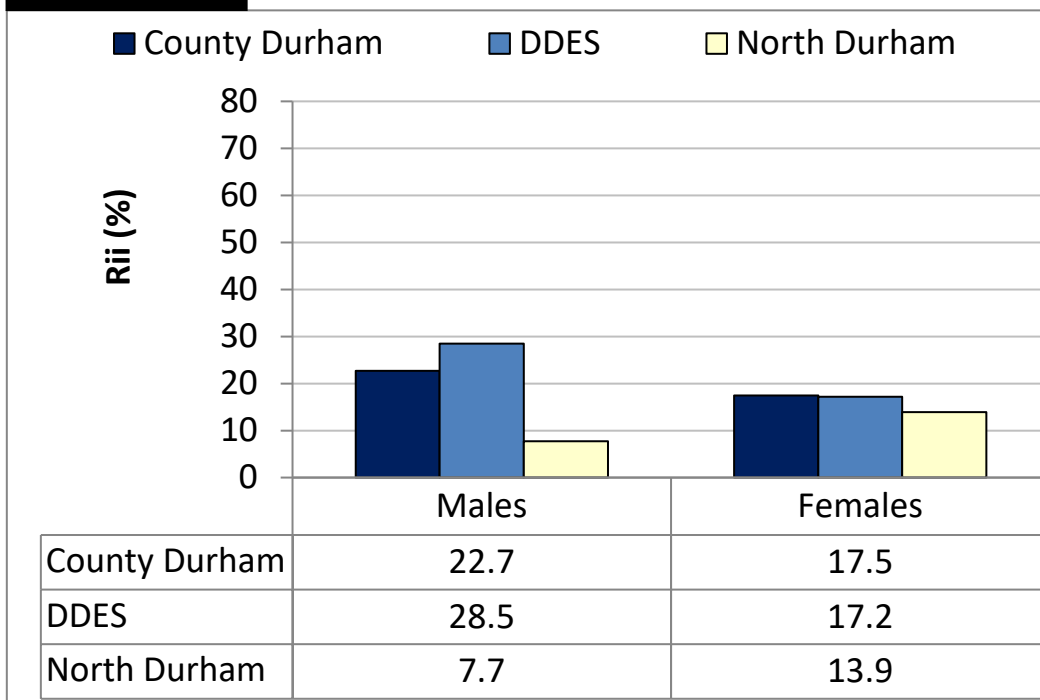
= poor outcomes

Summary of analysis 2 – measuring the gap

Relative Index of Inequality (RII): the size of the gap between the least and most deprived MSOAs (expressed as a percentage of the average rate for all areas)

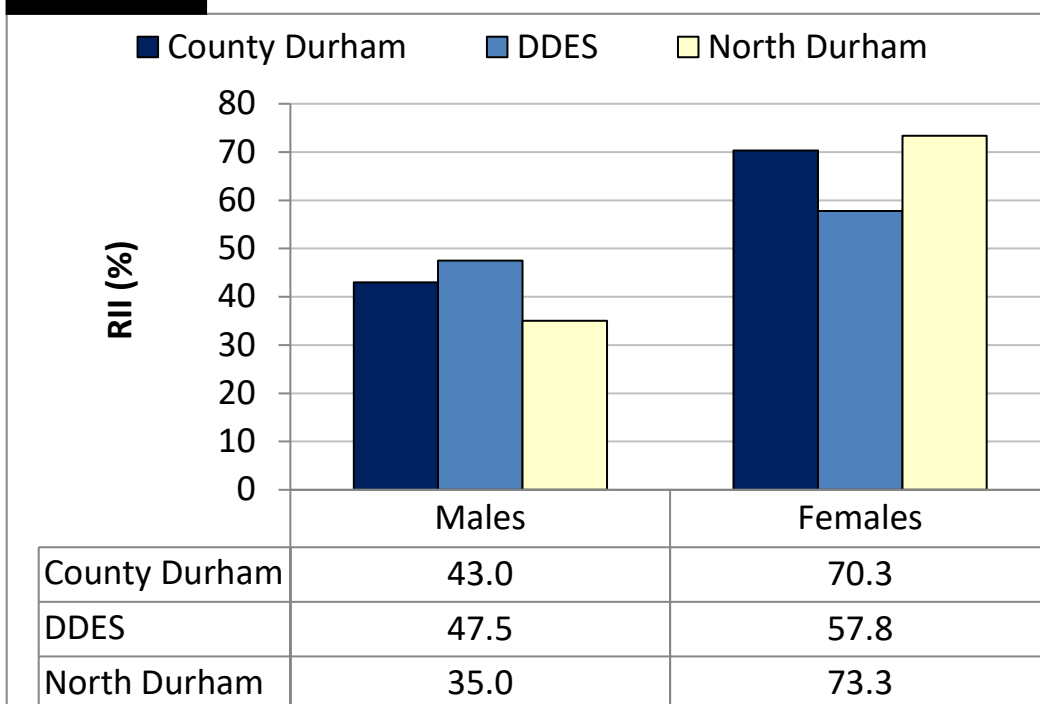
The distribution of (all) cancer incidence and (premature) mortality across County Durham, and North Durham and DDES CCGs is unequal. It is higher in the more deprived areas. The gap between the least and most deprived MSOAs is larger for mortality than incidence in all areas.

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

The tables below show the gap between the most and least deprived communities within County Durham and how this gap has changed over time.

Incidence (all cancers)

	2001-2005		2008-2012	
	Mean (rate per 100,000)	Relative index of inequality (%)	Mean (rate per 100,000)	Relative index of inequality (%)
Men				
County Durham	699.2	8.4	683.7	22.7
DDES	689.7	12.3	706.7	28.5
North Durham	711	8.3	656.1	7.7
Women				
County Durham	525.4	17.3	567.7	17.5
DDES	525.1	18	583.5	17.2
North Durham	526.2	17.8	548.9	13.9

Incidence

For men:

The gap has more than doubled in County Durham and DDES, with little change in North Durham

For women:

The gap has seen little change over time

Premature mortality (all cancer)

	2001-2005		2010-2014	
	Mean (rate per 100,000)	Relative index of inequality (%)	Mean (rate per 100,000)	Relative index of inequality (%)
Men				
County Durham	210.9	36.1	183.4	43
DDES	214.5	66.8	185.9	47.5
North Durham	206.9	5.2	180.7	35
Women				
County Durham	164.3	39.3	148.4	70.3
DDES	168.5	41.6	158	57.8
North Durham	159	37.2	137.3	73.3

Premature mortality

For men:

There is a varied experience over time. The gap has reduced in DDES, but increased in North Durham and County Durham

For women:

The size of the gap has increased in all areas

1. Introduction

1.1 What is cancer?

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). Cancer remains the biggest cause of death among all ages. Improvements in diagnosis and treatment mean that more people are likely to survive cancer than die from it however further improvements are required.

Key improvements should include:

- Focus on prevention and modifiable risk factors and increasing the knowledge of the population of the links between cancer and risk factors.
- Awareness of signs and symptoms with access to swift diagnostic tests.
- Holistic care for people who are affected by cancer.

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



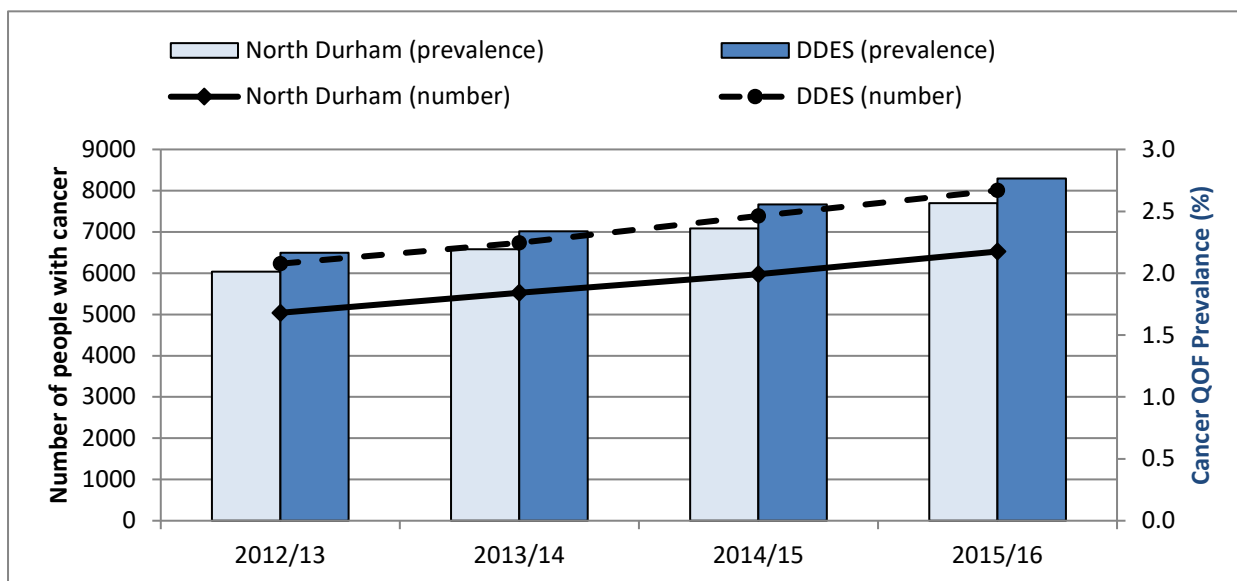
More than half of people diagnosed with cancer today are living more than 10 years. For many types of cancer, it can be seen as a more of a long term condition than a death sentence.

Many cancers are preventable and our risk of getting cancer increases as we age (ONS, 2016). The main impact on the increasing numbers of people being diagnosed with cancer is our lifestyle.

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.

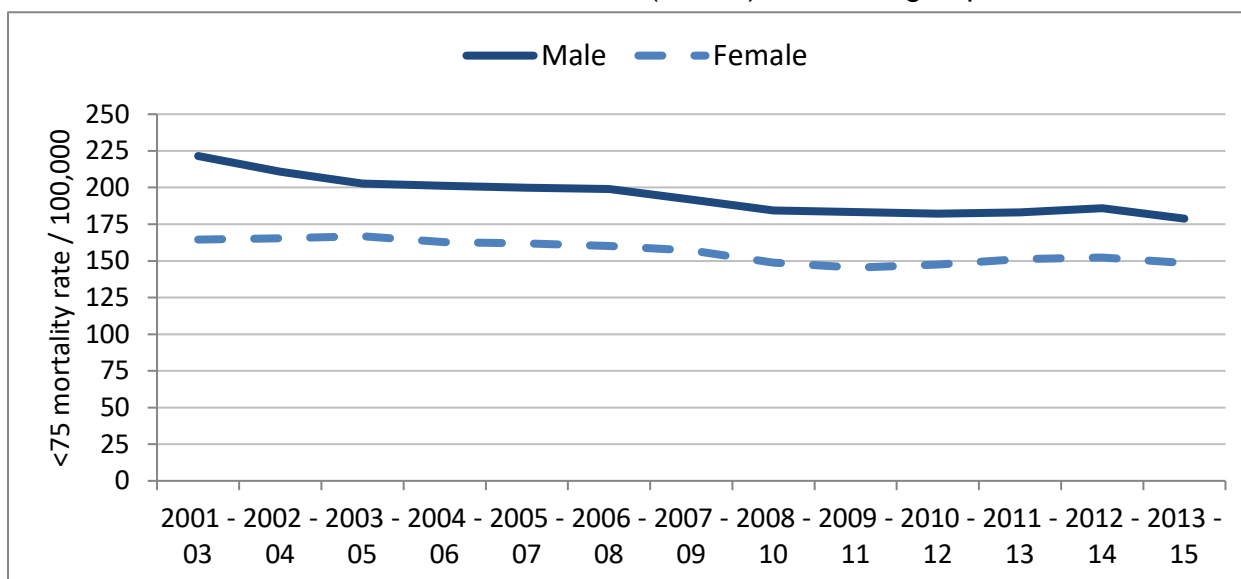
The burden of cancer in County Durham is high. Prevalence, the number of people living with cancer (as recorded on GP disease registers) is rising. In 2015/16 there were almost 15,000 across both CCGs living with cancer (Figure 1). Estimates suggest that cancer prevalence will rise. If the general population 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 QOF cancer prevalence (all ages), % and number, 2012/13 to 2015/16, North Durham and DDES CCGs. Source: Cancer services profiles, PHE, Fingertips.



Between 2013 and 2015, 4,772 County Durham residents died from cancer. Of these almost 50% died prematurely (under 75 years). During this period cancer accounted for almost 65% of deaths in County Durham for those aged less than 75 years of age. Premature cancer mortality in County Durham has been reducing over time.

Figure 2: Trend in male and female premature mortality 2001-03 to 2013-15, County Durham. Source: Public Health Outcomes Framework (PHOF), PHE, Fingertips.



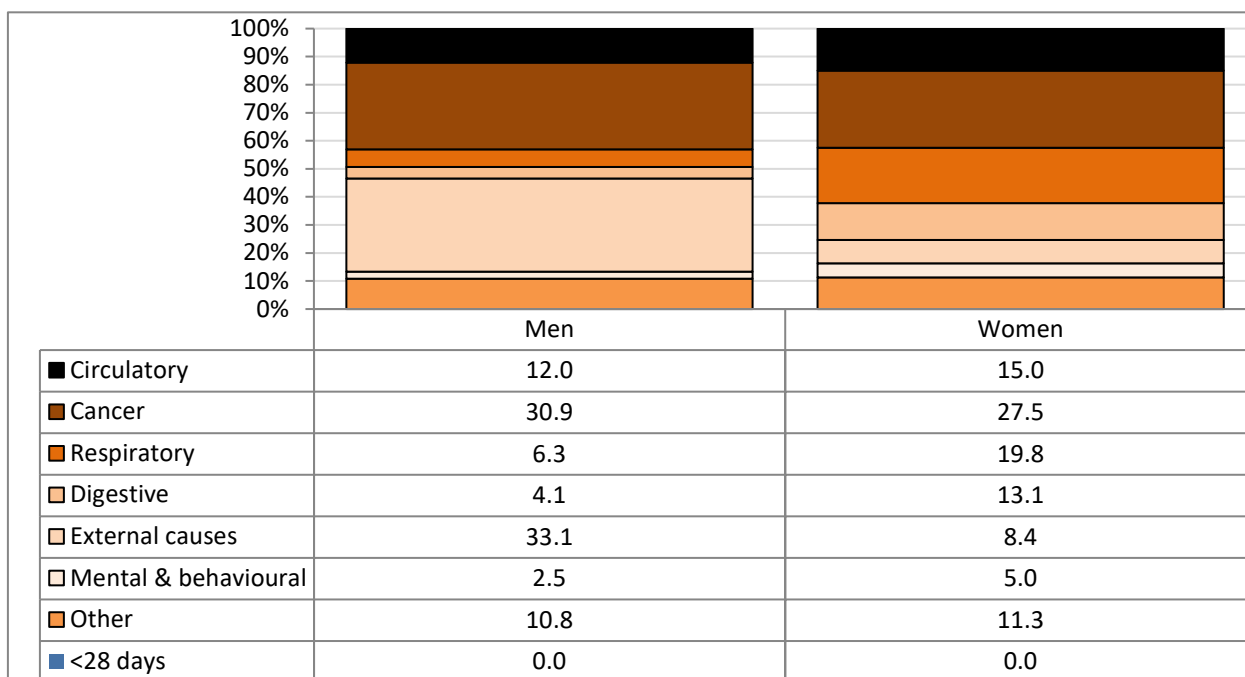
There are significant inequalities in cancer which contribute to the gap in life expectancy between the most deprived and least deprived areas. Generally the national experience is that cancer incidence and mortality are higher among:

- Men compared to women.
- More deprived groups compared to more affluent groups.¹
- Older compared to younger.

¹ In 2010 the National Cancer Intelligence Network reported that breast cancer patients are more likely to be affluent than deprived. Affluent patients are more likely to have a screen detected breast cancer. The most deprived patients have a higher mastectomy rate and received less immediate reconstruction. NCIN Data Briefing. Breast Cancer and Deprivation.

Public Health England’s (PHE) ‘Segment Tool’ shows the main contributors to the lower life expectancy between County Durham and England (figure 2) and between the most and least deprived areas within County Durham (figure 3).

Figure 3: Scarf chart showing the breakdown of the life expectancy gap between County Durham as a whole and England as a whole, by broad cause of death, 2012-14. Source: PHE Segment Tool, 2016.



The tool also illustrates that around 45% of excess cancer mortality in County Durham was due to lung cancer, and that:

For men

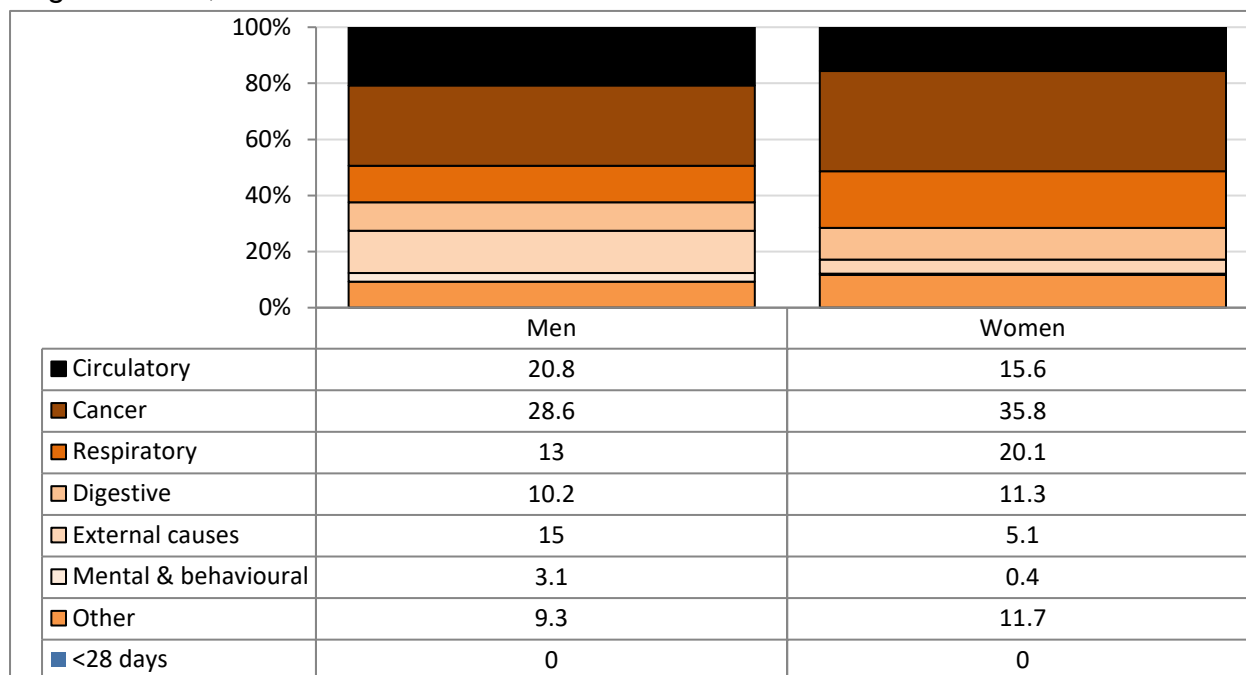
- Around one-third of the gap between County Durham and England (30.9%) is caused by higher rates of cancer mortality.
- Circulatory mortality accounts for 12% of the gap between County Durham and England.

For women

- Around one-quarter of the gap between County Durham and England (27.5%) is caused by higher rates of cancer mortality.
- Respiratory mortality accounts for almost 20% of the gap between County Durham and England.
- Circulatory mortality accounts for 12% of the gap between County Durham and England.

The tool also shows that cancer is the biggest contributor to the gap between the most and least deprived communities within County Durham for both men (28.6%) and women (35.8%) (figure 3).

Figure 4: Scarf chart showing the breakdown of the life expectancy gap between the most and least deprived quintiles in County Durham, %, by broad cause of death, 2012-14. Source: PHE Segment Tool, 2016.



1.2 National and Local Policy

Achieving World-Class Cancer Outcomes: A Strategy for England 2015-2020

- Effective prevention (so that people do not get cancer at all if possible);
- Prompt and accurate diagnosis;
- Informed choice and convenient care;
- Access to the best effective treatments with minimal side effects;
- Always knowing what is going on and why;
- Holistic support; and
- The best possible quality of life, including at the end of life.

National Institute for Clinical and Health Excellence (NICE) clinical guidance on supportive and palliative care (CSG) (2004):

- People affected by cancer should be involved in developing cancer services;
- There should be good communication, and people affected by cancer should be involved in decision making;
- Information should be available free of charge;
- People affected by cancer should be offered a range of physical, emotional, spiritual and social support;
- There should be services to help people living with the after-effects of cancer manage these for themselves;
- People with advanced cancer should have access to a range of services to improve their quality of life;
- There should be support for people dying from cancer;
- The needs of family and other carers of people with cancer should be met;
- There should be a trained workforce to provide services.

NHS Five Year Forward View

- People to have greater control of their own care;
- Breaking down the barriers between acute, primary and social and community care; and
- Contributing to more integrated care for people.

County Durham Health and Wellbeing Board Strategic Objectives:

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

NHS Sustainability and Transformation Plan:

- Engaging patients, communities and NHS staff, with a focus on self-care;
- Implement new care models integrating across health, social and voluntary sectors;
- Reduction in emergency admission and inpatient bed-day;
- Integrated multidisciplinary teams to underpin new care models; and
- Helping to achieve 2020 ambitions on key clinical priorities around cancer.

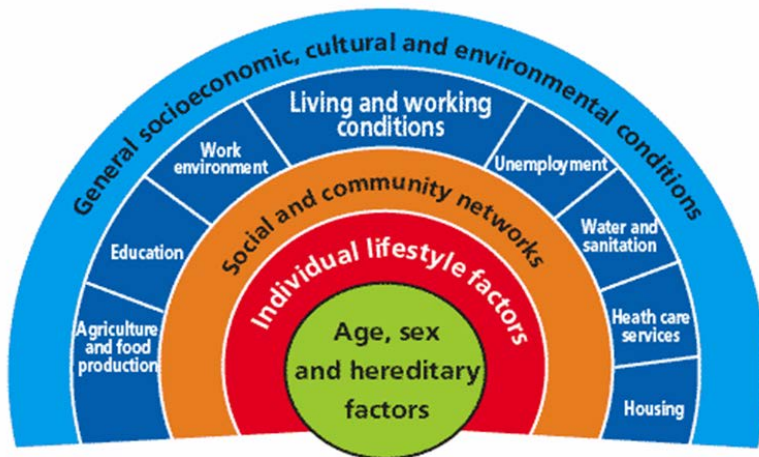
1.3 What are health inequalities?

Health inequalities are disparities between population groups that are systematically associated with socio-economic and environmental factors. Often these inequalities are geographical with health status or outcomes worse in more deprived areas (the social gradient), they can also be experienced by different groups of people, for example the young, the elderly, or BME groups. Such variations in health are avoidable and unjust.

The health of the people in County Durham has improved significantly over recent years, but remains worse than the England average. Health inequalities remain persistent and pervasive. Levels of deprivation are higher and life expectancy is lower than the England average. The health and wellbeing of County Durham's population is shaped not only by lifestyle and behavioural factors but also by a wide variety of social, economic and environmental factors (such as poverty, housing, ethnicity, place of residence, education, and environment). This is nothing new, and the importance of these social determinants of health inequalities is well established. Evidence from 'Due North: Independent Inquiry on Health Equity for the North' (2014), the Marmot review ('Fair Society, Healthy Lives', 2010), the Acheson Report (1998) and the Black Report (1982) is very clear that health inequalities are the result of complex interactions that are caused by a number of factors. We know that health deteriorates with increasing socio-economic disadvantage, and that improvements in health outcomes cannot be made without action in these social (or wider) determinants.

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 that influence people's behaviour, the opportunities available to them, the choices they make, their risk of poor health and their resilience. Often these inequalities are geographical, with health status or outcomes worse in more deprived areas (the social gradient). They can also be experienced by different population groups (such as older people, children, black and minority ethnic groups (BME), lesbian, gay, bisexual, transgender (LGBT)). Inequalities in these social determinants of health are not inevitable, and are therefore considered avoidable and unjust. Health inequalities are an extremely complex issue, and only through concerted and collective effort they can be prevented.

Figure 5: The rainbow model of health. Source: Policies and strategies to promote social equity in health, 1991, Dahlgren and Whitehead.



The social determinants of health are widely described as ‘the causes of the causes of health inequalities’. These are the conditions in which people are born, grow, live, work and age. We know these conditions affect the likelihood of people enjoying long, healthy lives, and will determine variations in health and life expectancy. The extensive evidence base on health inequalities demonstrates the need for policy makers to focus actions on the social determinants of health as the most effective way of addressing the issue (Marmot, 2010).

Marmot also demonstrated a gradient in health outcomes; the lower an individual’s social and economic status, the worse their expected health. However, these health inequalities are avoidable and to reduce them is a fundamental issue of social justice, bringing significant benefits to society. The Marmot Review also presented an evidence base of interventions which could contribute to reducing health inequalities by levelling up the gradient. Focusing solely on the most disadvantaged in society will not reduce health inequalities sufficiently. To reduce the steepness of the social gradient in health, actions must be universal, but with a scale and intensity which is proportionate to the level of disadvantage. This is called proportionate universalism.

‘Due North’ documented the scale of the health divide between the North and the rest of England. It noted the causes of these health inequalities were broadly similar across the country; differences in poverty, power and resources needed for health. However, it stated the severity of these causes was greater in the North. Furthermore, it suggested austerity measures were making the situation even worse, impacting more heavily on the North and disadvantaged areas.

The importance of these social determinants of health inequalities is well established; the evidence is very clear that health inequalities are the result of complex interactions caused by a number of factors. These can be described as:

- Inequalities in opportunity – caused by poverty, family circumstances, education, employment, environment, housing.
- Inequalities in unhealthy behaviours – caused by smoking, lack of physical activity, eating poor quality food, drugs misuse, inappropriate alcohol consumption and risky sexual activity.
- Inequalities in access to services for those who are already ill or have accrued risk factors for disease (health inequity).

1.4 What is health equity audit?

Health equity audit (HEA) is an important tool when considering how to reduce health inequalities and inequities in the provision of appropriate services. It identifies how fairly services or other resources are distributed relative to the health needs of different groups and areas. The ultimate aim of HEA is distribute resources relative to need. It is a cyclical process as illustrated in figure 5.

Figure 6: The health equity audit cycle.



The first output of a health equity audit is the production of a health equity profile. This should identify and quantify both the need and inequality. A health equity profile only becomes a health equity audit once the cycle as shown in figure 1 is complete i.e. once changes in resource allocation have been made and outcomes of this change have been reviewed. This process should normally take no less than three years.

This HEA assesses the distribution of cancer incidence and mortality relative to deprivation within County Durham and the two Clinical Commissioning Groups (CCGs) within its borders; North Durham (ND) CCG and Durham Dales, Easington and Sedgfield (DDES) CCG.

1.5 Measuring cancer: Glossary and definitions

Analysis within this document covers incidence and premature mortality for all cancers, and breast, bowel, prostate and lung cancers at County, CCG and MSOA level. All numbers and rates in this document relate only to residents of County Durham and the sub-areas therein. All rates are directly age-standardised per 100,000 population (to the European Standard Population 2013). Where the count of individuals (incidence or mortality) was less than 5, the numbers have been suppressed to avoid potential disclosure. The terms are defined below:

Incidence: The number of new cases of cancer diagnosed for a given period, usually a year. 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.

Prevalence: Cancer prevalence is a measure of the burden of cancer in a population at a particular point in time. The statistics are provided as the total number or the percentage of people who are alive (either living with or surviving cancer) on a particular date.

Premature mortality: Premature cancer mortality is the number of people who have died from cancer under the age of 75. The statistics show the number and the rate of cancer deaths per year. Cancer mortality is commonly expressed as directly age-standardised rates in exactly the same way as cancer incidence (see above).

Staging:	Stage is a measure of how much a cancer has grown and spread, with later stages having poorer outcomes. 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. Early detection of cancer increases the likelihood of treatment being successful and therefore increased length of survival.
Survival:	Survival estimates are the percentage of patients who are still alive a specified time after their diagnosis of cancer. The most common estimates are one-year and five-year survival. There are a number of methods used to calculate cancer survival. The most commonly used method is called relative survival.
All cancers:	This grouping excludes registrations for non-melanoma skin cancer (ICD-10 C44). Registrations for non-melanoma skin cancer (ICD-10 C44) are likely to be less complete and less accurate than for other cancer sites. Such cancers are relatively common and usually non-fatal. There is a propensity for multiple tumours to occur in one individual. This is the standard practice of the National Cancer Registration and Analysis Service, Public Health England (PHE).

1.6 Data quality, availability and limitations

The premature mortality and incidence rates used in this HEA cannot be directly compared to those presented in the previous Cancer Health Equity for County Durham (2014). The standard population used to calculate directly age-standardised rates (European Standard Population) was changed in 2013. These are the key points to note:

- A change to the methods for calculating age-standardised rates will cause mortality rates and cancer incidence rates to increase significantly.
- It is important to be aware that this is due to an improvement in statistical methods and not to any unusual increase in the actual numbers of deaths or cancer registrations.

PHE advises caution with the interpretation of cancers diagnosed at early stage. This is due to the overall staging completeness, whilst improving, is not entirely consistent. It cannot be assumed that the ones that aren't staged are a similar breakdown to the ones that are; some trusts may have particular problems staging a particular group for example.

2 Profiling County Durham

2.1 Demography

Cancer risk increases with age. County Durham has an ageing population structure. This follows national and historical trends brought about by the post Second World War spike in births, followed by steadily decreasing birth rates until the start of the new millennium. Office for National Statistics (ONS) projections suggest that the proportion of County Durham's population aged 65+ will rise from 19.6% in 2014 to 26.1% by 2035.

Figure 7: County Durham population pyramid, Source: 2014 mid-population estimates, ONS.

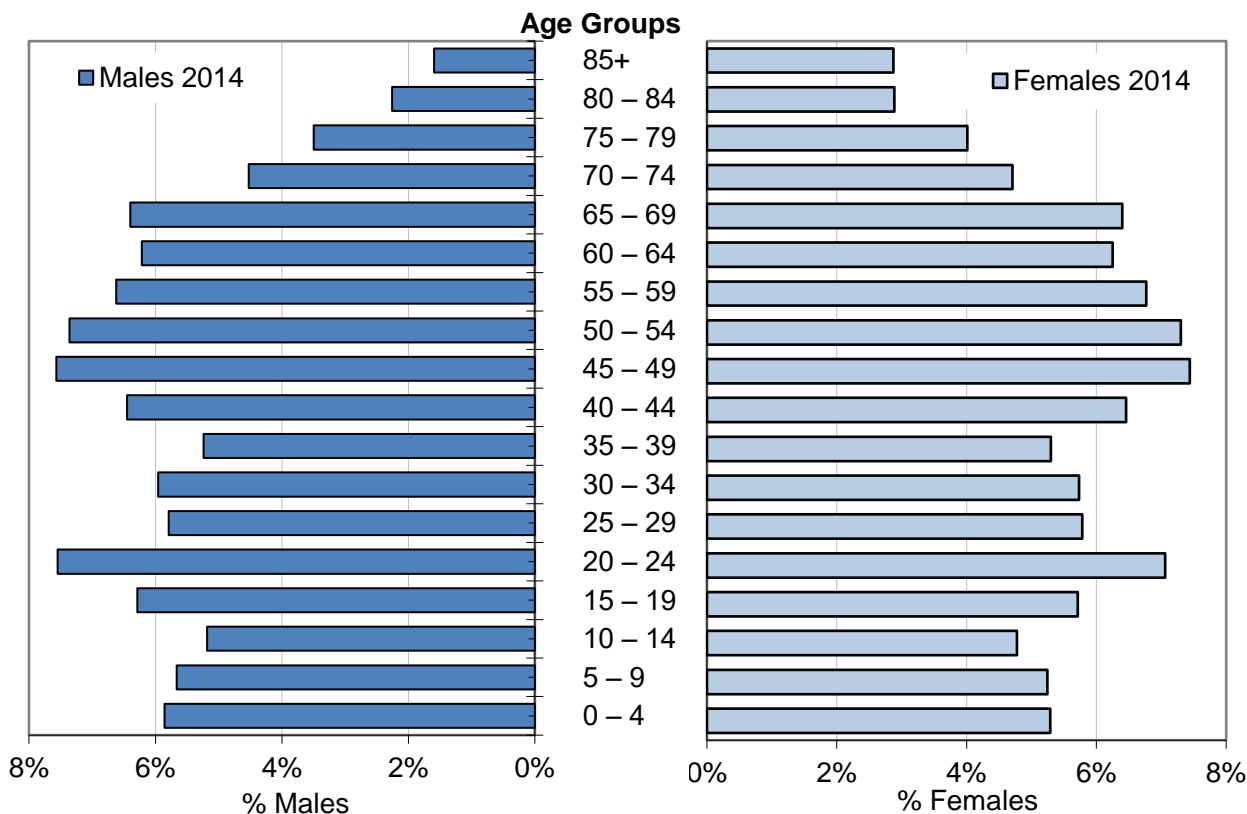


Figure 8: County Durham population by selected age categories, projected to 2035. Source: 2014-based subnational population projections, ONS.

County Durham projections	2015	2025	2035
Total population	519,900	541,800	560,200
Population aged 65 and over	103,200	123,100	146,300
Population aged 85 and over	11,700	16,500	26,300
% of population aged 65+	19.8%	22.7%	26.1%
% of population aged 85+	2.3%	3.0%	4.7%

Figure 9: Population by selected age groups, County Durham, North Durham CCG and DDES CCG. Source: 2014-based subnational population projections, ONS.

Area	All ages					
	0-64	65+	% 65+	85+	% 85+	
North Durham CCG	273,400	197,900	46,500	19.0%	5,300	2.2%
DDES CCG	244,400	218,700	54,900	20.1%	6,300	2.3%
County Durham	517,800	416,300	101,500	19.6%	11,700	2.3%

N.B Figures may not add exactly due to rounding

2.2 Deprivation and lifestyle

County Durham is a large and diverse area and experiences higher levels of deprivation than the national average. It should be noted that pockets of relative deprivation exist across the County, even in more relatively affluent areas such as Durham and Chester-le-Street.

Over 40% of our population live in relatively deprived areas (43% of County Durham's Lower Super Output Areas (LSOAs) are in the 30% most deprived nationally). The variation in County Durham is shown on the map below (figure 9)

Figure 10: Map showing County Durham's most 30% most deprived LSOAs nationally. Source ID2015, DCLG.

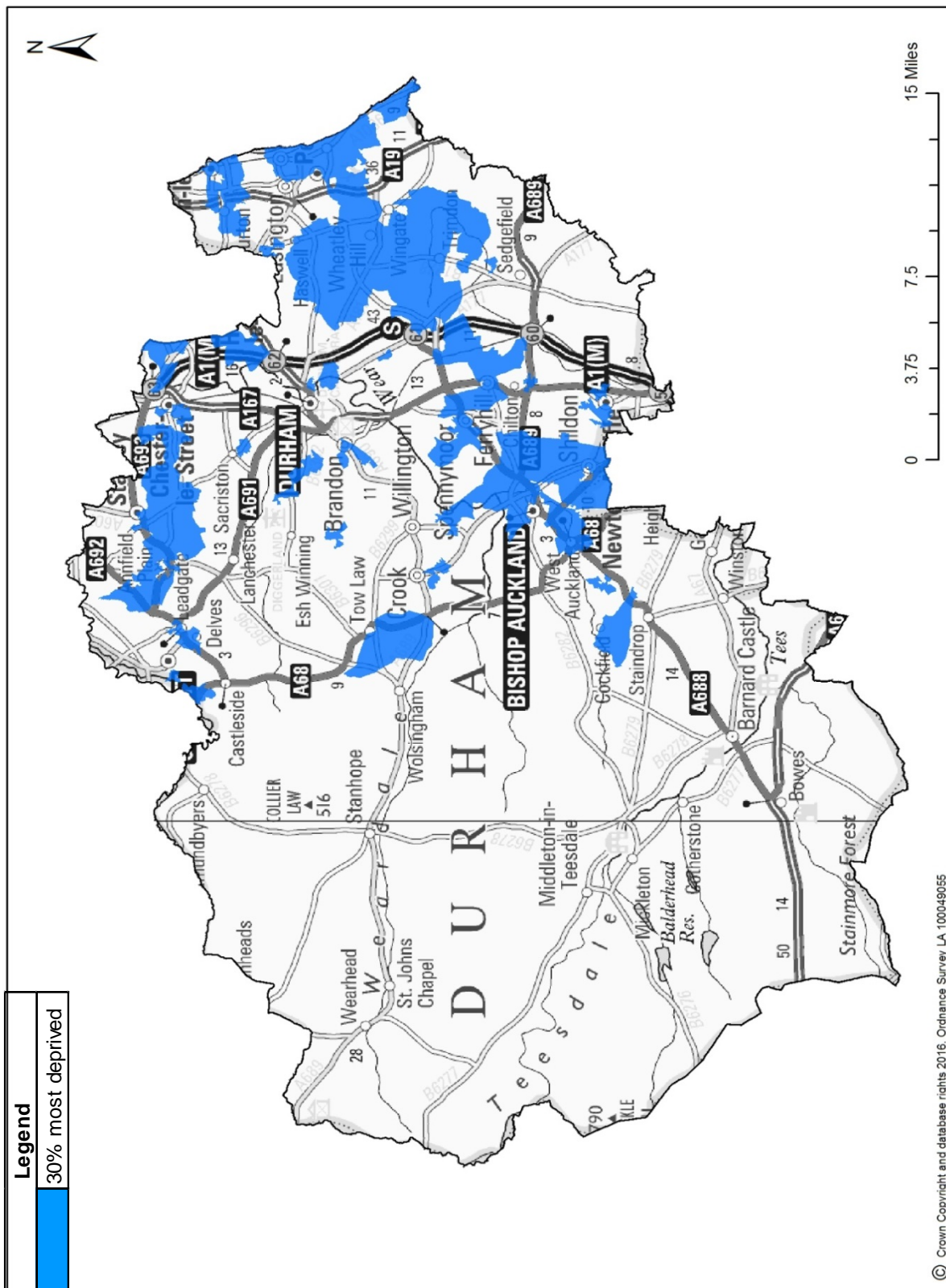
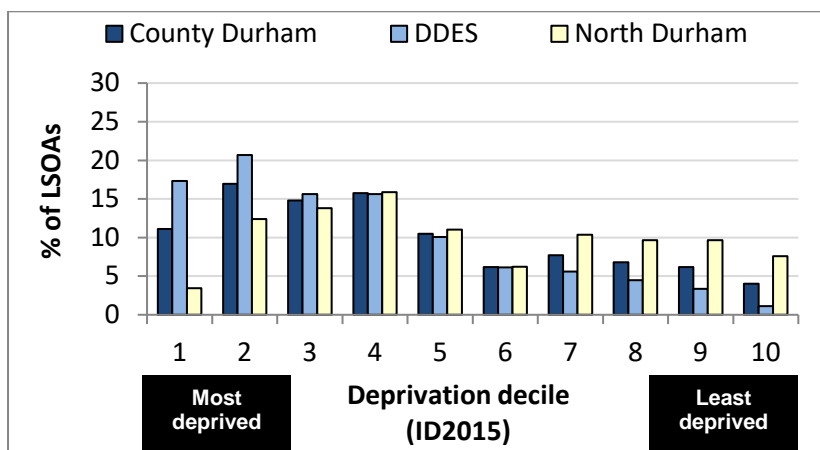


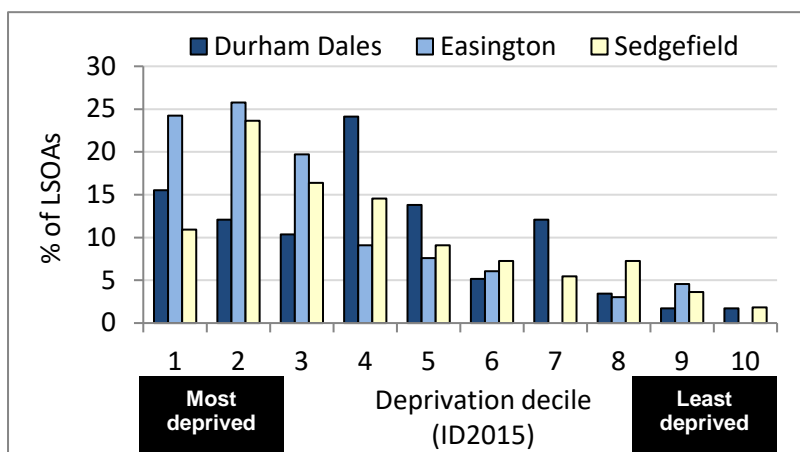
Figure 11: Percentage of LSOAs by national deprivation deciles (Overall Rank, Index of Deprivation 2015), County Durham, DDES CCG and North Durham CCG. Source: ID2015, DCLG, Durham County Council Public Health Intelligence (DCCPHI).



% of LSOAs in the most deprived 30% nationally (ID2015):

- County Durham. 42.9%.
- North Durham CCG. 29.7%.
- DDES CCG. 53.6%.

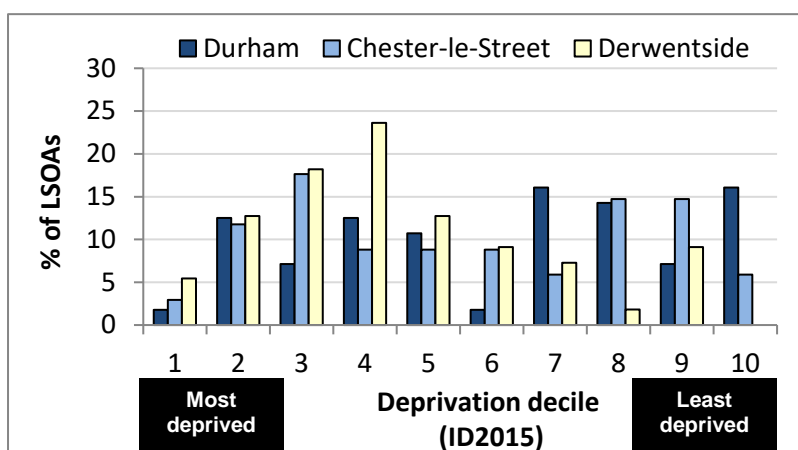
Figure 12: Percentage of LSOAs by national deciles (Overall Rank, Index of Deprivation 2015), Durham Dales, Easington and Sedgfield localities. Source: ID2015, DCLG, DCCPHI.



% of LSOAs in the most deprived 30% nationally (ID2015):

- Durham Dales. 37.9%
- Easington. 69.7%
- Sedgfield. 50.9%

Figure 13: Percentage of LSOAs by national deciles (Overall Rank, Index of Deprivation 2015), Durham, Chester-le-Street and Sedgfield localities. Source: ID2015, DCLG, DCCPHI.



% of LSOAs in the most deprived 30% nationally (ID2015):

- Durham. 21.4%
- Chester-le-Street. 32.4%
- Derwentside. 36.4%

Lifestyle factors

Tackling unhealthy lifestyles remain a key driver to reducing premature deaths. Many people in County Durham continue to exhibit unhealthy lifestyle behaviours when compared to England.

Figure 14: Prevalence of lifestyle factors (%). Source: PHE Fingertips.

		County Durham	England
Smoking in pregnancy	2015/16	18.1	10.6
Child excess weight in 10-11 year olds	2014/15	36.5	33.2
15 year olds meeting the recommended '5-a-day'	2014/15	44.7	52.4
Adults smoking	2015	19	16.9
Adult excess weight	2013-15	67.6	64.8
Adults meeting the recommended '5-a-day'	2015	53.4	52.3

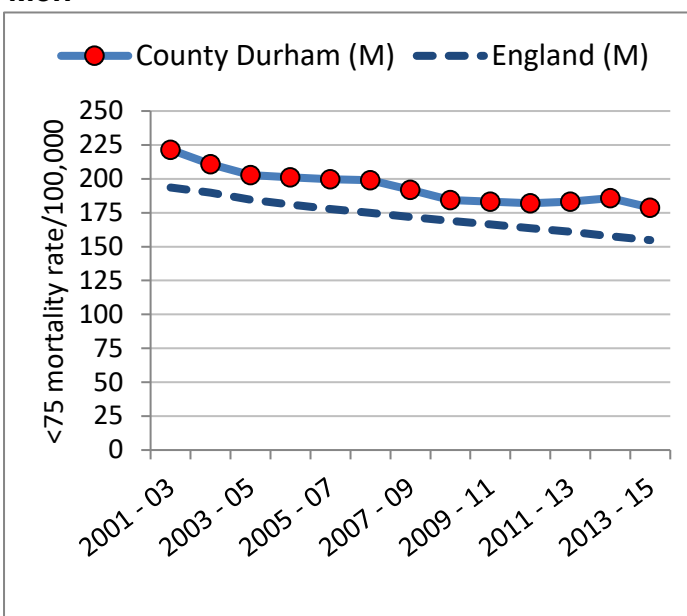
■	Statistically significantly worse than England
■	Not statistically different to England

2.3 National and local trends

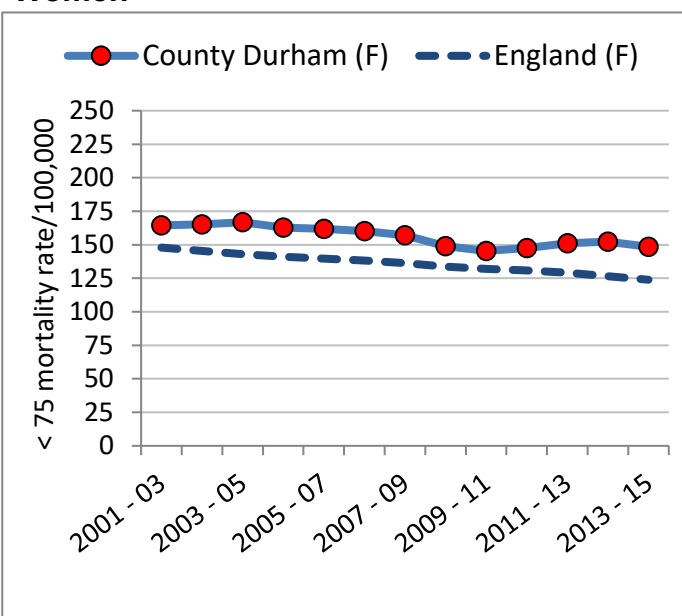
Early or premature death rates from all cancers have been reducing over time both nationally and in County Durham (figure 14). The Public Health Outcomes Framework uses three year pooled rates for its premature cancer mortality indicator. Using this data, for the period 2001-03 to 2013-15 reductions in female mortality rates were greater for England (16.2%) than County Durham (9.7%), reductions in male mortality were similar locally and nationally.

Figure 15: Trend in male and female premature cancer mortality, 2001-2003 to 2013-2015, County Durham and England. Source: Public Health Outcomes Framework (PHOF), PHE.

Men



Women

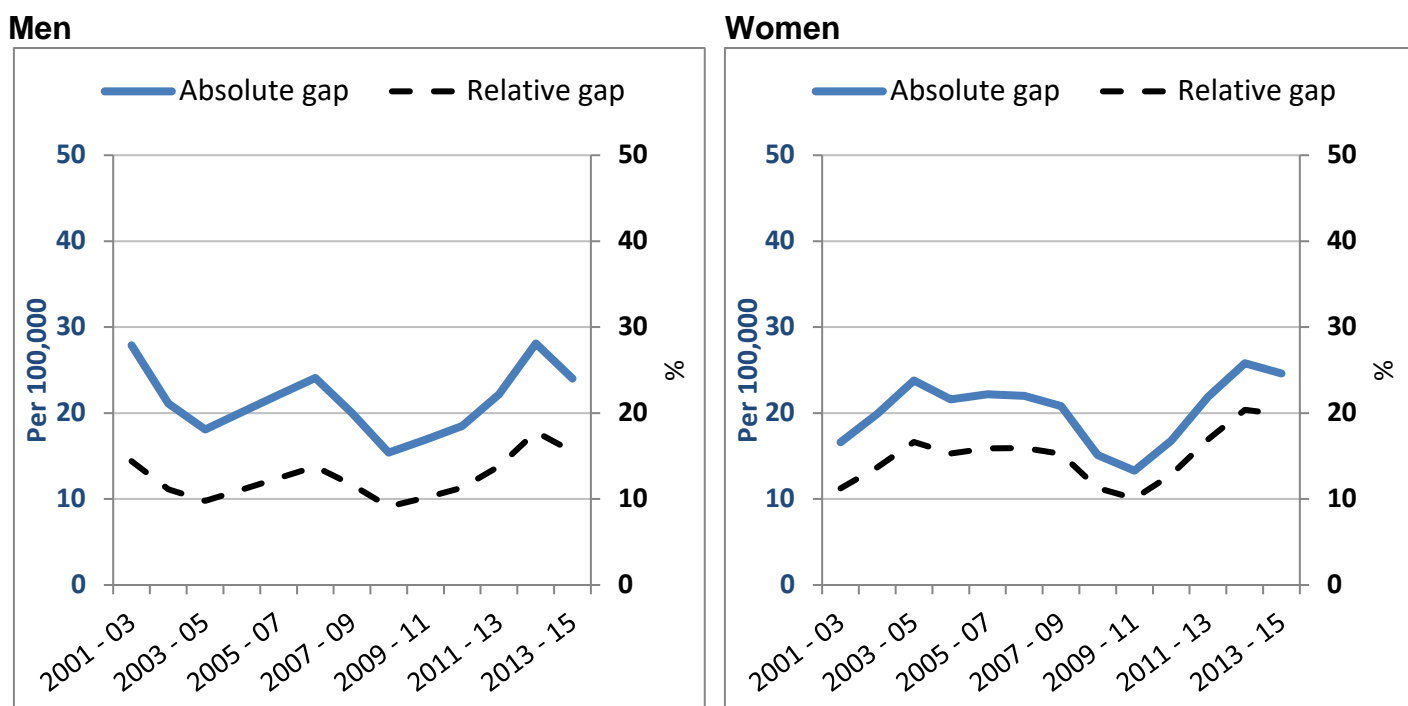


● Statistically significantly higher than England

Figure 16: Percentage reductions in premature cancer mortality (all cancers), 2001-03 to 2013-15. Source: PHOF, PHE.

	Male	Female
County Durham	19.3	9.7
England	20.0	16.2

Figure 17: Absolute and relative inequality gaps in premature cancer mortality between County Durham and England over time, men and women, 2001-03 to 2013-15. Source: PHOF, PHE.



Absolute inequality gaps are simply the difference between the value for County Durham and the value for England for any given indicator.

- Absolute inequality has shown some variation over time for men and women but little overall change in the rate per 100,000.

Relative inequality is 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.

- Relative inequality in premature mortality for women in County Durham compared to England has been increasing over time. There has been little change over this period for men.

	Men		Women	
	2001-03	2013-15	2001-03	2013-15
Average number of premature deaths in County Durham per year	432	422	357	359
Absolute gap between County Durham and England	27.9	24	16.6	24.6
Relative gap (%)	14.4	15.5	11.2	19.9

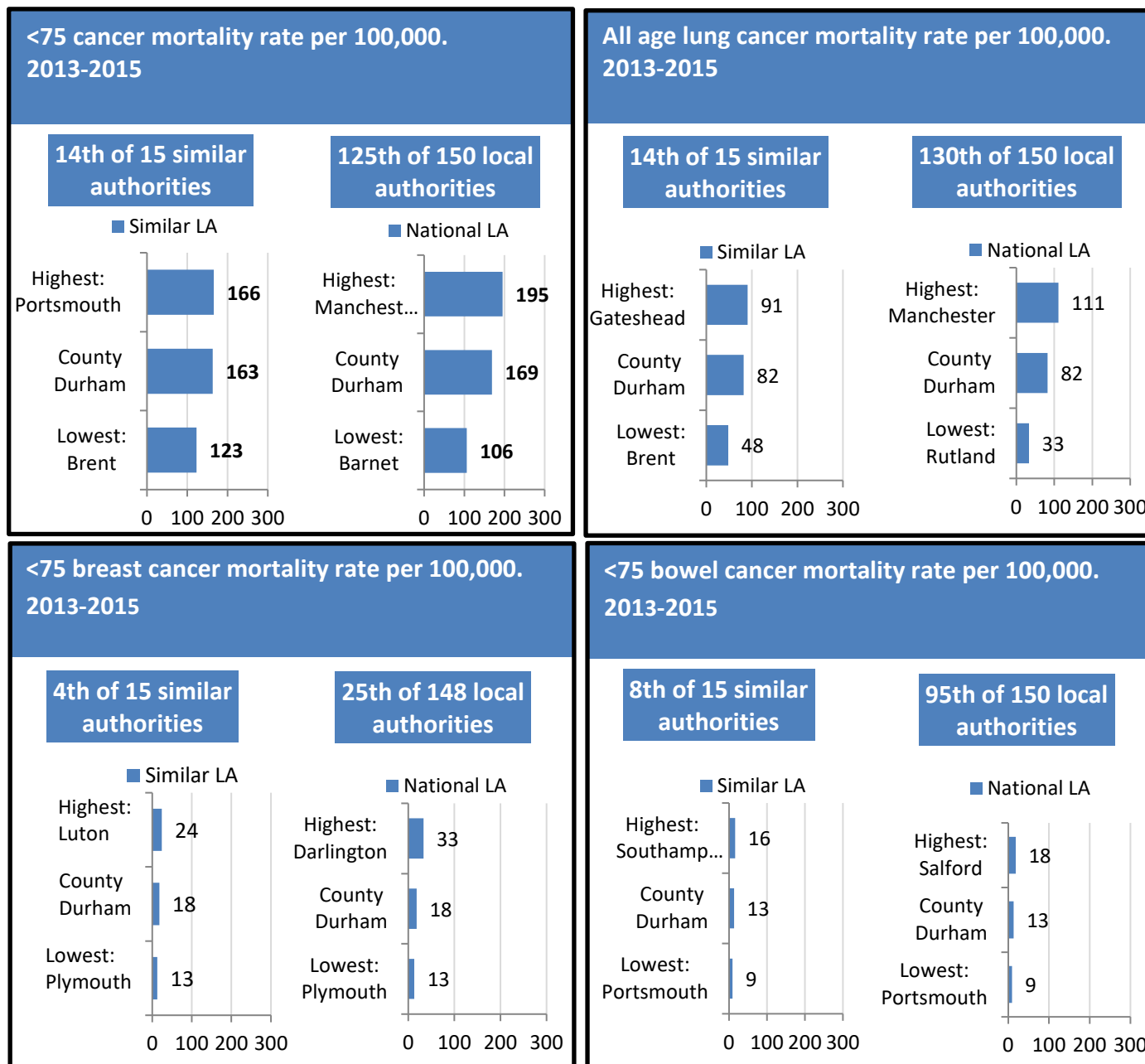
2.4 Benchmarking County Durham

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 focusses on premature death. County Durham is compared against the other 150 local authorities nationally ('National LA'), and 15 similar local authorities ('Similar LA'). Local authorities in the same socio-

economic bracket (identified as 'similar') are: Brent, Bristol; Enfield; Gateshead; Greenwich; Leeds; Luton; Plymouth; Sefton; Sheffield; Southampton; Wakefield; Wirral.

Figure 18: 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.

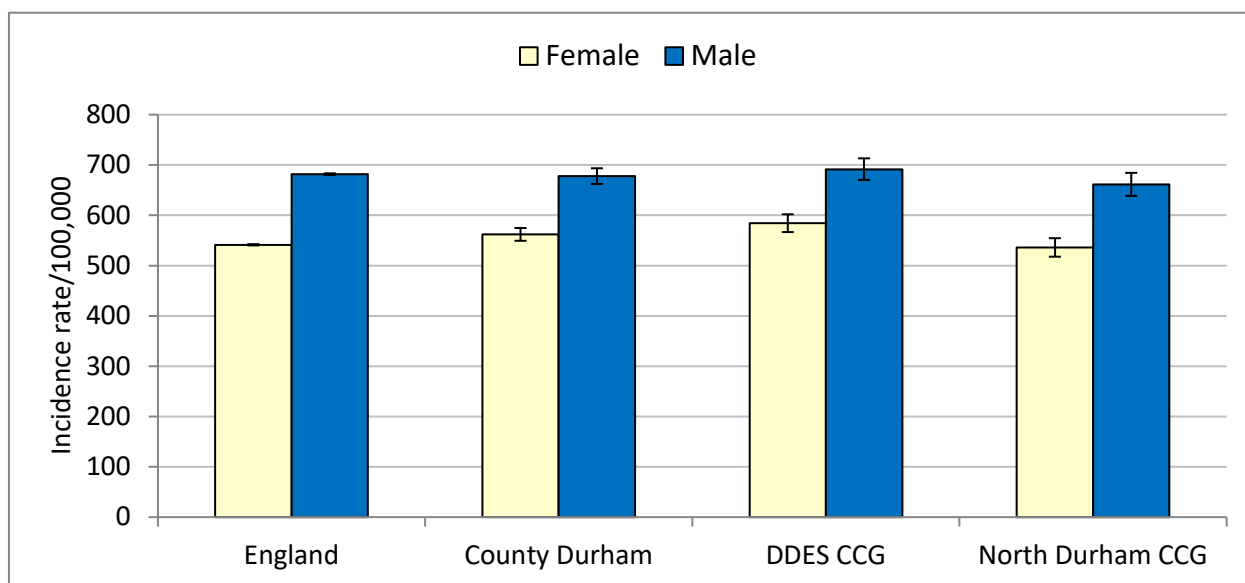
3. Incidence and premature mortality analysis

N.B. The data used in this section uses five year pooled time periods. This is different to the three year pooled periods used in section 2. Five year pooled time periods allows for more robust analysis at smaller geographies such as CCGs and MSOAs.

3.1 All cancers: CCG trends

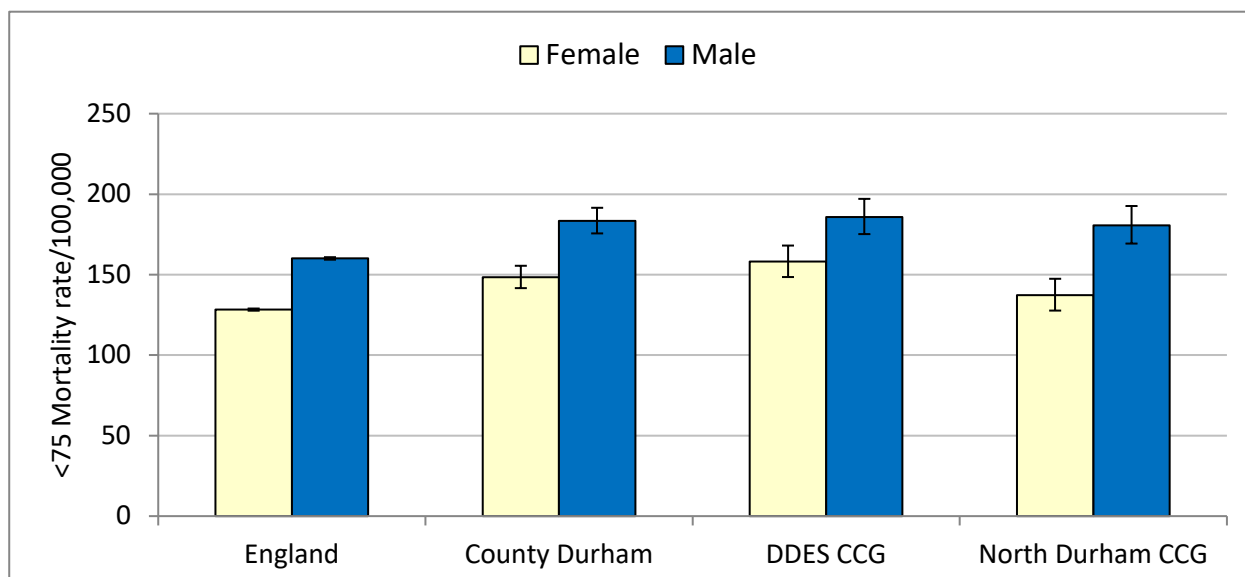
- Between 2010 and 2014 an average of 3,065 people per year in County Durham were diagnosed with cancer.
- Over the same period an average of 777 people per year in County Durham died prematurely (under 75 years) as a result of cancer.

Figure 19: Incidence rate per 100,000, with 95% confidence intervals, all cancers. 2010-14. Source: CancerStats, PHE.



- Female cancer incidence in County Durham and DDES CCG is statistically significantly higher than England. There is no significant difference between North Durham CCG and England (figure 18).
- There is no statistically significant difference in cancer incidence for males between England, County Durham and both CCGs.

Figure 20: Premature mortality rate per 100,000, with 95% confidence intervals, all cancers. 2010-14. Source: CancerStats, PHE.

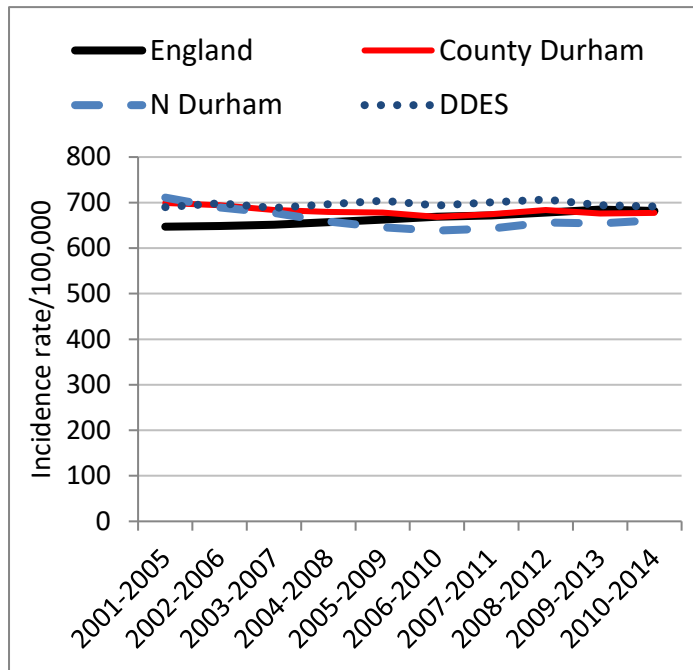


- Premature cancer mortality is significantly higher for males than females across County Durham and within both CCGs (figure 19).
- Premature cancer mortality for females in County Durham and DDES CCG is statistically significantly higher than England. There is no significant difference between North Durham CCG and England.
- Premature cancer mortality for males in County Durham and both CCGs is statistically significantly higher than England.

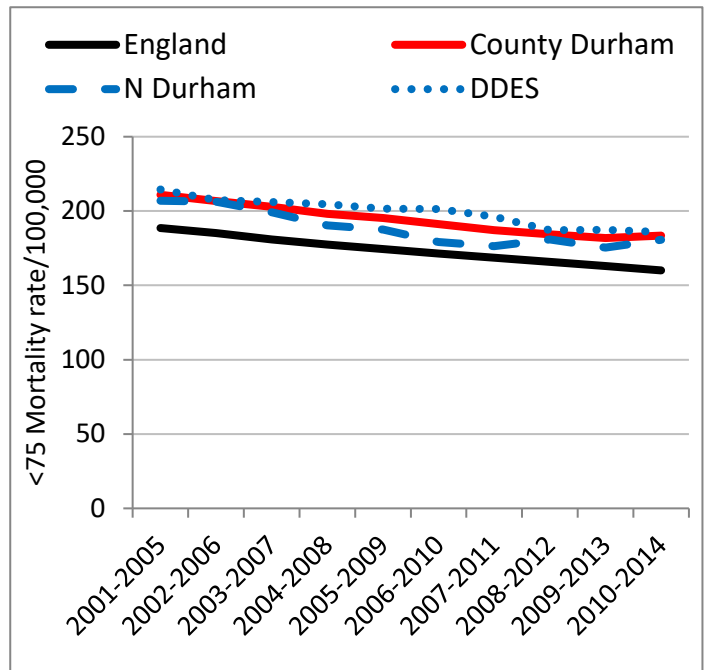
Figure 21: Incidence and mortality (2001-05 to 2010-14) rates per 100,000, all cancers.

Source: CancerStats, PHE

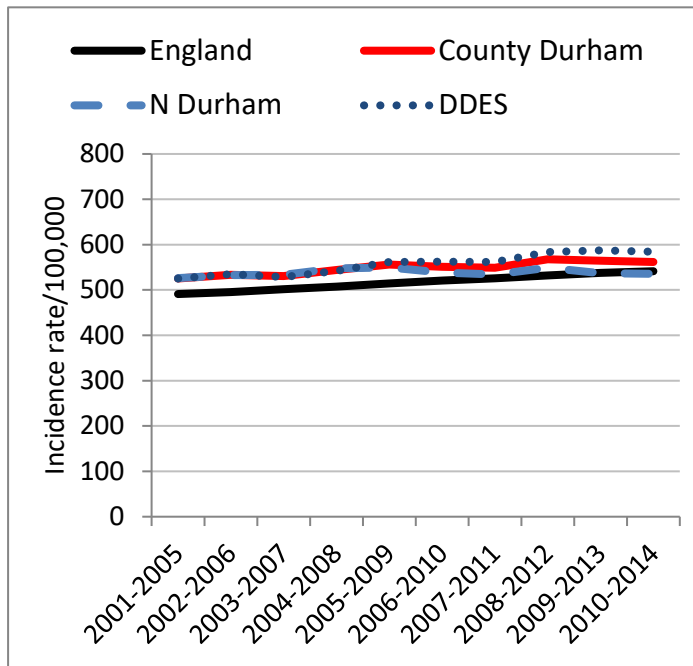
Incidence (male)



Premature Mortality (male)



Incidence (female)



Premature Mortality (female)

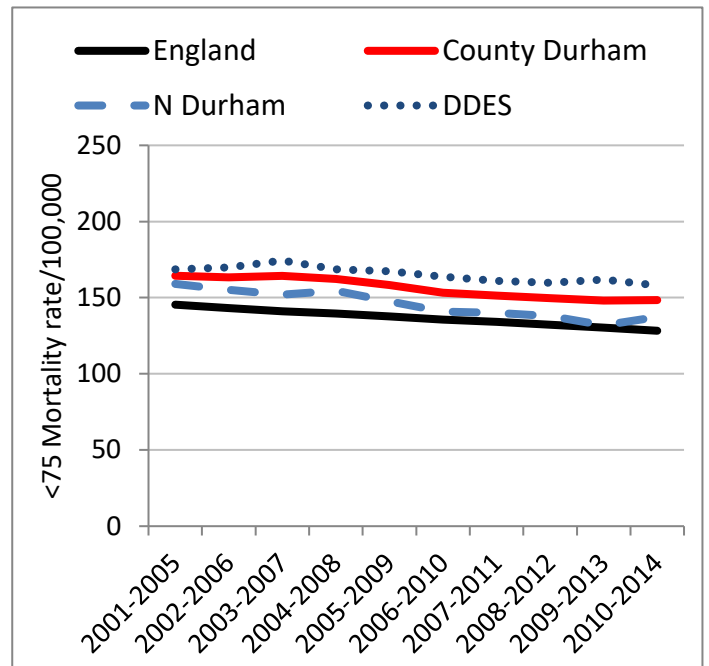


Figure 22: Change over time (%), incidence and premature mortality rates per 100,000, 2001-05 to 2010-14, all cancers. Source: CancerStats, PHE.

	Incidence (% change)		<75 Mortality (% change)	
	Male	Female	Male	Female
England	+5.4	+10.2	-15.1	-11.8
County Durham	-3.1	+6.9	-13.0	-9.7
DDES CCG	+0.2	+11.2	-13.3	-6.2
North Durham CCG	-7.0	+1.8	-12.7	-13.7

Key:

Increasing

Decreasing

- Female cancer incidence has increased over time in all areas.
- Proportionally, DDES CCG experienced a similar increase to England compared to a smaller increase in North Durham.
- Male cancer incidence increased nationally over time, compared to a reduction in North Durham and County Durham. Male incidence in DDES has experienced little change.
- Premature mortality rates have fallen for both male and female in all areas. The largest reduction has been for female in North Durham CCG and the smallest reduction has been experienced in DDES CCG.

Figure 23: Absolute and relative gaps in incidence and premature mortality rates per 100,000, comparing 2001-05 to 2010-14, all cancers. Source: CancerStats, PHE.

	Male		Female	
	2001-05	2010-14	2001-05	2010-14
Average number of tumours in County Durham per year	1,311	1,543	1,309	1,522
Absolute gap between County Durham and England	52.1	-4.1	34.3	20.5
Relative gap	8.1	-0.6	7.0	3.8
Average number of premature deaths in County Durham per year	417	418	357	359
Absolute gap between County Durham and England	22.4	23.4	18.9	20.2
Relative gap	11.9	14.6	13.0	15.7

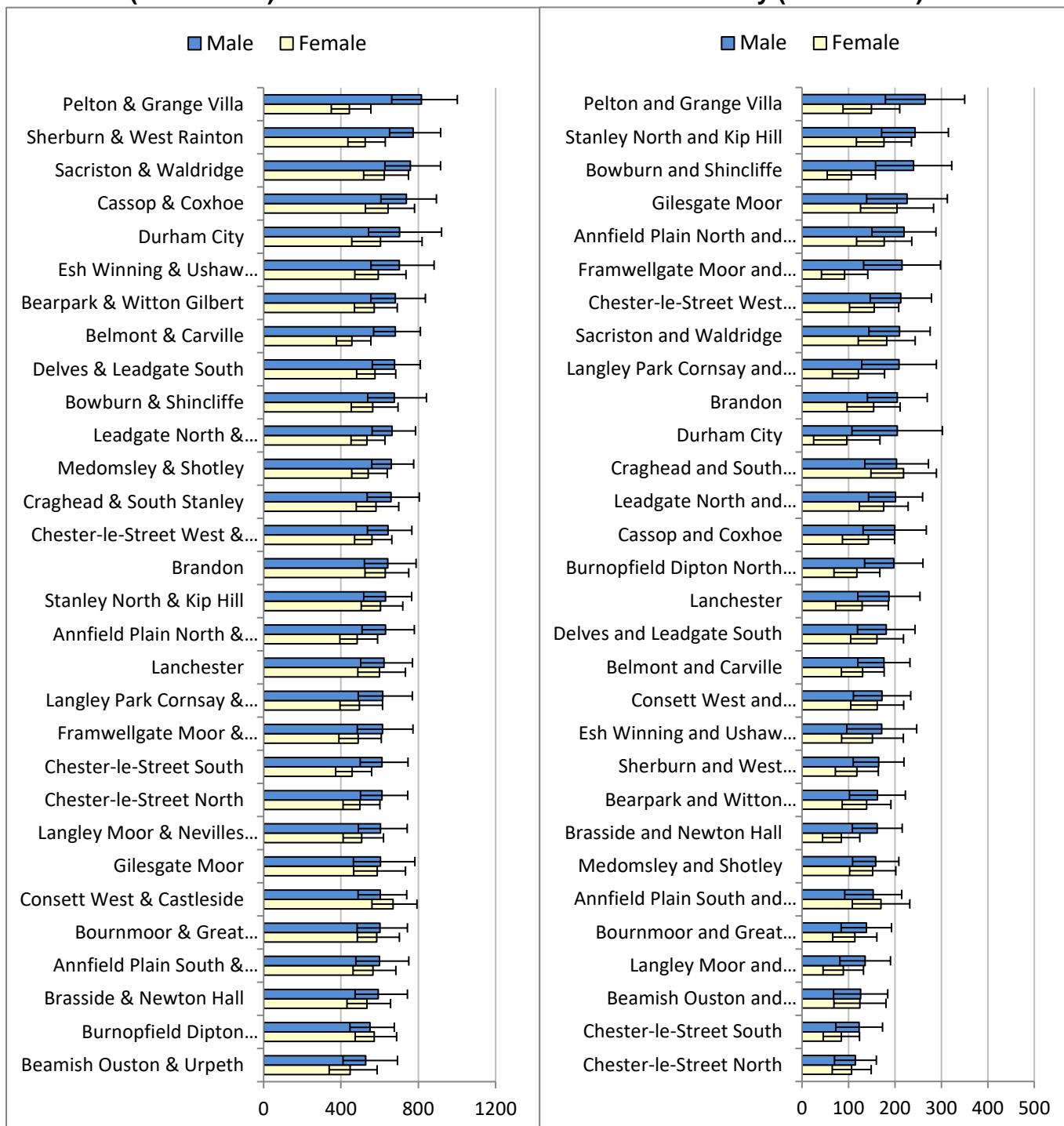
- Between 2010 and 2014 an average of around 1,500 males and females were diagnosed with cancer per year.
- The absolute and relative gaps for incidence between County Durham and England have reduced for males and females.
- Between 2010 and 2014 an average of 418 males and 359 females died prematurely from cancer per year.
- The absolute and relative gaps for premature cancer mortality have increased for males and females.

3.2 All cancers – MSOA and inequality analysis

Figure 24: Incidence¹ (2008-12) and premature mortality (2010-14) rates per 100,000, all cancers, North Durham CCG by MSOA, males and females. Source: Incidence, PHE KIT (N&Y). Mortality, PCMD DCCPHI.

Incidence (all cancers)

Premature mortality (all cancers)



There is no statistically significant variation in male cancer incidence across MSOAs in North Durham. For women there is some significant variation between some MSOAs. Some MSOAs illustrate statistically significant variation between males and females.

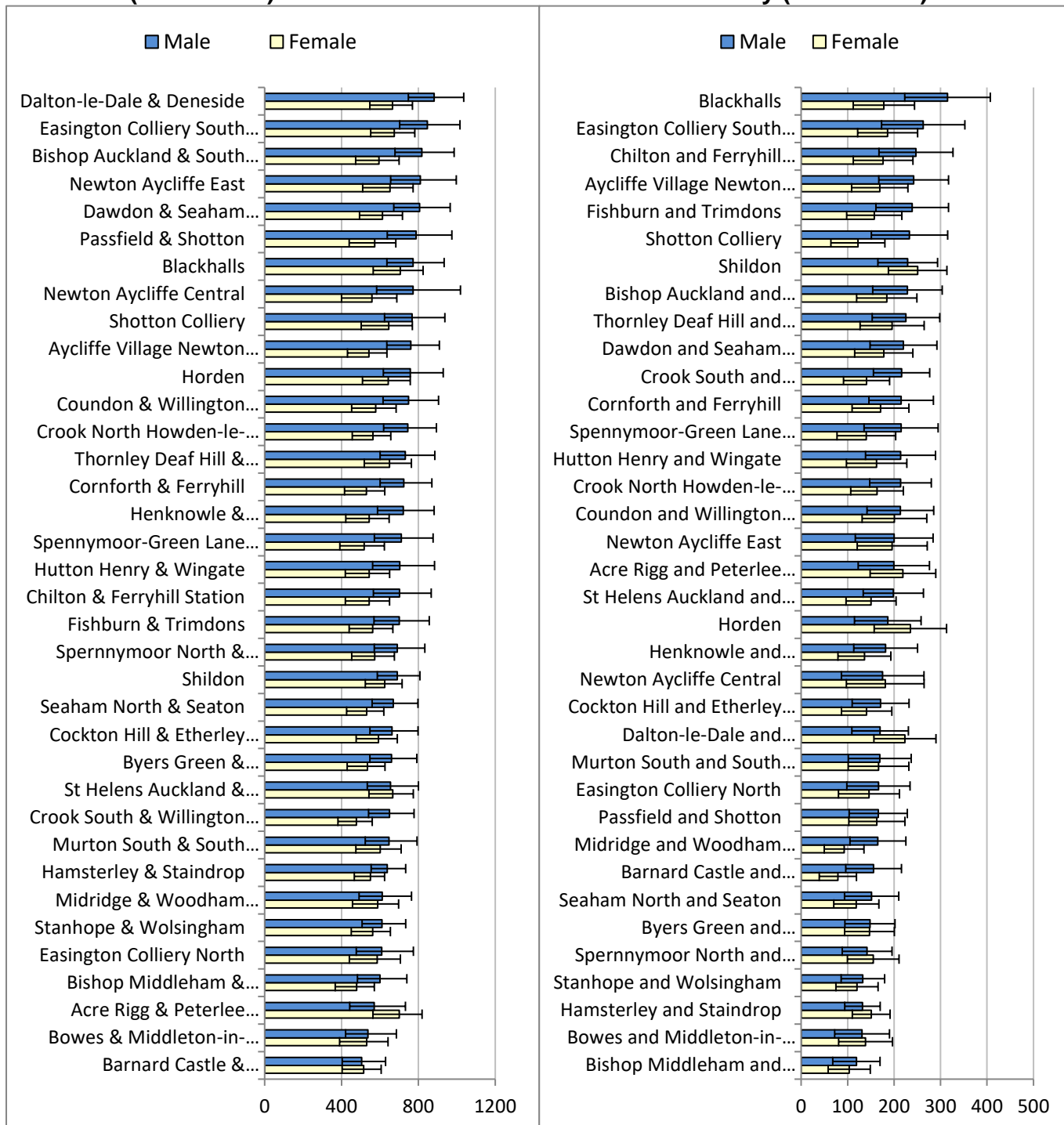
There is statistically significant variation in male premature mortality (e.g. CLS S & N are significantly lower than Pelton and Grange Villa) and female premature mortality (e.g. Craghead and South Stanley is significantly higher than 4 other MSOAs). Only Bowburn and Shincliffe shows a male mortality rate that is statistically significantly higher than for females.

¹ N.B. The latest time period available for all incidence rates at a small area level (below CCG) is 2008 to 2012

Figure 25: Incidence (2008-12) and premature mortality (2010-14) rates per 100,000, all cancers, DDES CCG by MSOA, males and females. Source: Incidence, PHE KIT (N&Y). Mortality, PCMD DCCPHI.

Incidence (all cancers)

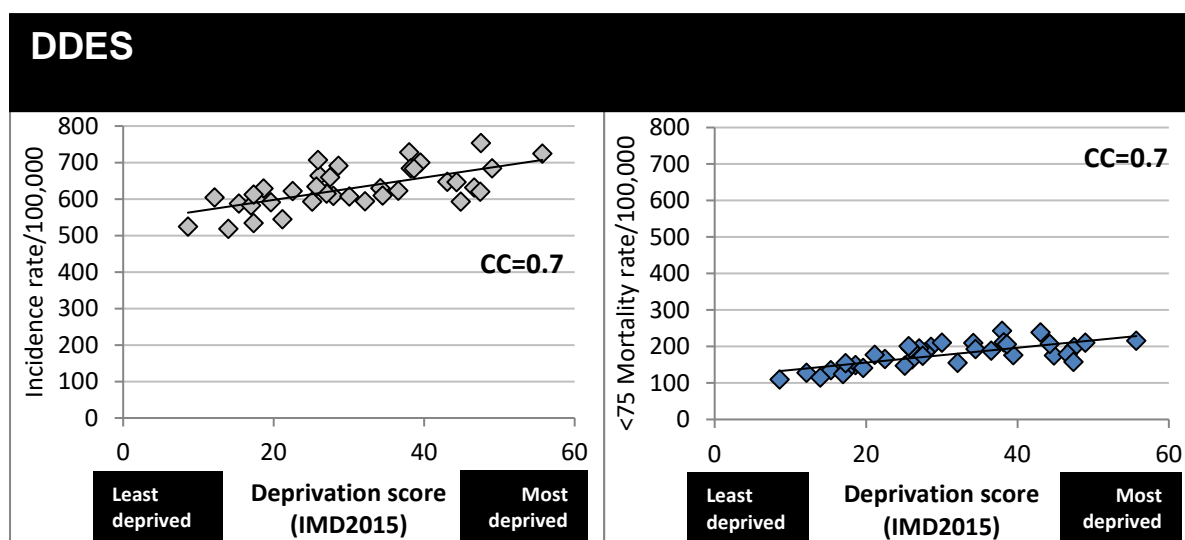
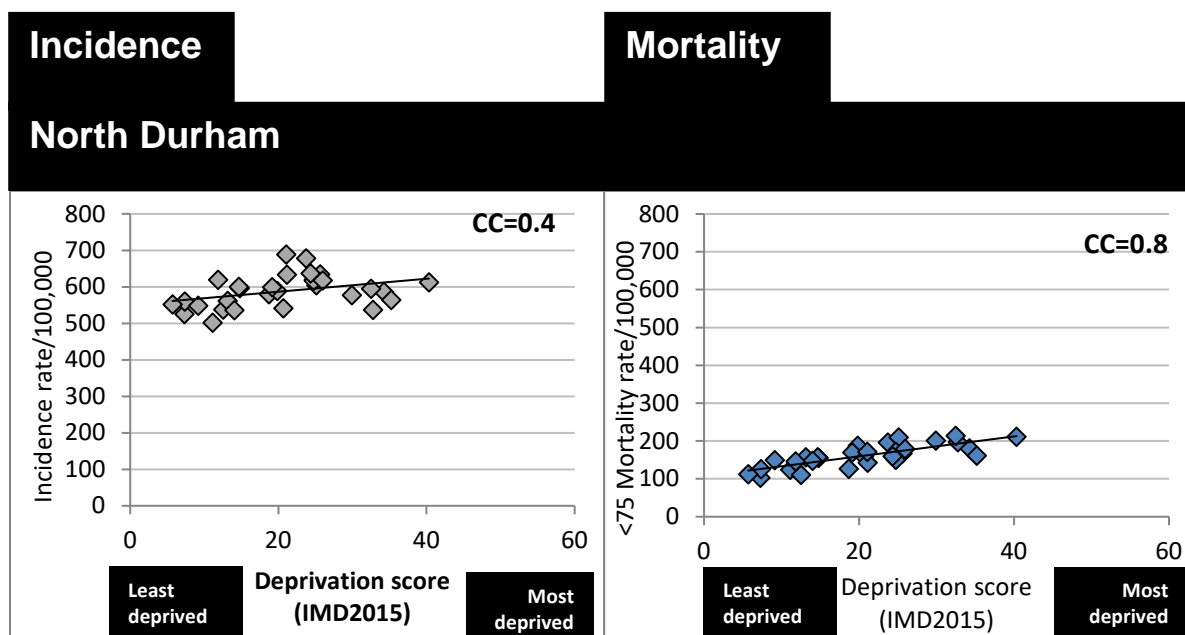
Premature mortality (all cancers)



There is statistically significant variation in male cancer incidence across MSOAs in DDES. For women, there little significant variation. There is no significant variation between male and female incidence for DDES MSOAs.

There is statistically significant variation in male and female premature mortality across some DDES MSOAs. There are 8 MSOAs which have significantly lower male rates than Blackhalls and six MSOAs with significantly lower female rates than Shildon. There is no significant variation between male and female premature mortality for DDES MSOAs.

Figure 26: Incidence (2008-12) and premature mortality (2010-14) directly age standardised rates per 100,000, all cancers, by MSOA and deprivation score (IMD2015), North Durham CCG and DDES CCG. Source: CancerStats (incidence) and PCMD (mortality).



Strength of relationship (correlation co-efficient):
 -1 or +1=perfect; 0.7 to 1=strong; 0.3 to 0.6=moderate; 0-0.2=weak

The distribution of cancer incidence and mortality (all cancers) across County Durham within North Durham and DDES CCGs is unequal. It is higher in the more deprived areas.

For incidence this relationship is moderate in North Durham (cc=0.4) and strong in DDES CCG (cc=0.7). The relationship between premature cancer mortality and deprivation is stronger, with a strong correlation in both North Durham (cc=0.7) and DDES CCG (cc=0.8).

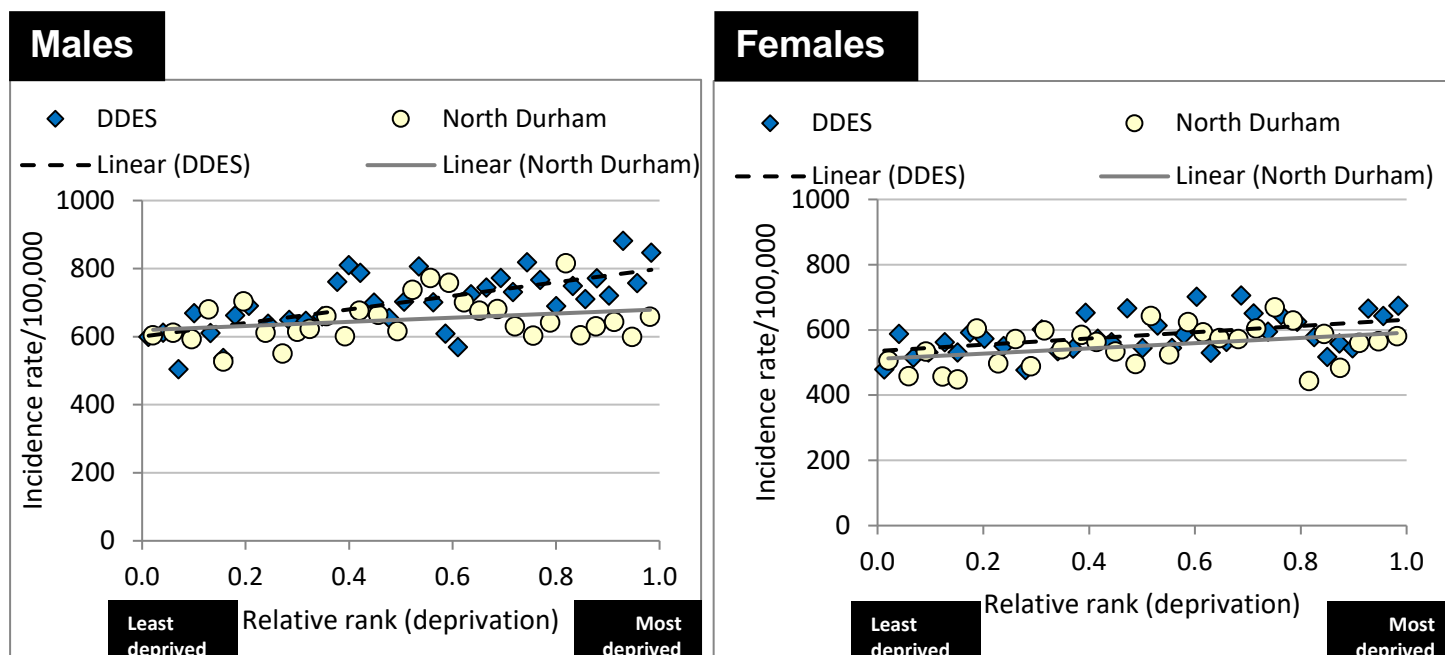
Drives to reduce cancer incidence and premature mortality at an area level i.e. County Durham, take no account of inequalities within areas. Rates can improve alongside widening inequalities both within and between areas. In order to understand more of this socio-economic dimension to inequalities in health the Slope and Relative Indices of Inequality have been calculated.

The **Slope Index of Inequality (SII)** is used to show the association between a chosen outcome in an area (in this instance cancer incidence and premature mortality) compared to its relative rank in the socio-economic distribution, taking into account the number of subjects in each category. The SII allows the absolute gap between the least and most deprived areas across all MSOAs in a given area to be shown for a particular measure. It provides a consistent measure of health inequalities across local populations and takes into account the position of all groups across the social gradient simultaneously.

The **Relative Index of Inequality (RII)** is the size of the SII gap between the least and the most deprived MSOAs expressed as a percentage of the average rate for all areas. This permits comparisons to be made over time.

Slope and relative indices of inequality have been calculated for all cancer incidence and mortality. Relatively small observed numbers across a relatively large proportion of MSOAs, particularly in relation to mortality, made this analysis less robust by cancer site.

Figure 27: Incidence (2008-12) rates per 100,000, all cancers, by MSOA and relative rank of deprivation (ID2015), County Durham, North Durham CCG and DDES CCG. Source: PHE, DCCPHI.

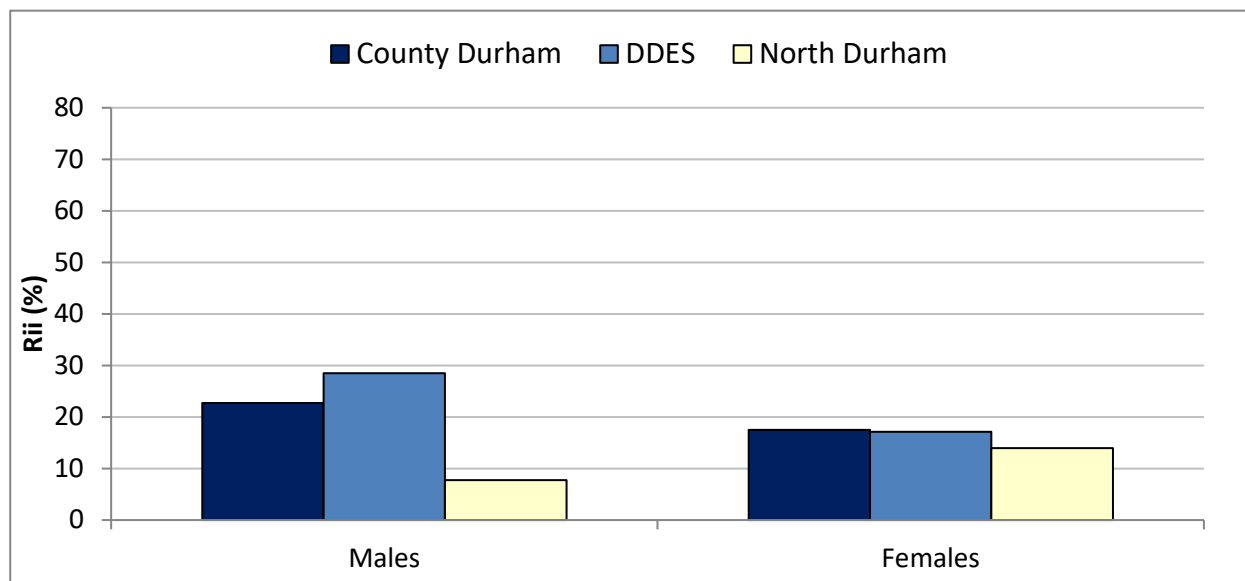


- The distribution of all cancer incidence across North Durham and DDES CCGs is unequal. It is higher in the more deprived areas. The size of the gaps between the least and most deprived MSOAs can be seen in the table overleaf.

SII: the difference in the selected measure between those MSOAs which are least and most deprived taking account of all MSOAs in the area.

RII: the size of the gap between the least and most deprived MSOAs (expressed as a percentage of the average rate for all areas).

Figure 28: Relative Index of Inequality (RII) for all cancer incidence, County Durham, DDES and North Durham, 2008-2012. Source: PHE, DCCPHI.



For the period 2008-12 the size of the inequality gap (RII) in cancer incidence (all cancers) between the most and least deprived areas:

- Was greater for males in DDES (28.5%) than North Durham (7.7%).
- Was broadly similar for women in both CCGs.

Between 2001-05 and 2008-12 the gap in cancer incidence (RII):

For males

- Increased in County Durham (from 8.4% to 22.7%) and DDES (from 12.3% to 28.5%).
- Reduced marginally in North Durham (from 8.3% to 7.7%).

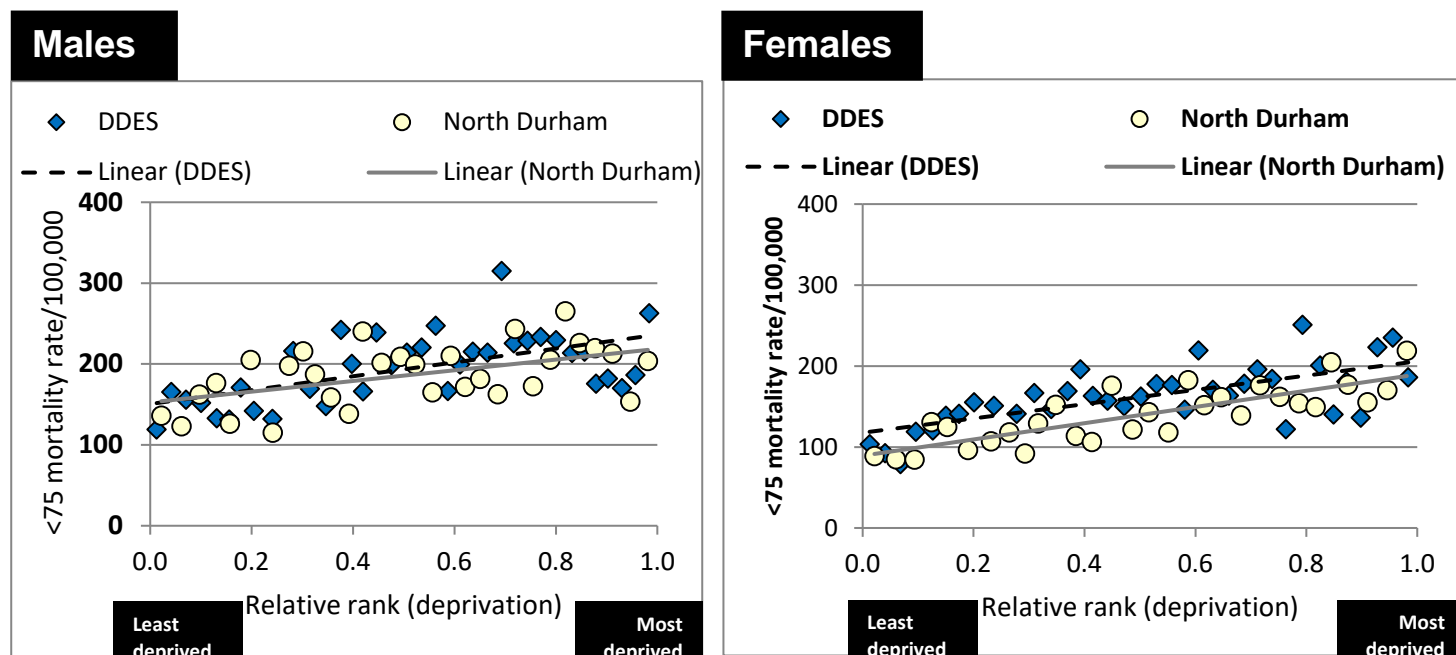
For females:

- Showed little change in County Durham and DDES and reduced in North Durham.

Figure 29: Summary of key inequalities for all cancer incidence within County Durham, DDES and North Durham, comparing 2001-2005 to 2008-2012. Source: PHE, DCCPHI.

	2001-2005			2008-2012		
	Mean (rate per 100,000)	SII (rate per 100,000)	RII (%)	Mean (rate per 100,000)	SII (rate per 100,000)	RII (%)
Males						
County Durham	699.2	58.6	8.4	683.7	155.3	22.7
DDES	689.7	85.2	12.3	706.7	201.2	28.5
North Durham	711.0	59.0	8.3	656.1	50.8	7.7
Females						
County Durham	525.4	90.8	17.3	567.7	99.2	17.5
DDES	525.1	94.8	18.0	583.5	100.1	17.2
North Durham	526.2	93.7	17.8	548.9	76.5	13.9

Figure 30: Premature mortality (2010-14) rates per 100,000, all cancers, by MSOA and deprivation (ID2015), County Durham, North Durham CCG and DDES CCG. Source: PHE.

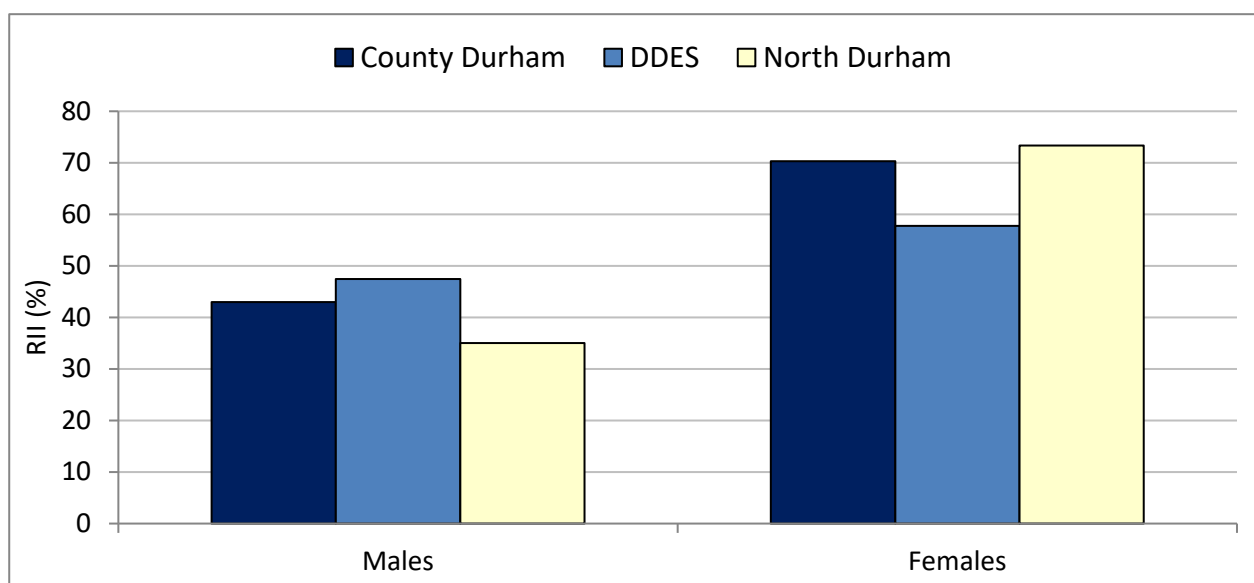


- The distribution of premature cancer mortality across North Durham and DDES CCGs is unequal. It is higher in the more deprived areas.

SII: the difference in the selected measure between those MSOAs which are least and most deprived taking account of all MSOAs in the area.

RII: the size of the gap between the least and most deprived MSOAs (expressed as a percentage of the average rate for all areas).

Figure 31: Relative Index of Inequality (RII) for all cancer premature mortality, County Durham, DDES and North Durham, 2010-2014. Source: PHE, DCCPHI.



For the period 2010-14 the size of the inequality gap (RII) in cancer mortality (all cancers) between the most and least deprived areas was:

- Greater than the gap for cancer incidence for males and females in all areas.
- Greater for females than males in all areas.
- Greater for males in DDES (47.5%) than North Durham (35%).

- greater for females in North Durham (73.3%) than DDES (57.8%).

Between 2001-05 and 2010-14 the inequality gap in cancer mortality (RII):

For males

- Increased in County Durham (from 36.1% to 43%) and North Durham (from 5.2% to 35%).
- Reduced in DDES (from 66.8% to 47.5%).

For females:

- Increased in all areas, in County Durham (from 39.3% to 70.3%), in North Durham (from 37.2% to 73.3%) and DDES (from 41.6% to 57.8%).

Figure 32: Summary of key inequalities for all cancer premature mortality within County Durham, DDES and North Durham, comparing 2001-2005 to 2010-2014. Source: PHE, DCCPHI.

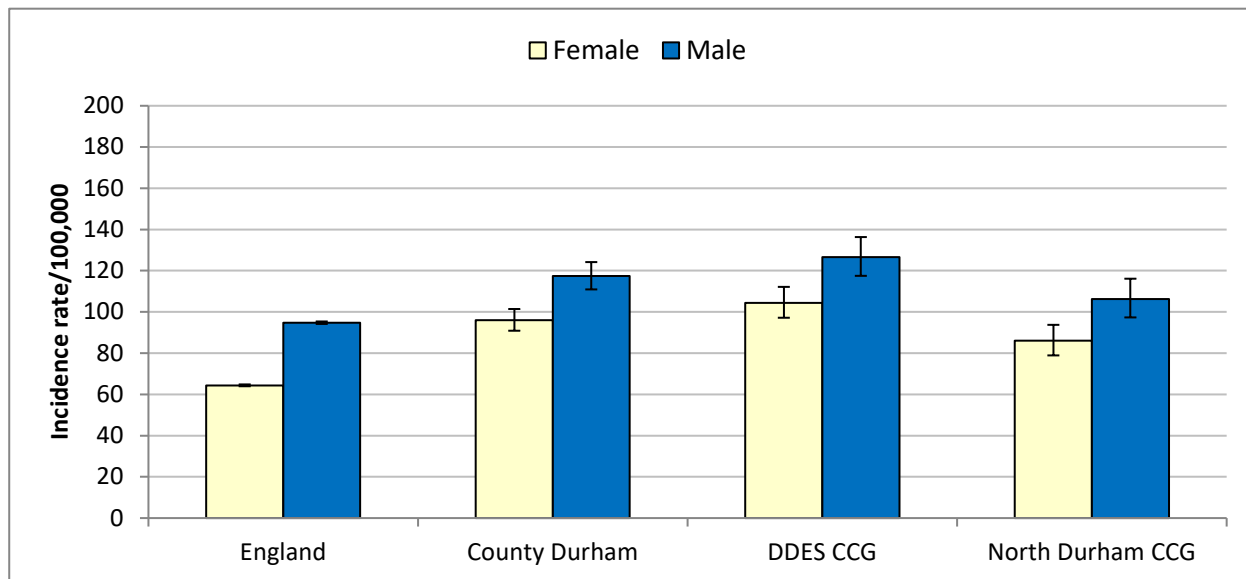
	2001-2005			2010-2014		
	Mean (rate per 100,000)	SII (rate per 100,000)	RII (%)	Mean (rate per 100,000)	SII (rate per 100,000)	RII (%)
Males						
County Durham	210.9	76.1	36.1	183.4	78.8	43.0
DDES	214.5	143.2	66.8	185.9	88.2	47.5
North Durham	206.9	10.8	5.2	180.7	63.3	35.0
Females						
County Durham	164.3	64.6	39.3	148.4	104.4	70.3
DDES	168.5	70.2	41.6	158.0	91.3	57.8
North Durham	159.0	59.2	37.2	137.3	100.7	73.3

3.3 Lung cancer – CCG trends

Lung cancer is the second most commonly diagnosed cancer (after breast cancer) in the UK with around 40,000 people diagnosed each year. It is also the most common cause of cancer death in the UK.

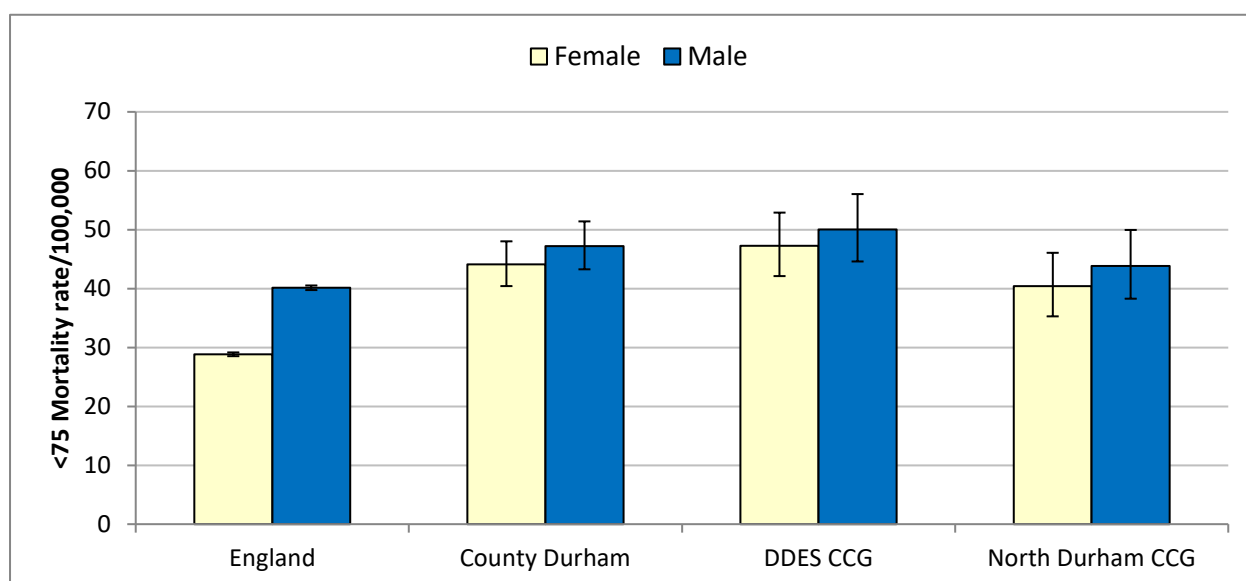
- Between 2010 and 2014 an average of 523 people per year in County Durham were diagnosed with lung cancer.
- Over the same period an average of 214 people per year in County Durham died prematurely as a result of lung cancer.

Figure 33: Incidence rate per 100,000, with 95% confidence intervals, lung cancer. 2010-14. Source: CancerStats, PHE.



- Male and female lung cancer incidence in County Durham, DDES and North Durham CCG is statistically significantly higher than England.
- Lung cancer incidence is higher for males than females in all areas.

Figure 34: Premature mortality rate per 100,000, with 95% confidence intervals, lung cancer. 2010-14. Source: CancerStats, PHE.

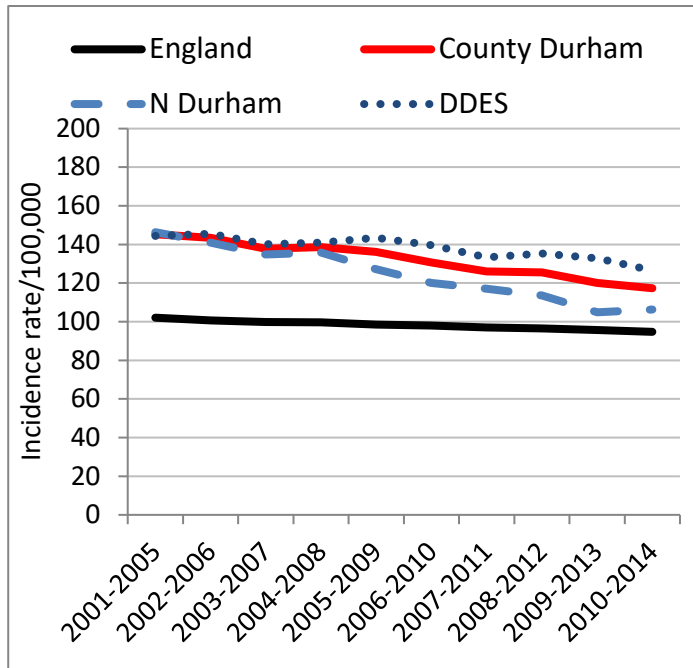


- Female lung cancer premature mortality in County Durham, DDES and North Durham CCG is statistically significantly higher than England.

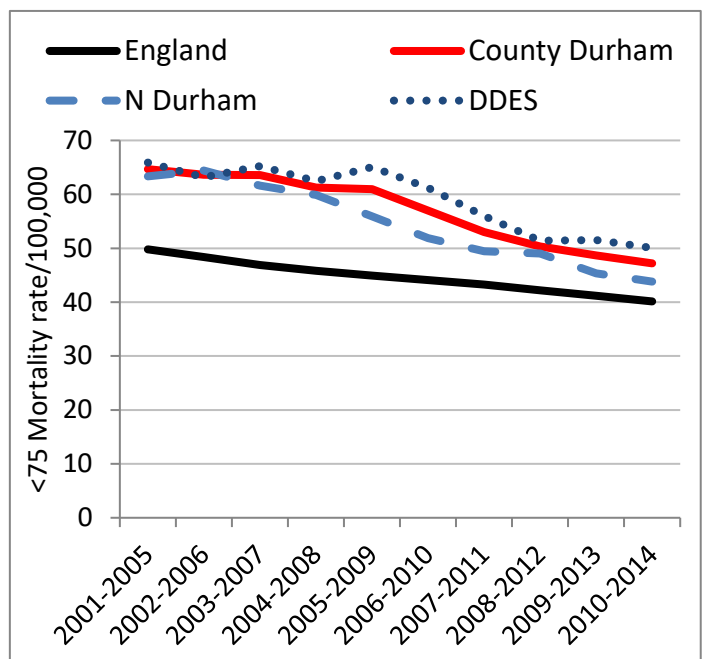
- Male lung cancer premature mortality is similar to England in North Durham but statistically significantly higher in DDES.

Figure 35: Lung cancer incidence and mortality rates (2001-05 to 2010-14) rates per 100,000. Source: CancerStats, PHE.

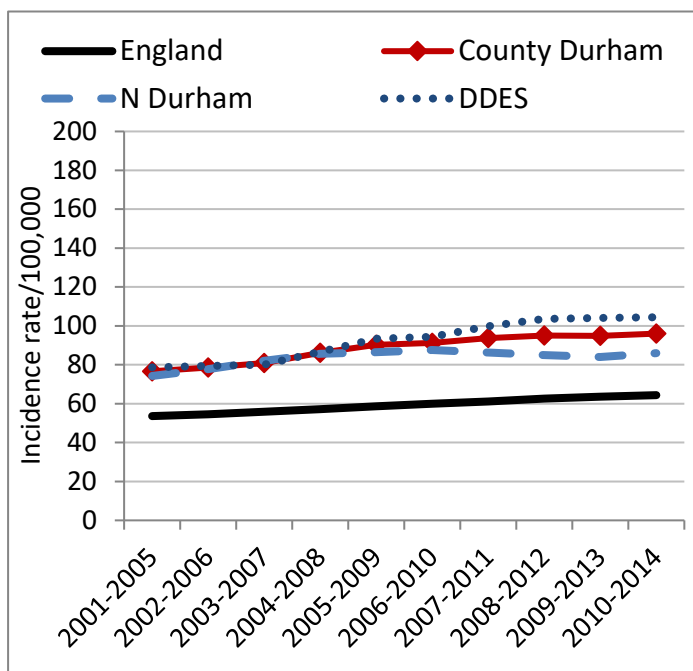
Incidence (male)



Premature Mortality (male)



Incidence (female)



Premature Mortality (female)

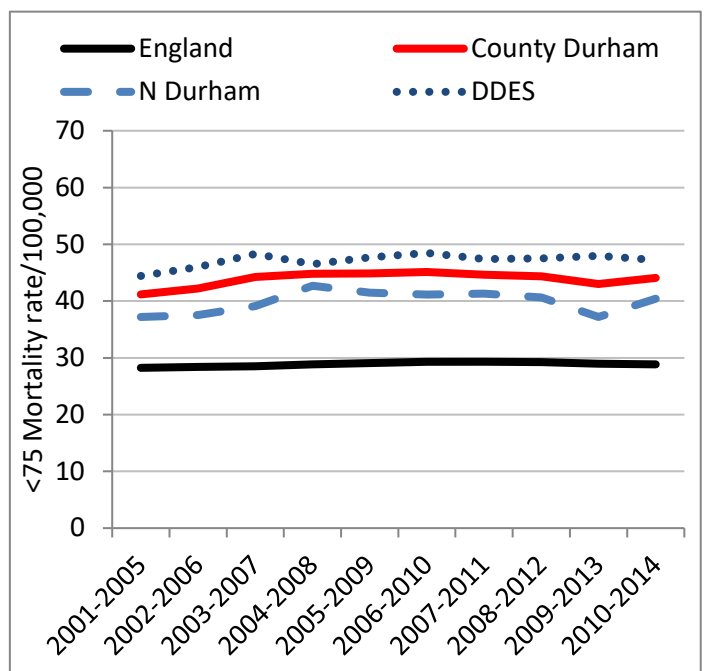


Figure 36: Change over time (%), incidence and premature mortality rates per 100,000, lung cancer, 2001-05 to 2010-14. Source: CancerStats, PHE.

	Incidence (% change)		<75 Mortality (% change)	
	Male	Female	Male	Female
England	-7.2	+20.1	-19.4	+2.1
County Durham	-19.2	+25.3	-27.0	+7.1
DDES CCG	-12.4	+32.8	-24.0	+6.4
North Durham CCG	-27.4	+15.9	-30.8	+8.5

Key:
Increasing
Decreasing

- Female lung cancer incidence has increased over time in all areas whereas there has been a decrease in all areas for males.
- Proportionally, DDES CCG experienced the greatest increase for females whereas the increase in North Durham has been smaller than for England.
- There has been a greater reduction in male incidence in County Durham compared to England.
- Male premature mortality from lung cancer decreased nationally and within County Durham. The largest reduction has been experienced in North Durham CCG.
- Female premature mortality from lung cancer increased over time in all areas. Proportionally the increase has been greater within County Durham than nationally.

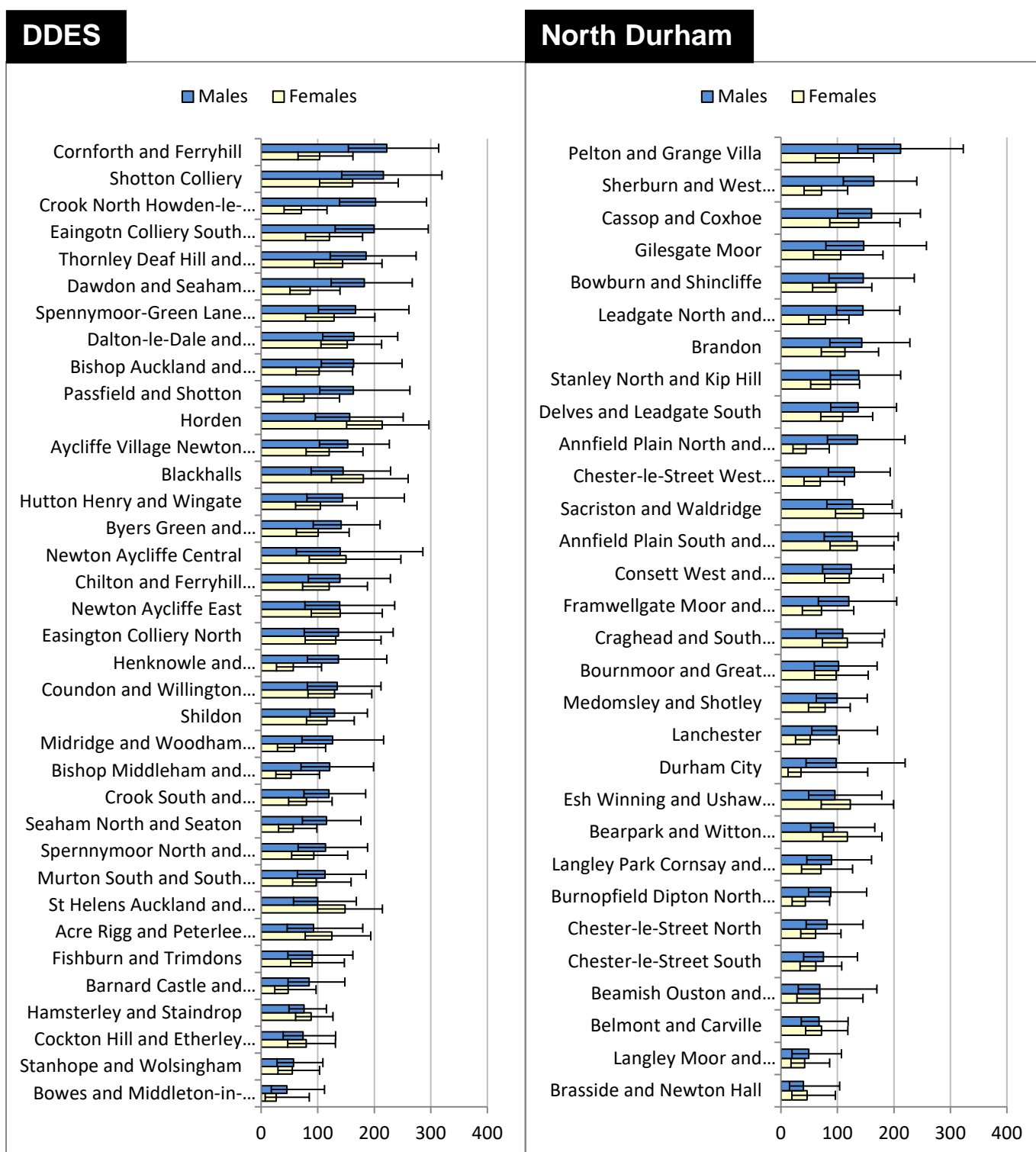
Figure 37: Absolute and relative gaps in incidence and premature mortality rates per 100,000, comparing 2001-05 to 2010-14, lung cancer. Source: CancerStats, PHE.

	Male		Female	
	2001-05	2010-14	2001-05	2010-14
Average number of tumours in County Durham per year	272	261	190	262
Absolute gap between County Durham and England	43.2	22.6	23.0	31.6
Relative gap	42.3	23.8	43.0	49.1
Average number of premature deaths in County Durham per year	127	107	89	107
Absolute gap between County Durham and England	14.9	7.1	12.9	15.2
Relative gap	29.9	17.6	45.8	52.9

- Between 2010 and 2014 an average of 261 male and 262 female were diagnosed with lung cancer per year. The number of lung cancers diagnosed for males and females is now similar, whereas in 2001-05 there was a large difference between genders.
- For men, the absolute and relative gaps in incidence between County Durham and England reduced between 2001-05 and 2010-14. For females these gaps increased.
- Between 2010 and 2014 an average of both 107 males and females died prematurely from lung cancer.
- For men, the absolute and relative gaps for premature mortality between County Durham and England reduced between 2001-05 and 2010-14. For females these gaps increased; this echoes the trend experienced for incidence.

3.4 Lung cancer MSOA and deprivation analysis

Figure 38: Incidence (2008-12) per 100,000, lung cancer, MSOAs, males and females. Source: Incidence, PHE KIT (N&Y).

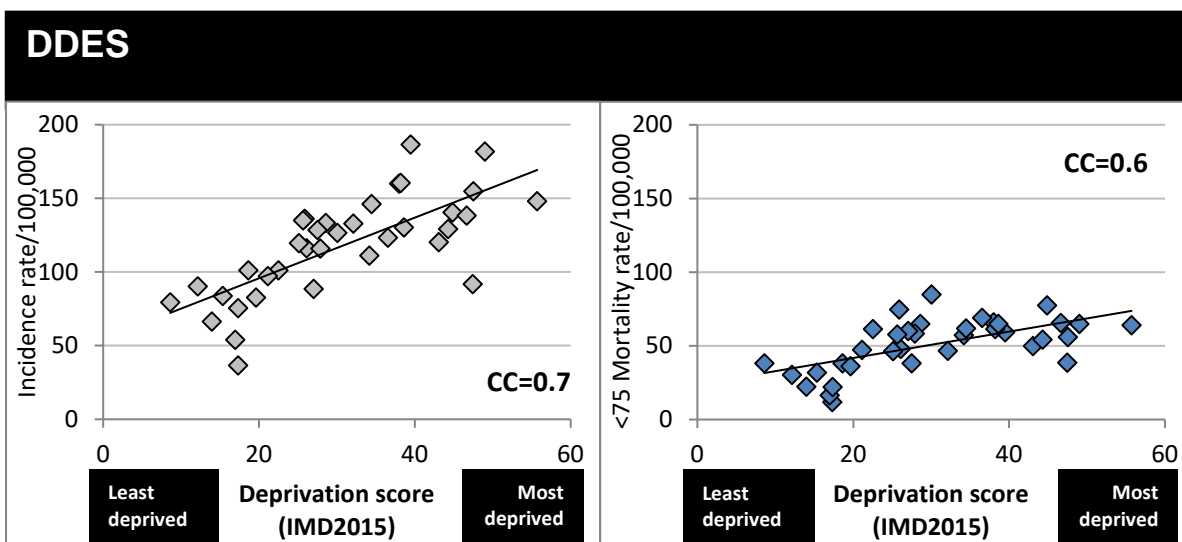
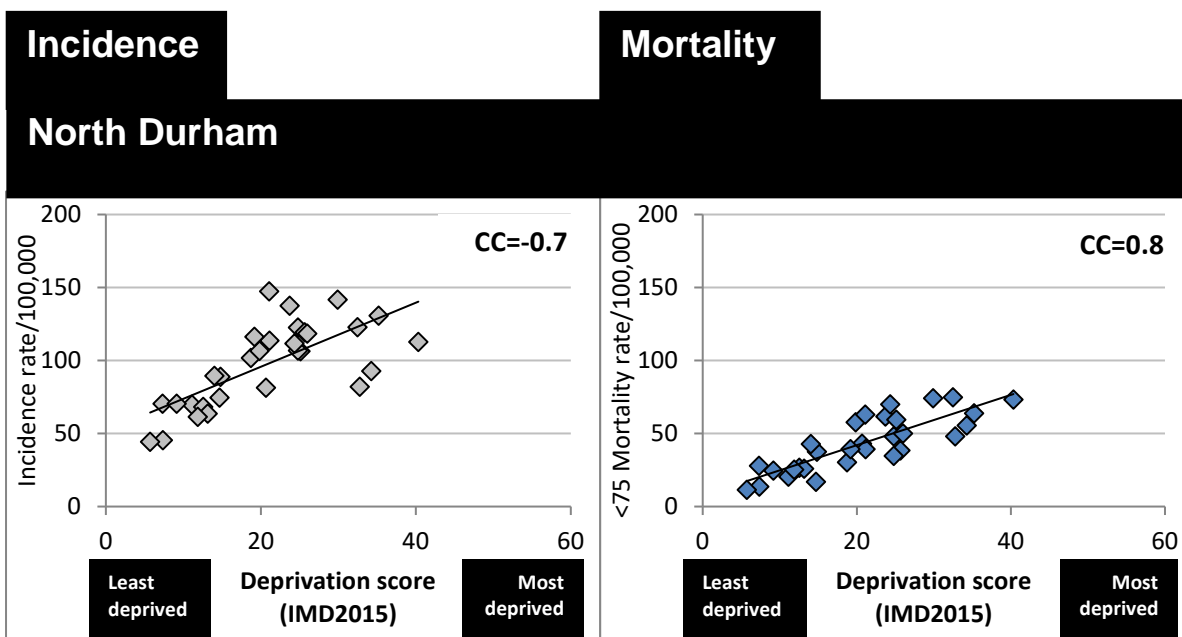


There is little significant variation by gender in lung cancer incidence at MSOA level in either CCG. Only in Crook North Howden le Wear and Tow Law shows male incidence as significantly higher than for females.

Across DDES and North Durham MSOAs there is statistically significant variation across male and female lung cancer incidence.

Due to small numbers at MSOA level it is not possible to replicate this analysis for lung cancer premature mortality.

Figure 39: Incidence (2008-12) and premature mortality (2010-14) directly age standardised rates per 100,000, lung cancer, by MSOA and deprivation score (IMD2015), North Durham CCG and DDES CCG. Source: CancerStats (incidence) and PCMD (mortality).



Strength of relationship (correlation co-efficient):
 -1 or +1=perfect; 0.7 to 1=strong; 0.3 to 0.6=moderate; 0-0.2=weak

The distribution of lung cancer incidence and mortality in North Durham and DDES CCGs is unequal. It is higher in the more deprived areas.

For incidence this relationship is strong in both North Durham (cc=0.7) and DDES CCG (cc=0.7). The relationship between premature cancer mortality and deprivation is also strong in North Durham (cc=0.8) and moderate to strong in DDES CCG (cc=0.6).

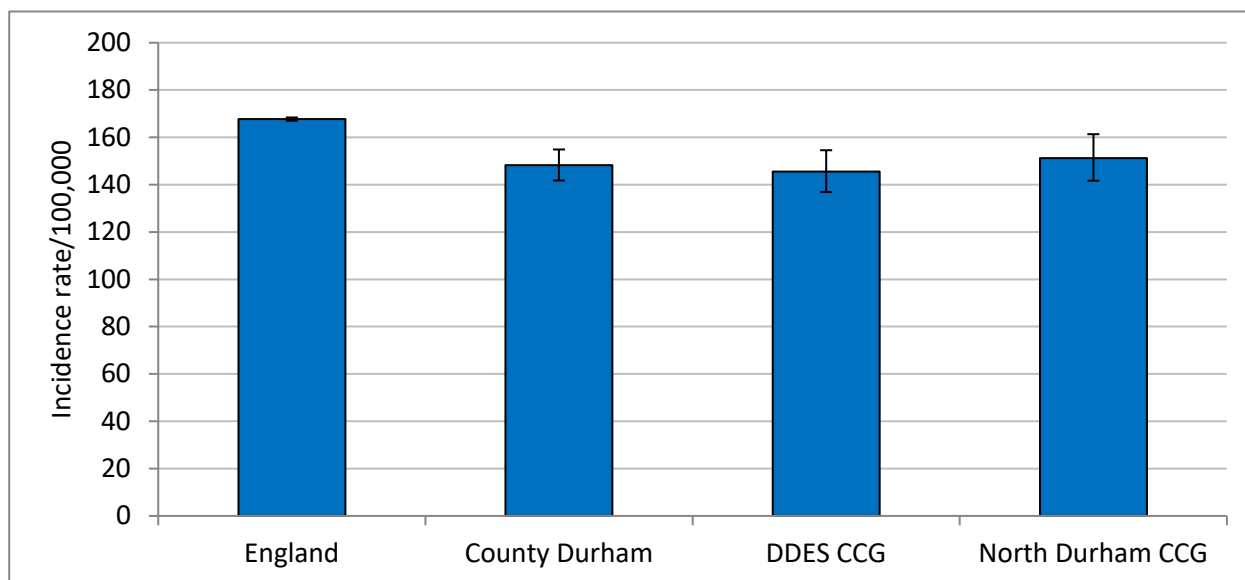
3.5 Breast cancer – CCG trends

Breast cancer is the most common form of cancer in the UK, with incidence increasing over time since the 1970's. Female breast cancer incidence is strongly related to age, with the high incidence rates overall being in older female (Cancer Research UK, 2013). Breast cancer in males is comparatively very rare. Annually around 350 males a year in the UK are diagnosed with breast cancer.

Many risk factors for breast cancer relate to a woman's reproductive history such as an early period, a late first pregnancy, never having given birth, and a late menopause. Using oral contraceptives, hormone replacement therapy (HRT), being obese, and drinking alcohol can also increase risk. Female with a family history of breast cancer are also at increased risk.

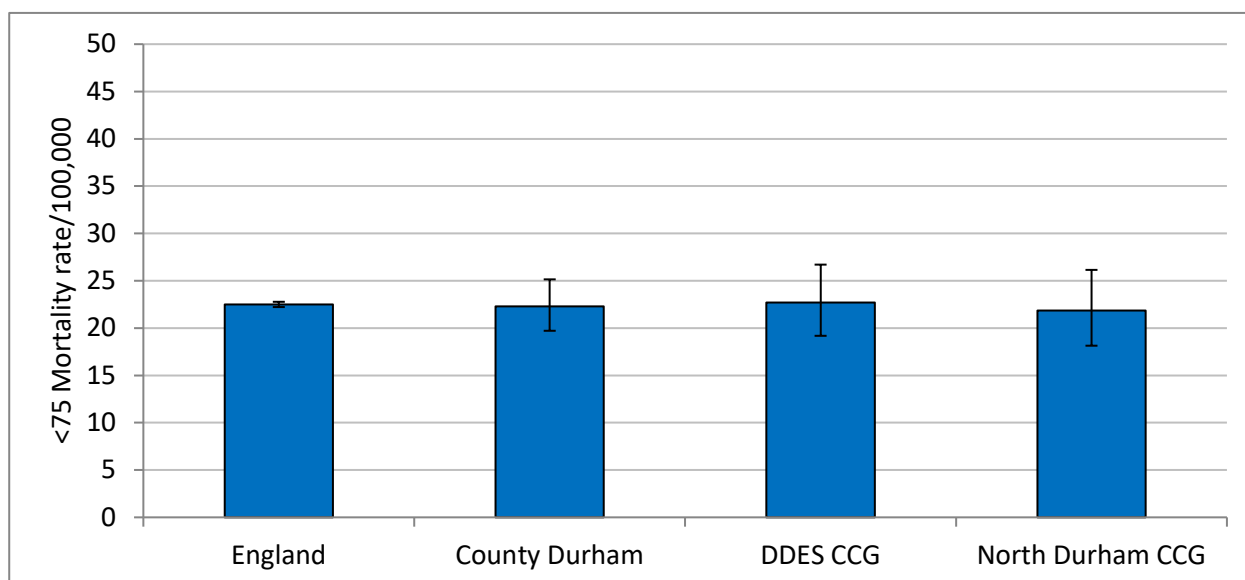
- Between 2010 and 2014 an average of 401 females per year in County Durham were diagnosed with breast cancer.
- Over the same period an average of 54 women died prematurely from breast cancer per year.

Figure 40: Incidence rate per 100,000, with 95% confidence intervals, female breast cancer. 2010-14. Source: CancerStats, PHE.



- Breast cancer incidence in females is significantly lower in County Durham, DDES CCG and North Durham CCG than England (figure 39).

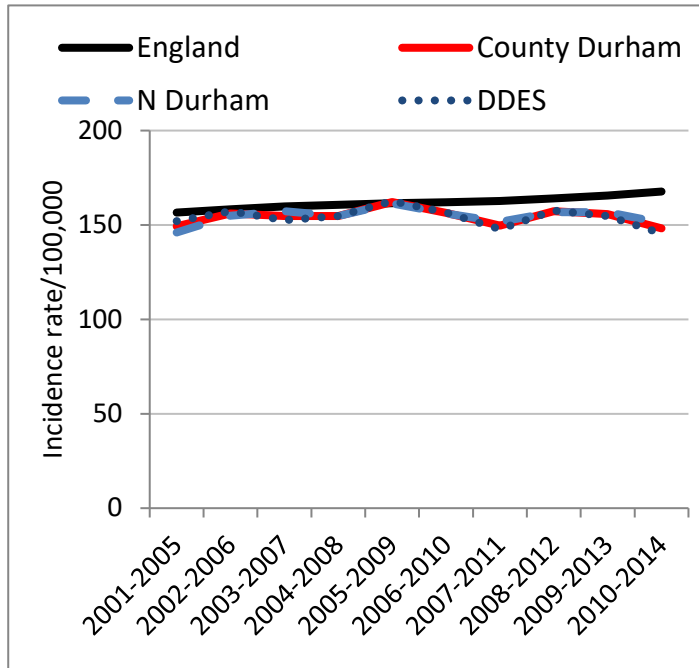
Figure 41: Premature mortality rate per 100,000, with 95% confidence intervals female breast cancer. 2010-14. Source: CancerStats, PHE.



- For the period 2010-2014 there was no statistically significant difference in breast cancer premature mortality between England, County Durham, DDES CCG and North Durham CCG.

Figure 42: Female breast cancer incidence rates (2001-05 to 2010-14) and mortality rates per 100,000. Source: CancerStats, PHE.

Incidence (female)



Premature Mortality (female)

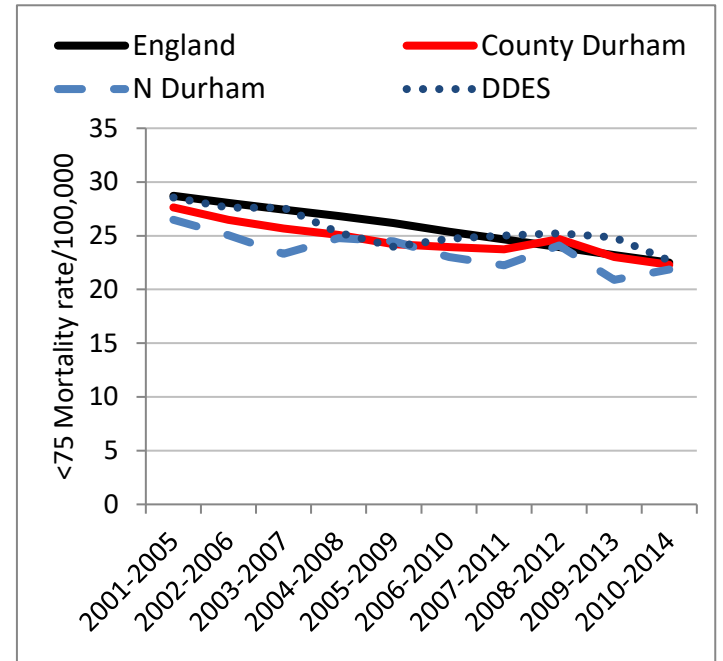


Figure 43: Percentage change over time, Incidence and premature mortality rates per 100,000, (2001-05 to 2010-14) female breast cancer. Source: CancerStats, PHE.

	Incidence (% change)	<75 Mortality (% change)
England	+7.1	-21.7
County Durham	-0.8	-19.3
DDES CCG	-4.3	-20.5
North Durham CCG	+3.6	-17.5

Key:
Increasing
Decreasing

- Nationally, incidence of female breast cancer between 2001-04 and 2010-14 increased by (+7.1%). Over the same period locally, incidence increased in North Durham (+3.6%) and fell in DDES (-4.3%) and County Durham (- 0.8%). Proportionally the increase in North Durham was lower than that seen nationally.
- Premature mortality rates fell in all areas between 2001-04 and 2010-14. Proportionally, the reduction in North Durham CCG has been smaller than the reductions experienced in County Durham and DDES CCG.

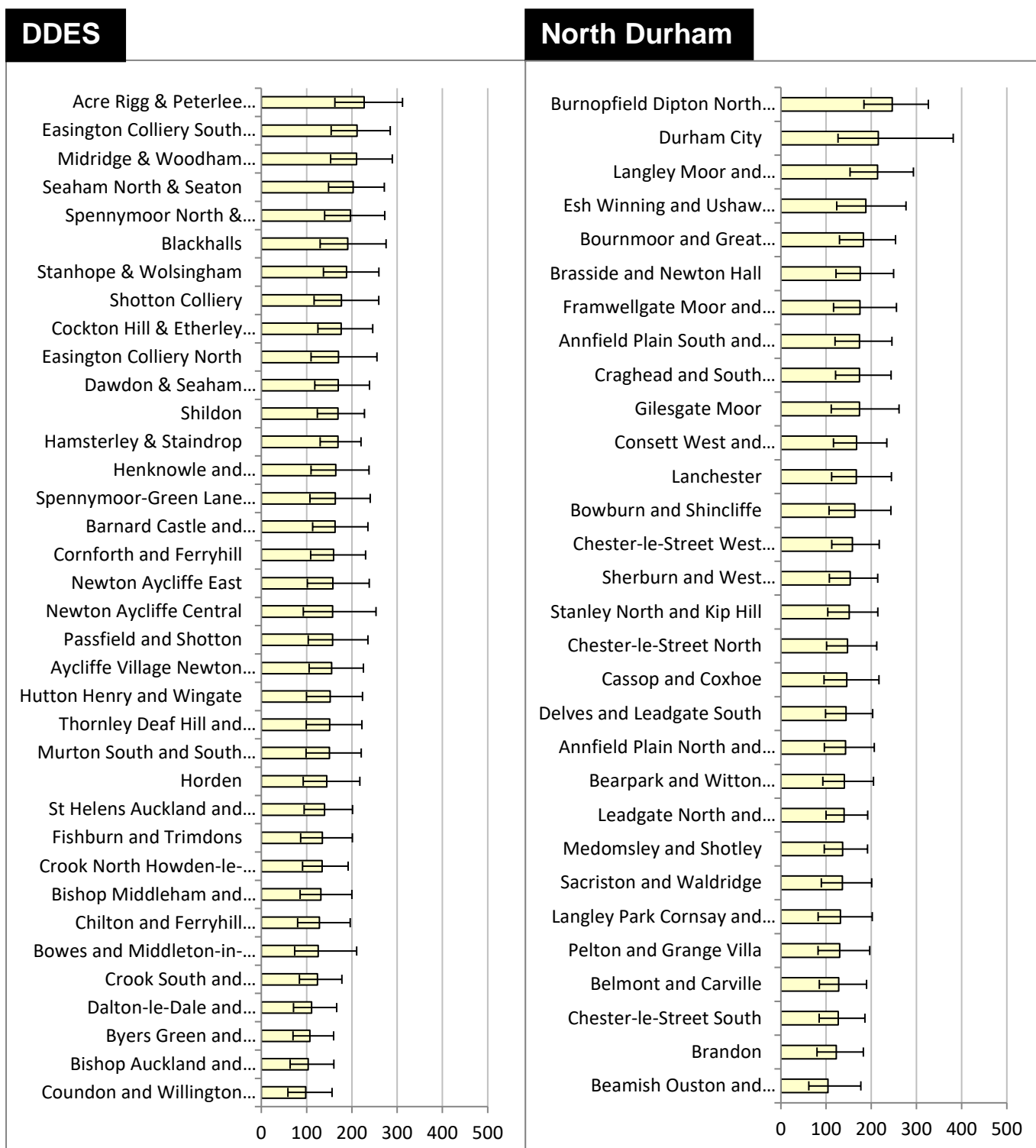
Figure 44: Absolute and relative gaps in incidence and premature mortality rates per 100,000, comparing 2001-05 to 2010-14, female breast cancer. Source: CancerStats, PHE.

	Females	
	2001-05	2010-14
Average number of tumours in County Durham per year	370	401
Absolute gap between County Durham and England	-7.2	-19.5
Relative gap	-4.6	-11.6
Average number of premature deaths in County Durham per year	61	54
Absolute gap between County Durham and England	-1.1	-0.2
Relative gap	-3.8	-0.9

- Between 2010 and 2014 an average of 401 females were diagnosed with breast cancer per year. Over the same period there was an average of 54 premature deaths per year.
- Since 2001-2005 the negative absolute and relative gaps for breast cancer incidence have widened as County Durham continues to have a lower incidence rate than England.
- The negative gaps for premature mortality have narrowed over the time period and in 2010-14 there was little different between County Durham and England.

3.6 Breast cancer - MSOA and deprivation analysis

Figure 45: Incidence (2008-12) rates per 100,000, female breast cancer, North Durham and DDES CCG by MSOA. Source: PHE KIT (N&Y).

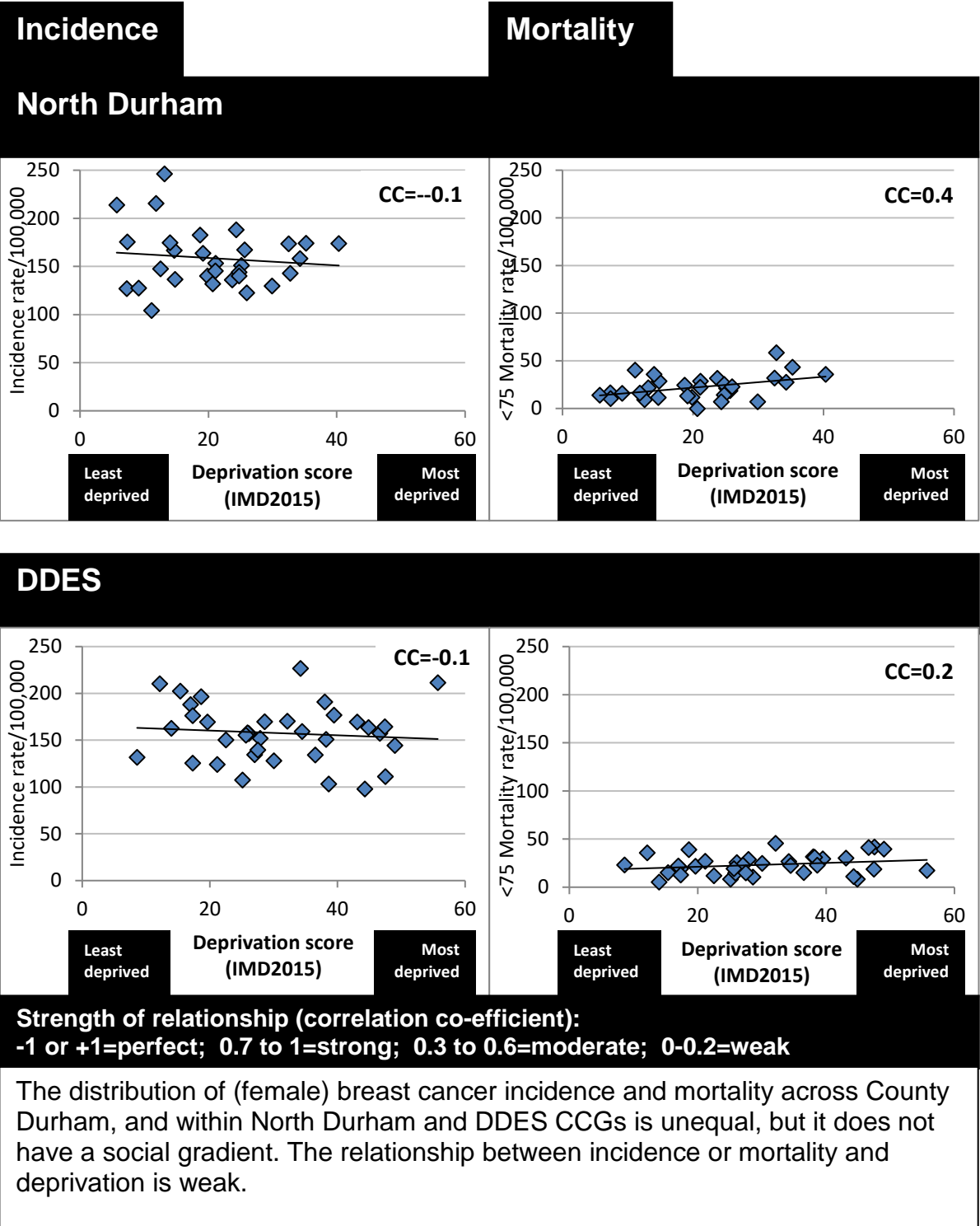


In DDES and North Durham there is statistically significant variation in breast cancer incidence.

Acre Rigg and Peterlee has a higher rate than the three DDES MSOAs with the lowest rates. In North Durham, Beamish, Ouston and Urpeth has a higher rate than the two North Durham MSOAs with the lowest rates.

Due to small numbers at MSOA level it is not possible to replicate this analysis for breast cancer premature mortality.

Figure 46: Incidence (2008-12) and premature mortality (2010-14) directly age standardised rates per 100,000, breast cancer (female), by MSOA and deprivation score (IMD2015), North Durham CCG and DDES CCG. Source: CancerStats (incidence) and PCMD (mortality).

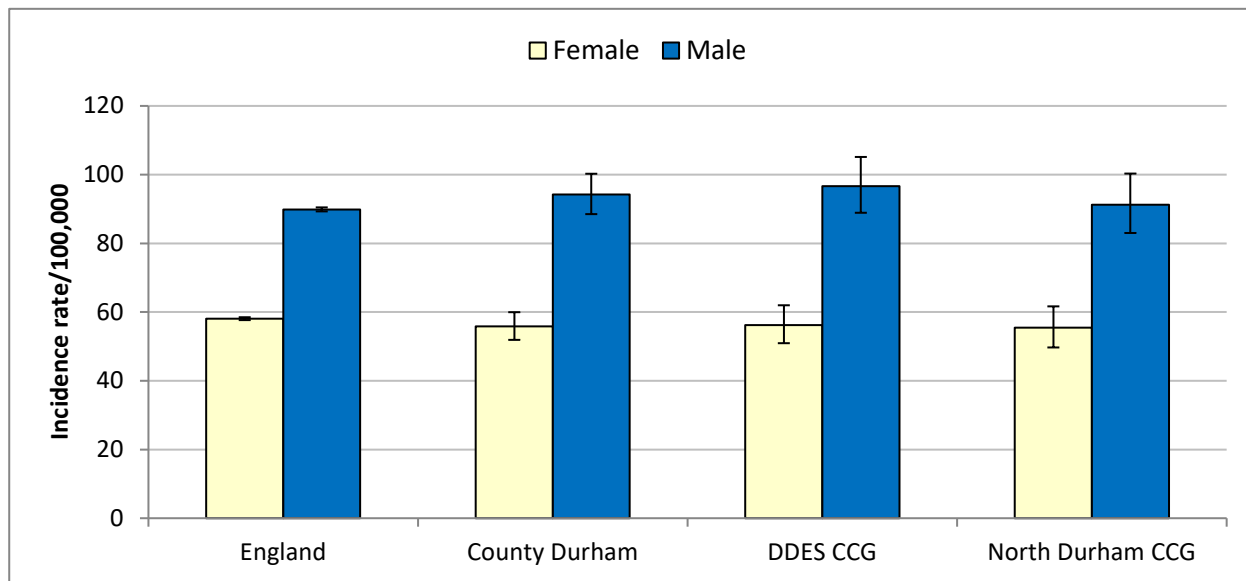


3.7 Bowel cancer – CCG trends

Bowel cancer is the fourth most common cancer in the UK and the second most common cause of cancer death in the UK (after lung cancer). Bowel cancer incidence is strongly related to age, with the highest incidence rates being in older male and female. More than 8 in 10 bowel cancer cases occur in people aged 60 and over.

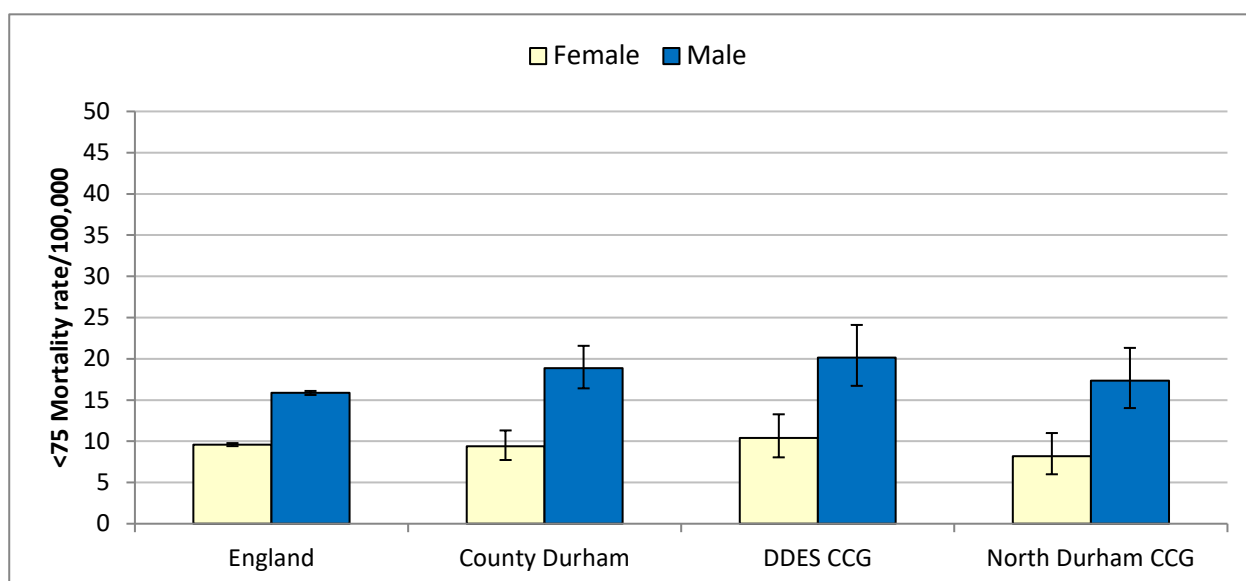
- Between 2010 and 2014 an average of 366 people per year in County Durham were diagnosed with bowel cancer.
- Between 2010 and 2014 an average of 66 people per year in County Durham died prematurely as a result of bowel cancer.

Figure 47: Incidence rate per 100,000, with 95% confidence intervals, bowel cancer. 2010-14. Source: CancerStats, PHE.



- Bowel cancer incidence is statically significantly higher for men than women in all areas.
- There is no statistically significant difference in bowel cancer incidence for either males or females between England and County Durham, DDES or North Durham CCG.

Figure 48: Premature mortality rate per 100,000, with 95% confidence intervals, bowel cancer. 2010-14. Source: CancerStats, PHE.

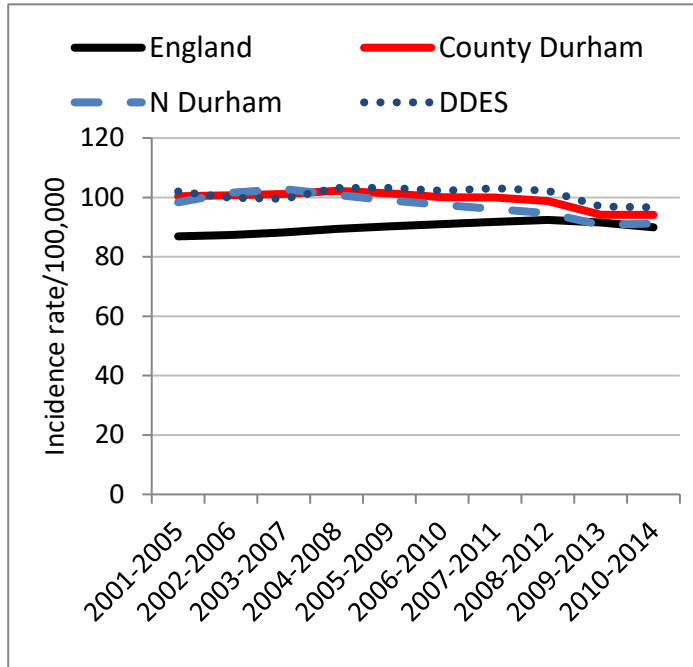


- Bowel cancer premature mortality is statically significantly higher for men than women in all areas.

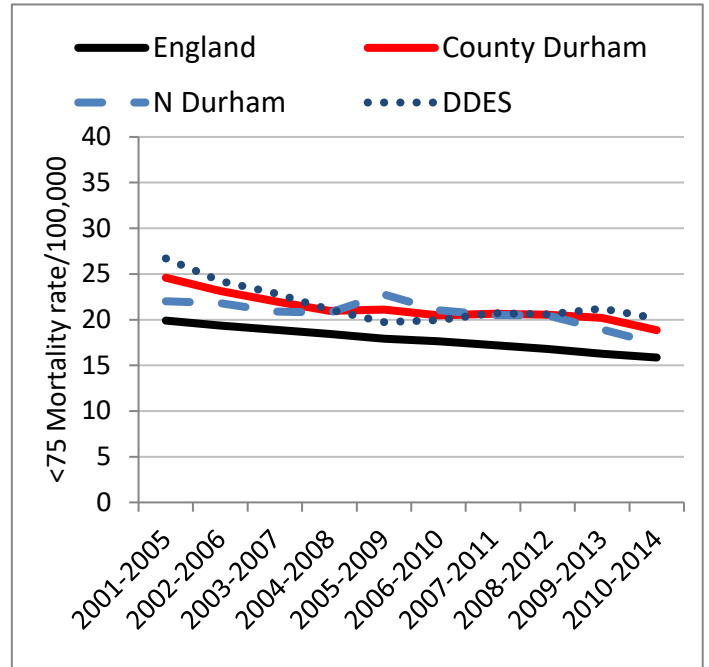
- Male premature mortality from bowel cancer is statistically significantly higher in DDES and County Durham than England. There is no significant difference for women between the geographies.

Figure 49: Bowel cancer incidence and mortality rates (2001-05 to 2010-14) rates per 100,000. Source: CancerStats, PHE.

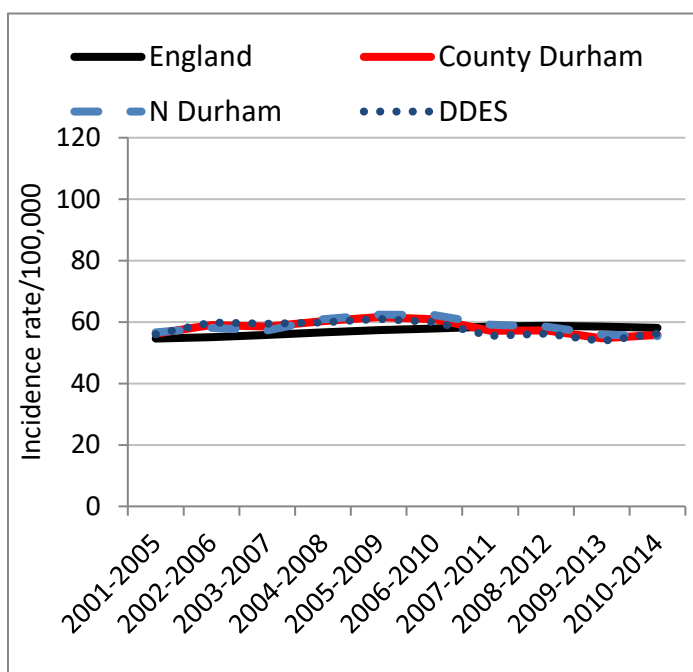
Incidence (male)



Premature Mortality (male)



Incidence (female)



Premature Mortality (female)

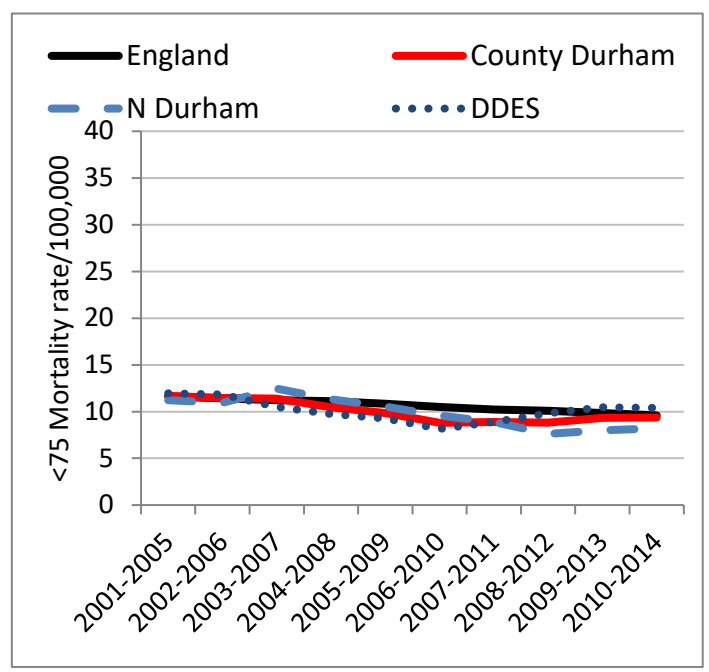


Figure 50: Percentage change over time, incidence and premature mortality rates per 100,000, 2001-05 to 2010-14, bowel cancer. Source: CancerStats.

	Incidence (% change)		<75 Mortality (% change)	
	Male	Female	Male	Female
England	+3.4	+6.3	-20.3	-17.4
County Durham	-6.2	-0.8	-23.3	-19.7
DDES CCG	-5.3	+0.5	-24.6	-13.0
North Durham CCG	-7.3	-2.1	-21.0	-26.9

Key:
Increasing
Decreasing

- Nationally, incidence of bowel cancer between 2001-04 and 2010-14 increased for males (3.4%) and females (6.3%).
- Over the same period locally:
 - For males, incidence fell in County Durham (-6.2%), North Durham (-7.3%) and DDES (-5.3%).
 - For females, incidence fell in North Durham (-2.1%) and County Durham (-0.8%) but increased in DDES (0.5%).
- Nationally, premature mortality for bowel cancer between 2001-04 and 2010-14 decreased for males (-20.3%) and females (-17.4%).
- Over the same period locally:
 - For males, bowel cancer mortality fell in DDES (-24.6%), County Durham (-23.3%) and North Durham (-21%).

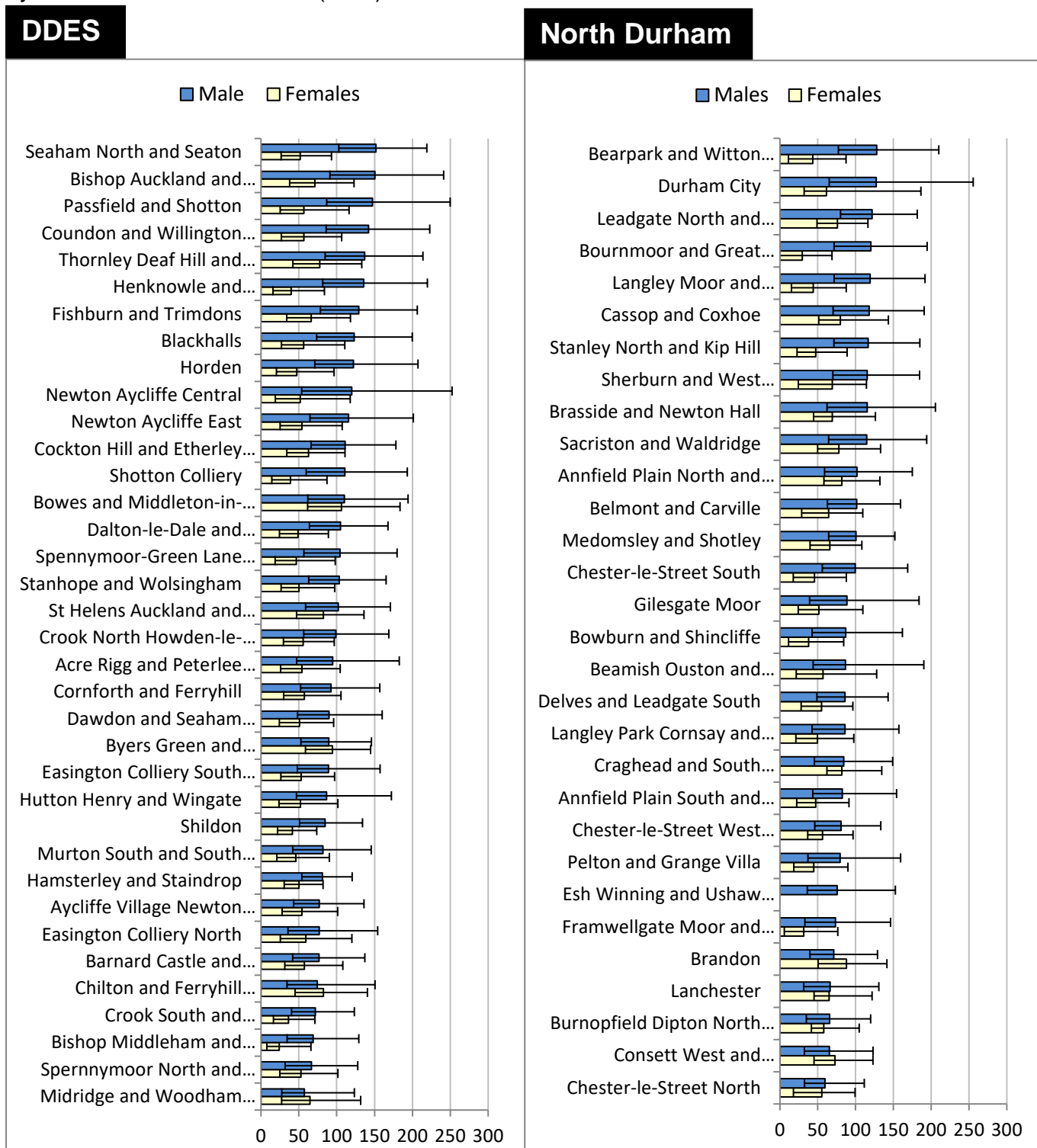
Figure 51: Absolute and relative gaps in incidence and premature mortality rates per 100,000, comparing 2001-05 to 2010-14, bowel cancer. Source: CancerStats, PHE.

	Male		Female	
	2001-05	2010-14	2001-05	2010-14
Average number of tumours in County Durham per year	188	214	141	152
Absolute gap between County Durham and England	13.5	4.3	1.6	-2.3
Relative gap (incidence)	15.6	4.8	3.0	-3.9
Average number of premature deaths in County Durham per year	48	43	25	23
Absolute gap between County Durham and England	4.7	3.0	0.1	-0.2
Relative gap (mortality)	23.6	18.9	0.5	-2.2

- Between 2010 and 2014 an average of 152 females and 214 males were diagnosed with bowel cancer per year.
- The absolute and relative gaps for incidence between County Durham and England have reduced for males and females. In 2010-14 the gap for females was negative indicating that incidence is now lower in County Durham than England.
- Between 2010 and 2014 an average of 43 males and 23 females died prematurely from bowel cancer.
- Over time there has been little difference between County Durham and England for female premature mortality from bowel cancer.
- For men, the relative gap has reduced over the time period, however a large relative gap remains.

3.8 Bowel cancer – MSOA and deprivation analysis

Figure 52: Incidence (2008-12) rates per 100,000, bowel cancer, North Durham and DDES CCG by MSOA. Source: PHE KIT (N&Y).

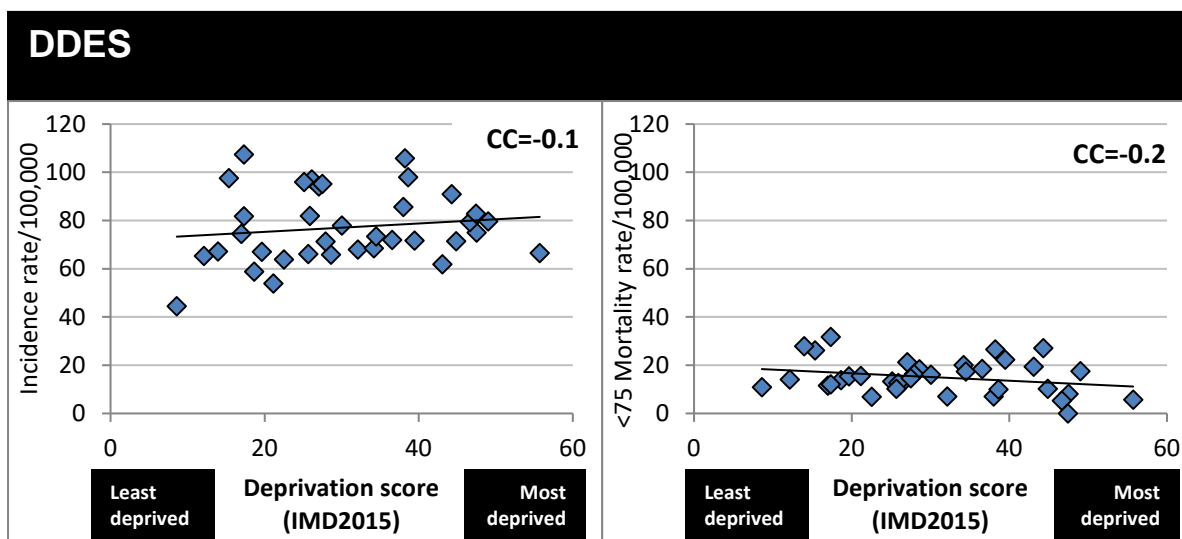
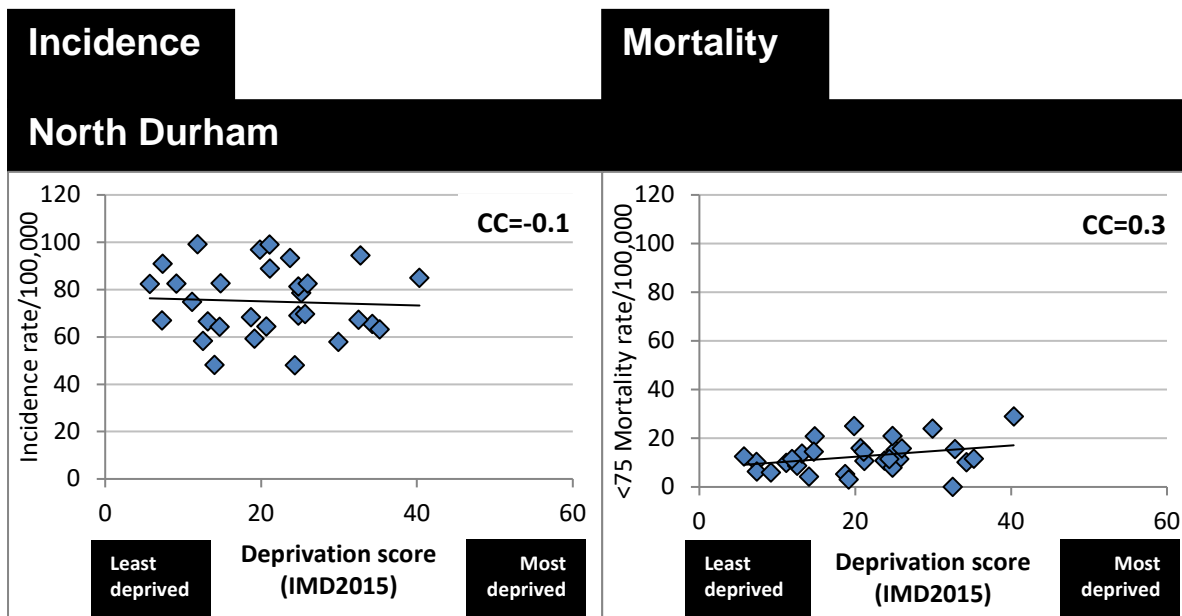


There is little significant variation by gender in bowel cancer incidence at MSOA level in either CCG. Only in Seaham North and Seaton and Bournmoor and Great Lumley is male incidence shown as significantly higher than for female.

Across both CCG MSOAs there is no statistically significant variation across male or female bowel cancer incidence. The wide confidence intervals signify relatively small numbers at these small geographies despite rates being pooled across a five year period. N.B. Observed numbers less than 5 have been suppressed.

Due to small numbers at MSOA level it is not possible to replicate this analysis for bowel cancer premature mortality.

Figure 53: Incidence (2008-12) and premature mortality (2010-14) directly age standardised rates per 100,000, bowel cancer, by MSOA and deprivation score (IMD2015), North Durham CCG and DDES CCG. Source: CancerStats (incidence) and PCMD (mortality).



Strength of relationship (correlation co-efficient):
 -1 or +1=perfect; 0.7 to 1=strong; 0.3 to 0.6=moderate; 0-0.2=weak

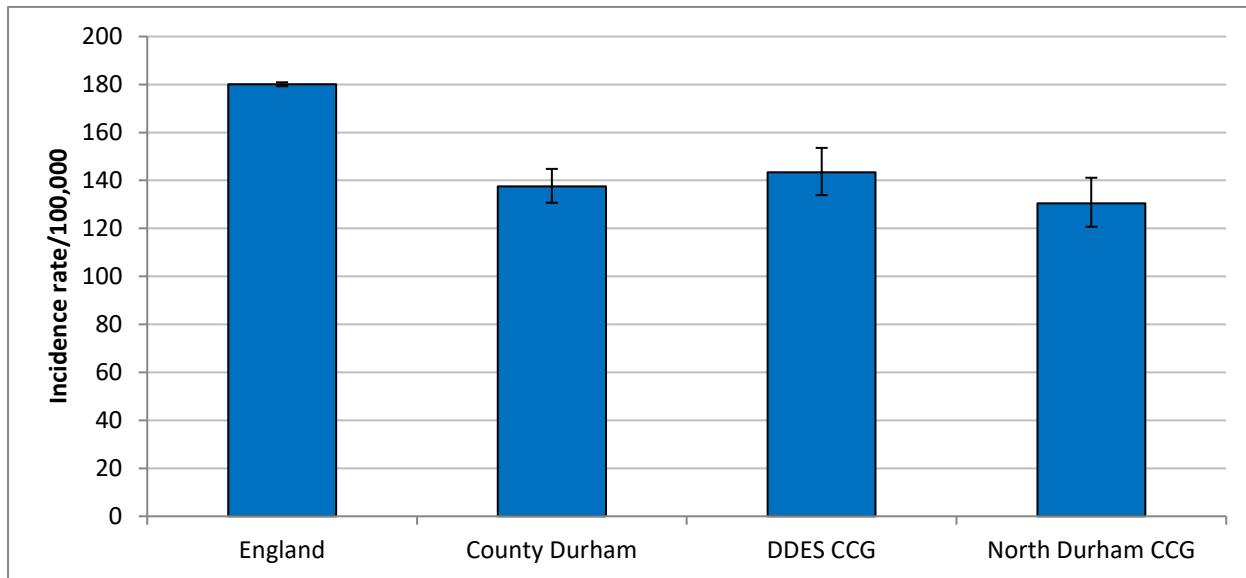
The distribution of bowel cancer incidence and premature mortality within North Durham and DDES CCGs is unequal, but it does not have a social gradient. The relationship between incidence or mortality and deprivation is weak.

3.9 Prostate cancer – CCG trends

Prostate cancer is the second most common cancer in the UK and the most common type of cancer in men (Cancer Research UK, 2014). It usually affects men over 50 and more than half (54%) of cases are diagnosed in men aged over 70 years.

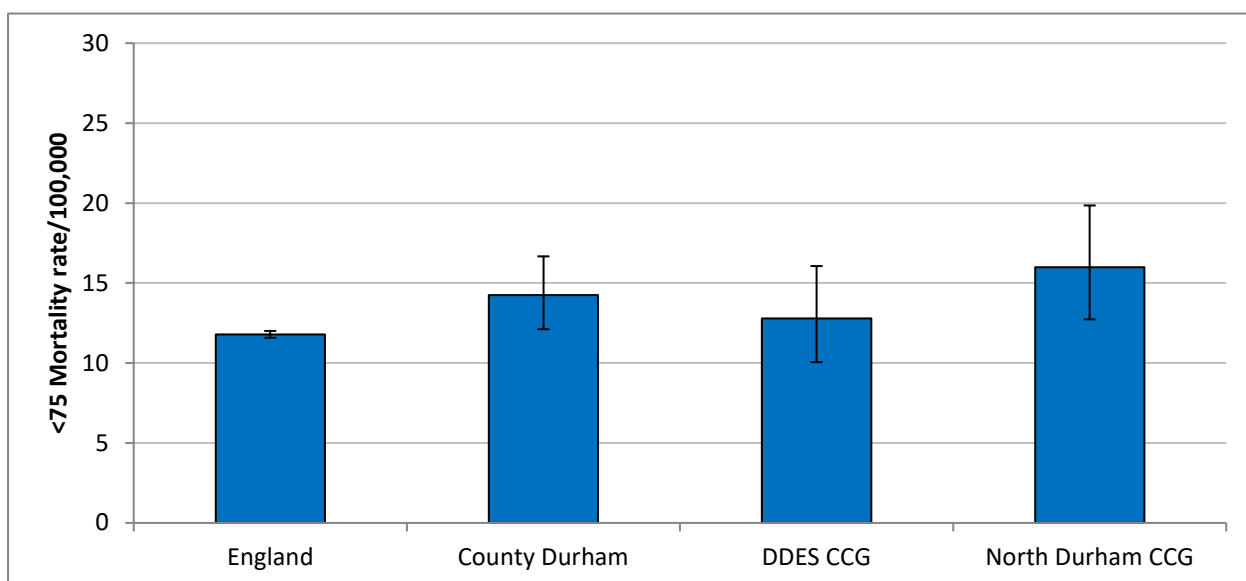
- Between 2010 and 2014 an average of 314 men per year in County Durham were diagnosed with prostate cancer.
- Between 2010 and 2014 an average of 32 men per year in County Durham died prematurely as a result of prostate cancer.

Figure 54: Incidence rate per 100,000, with 95% confidence intervals, prostate cancer. 2010-14. Source: CancerStats, PHE.



- Incidence of prostate cancer is statistically significantly lower in County Durham and the two CCGs than England.

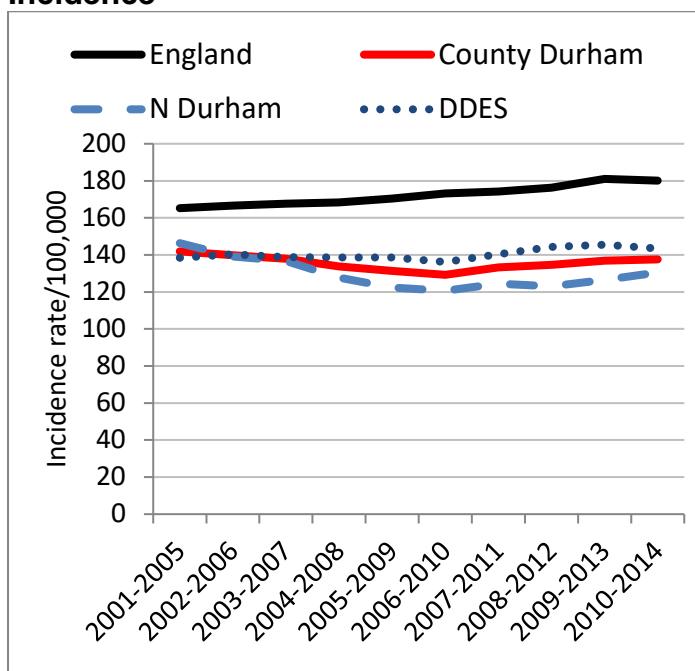
Figure 55: Premature mortality rate per 100,000, with 95% confidence intervals, prostate cancer. 2010-14. Source: CancerStats, PHE.



- Premature mortality from prostate cancer is statistically significantly higher in County Durham and North Durham than England. There is no significant difference between DDES CCG and England.

Figure 56: Prostate cancer incidence and mortality rates (2001-05 to 2010-14) rates per 100,000. Source: CancerStats, PHE.

Incidence



Premature Mortality

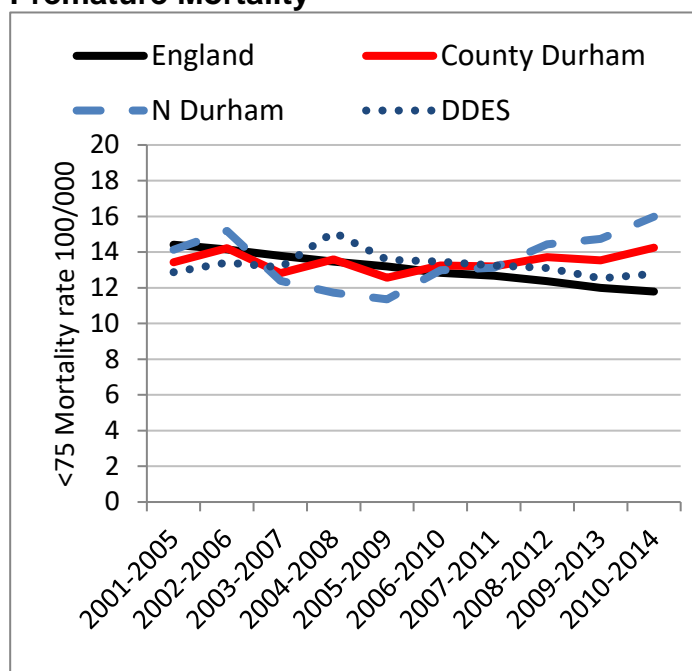


Figure 57: Percentage change over time, incidence and premature mortality rates per 100,000, 2001-05 to 2010-14, prostate cancer. Source: CancerStats, PHE.

	Incidence (% change)	<75 Mortality (% change)
England	+9.0	-18.2
County Durham	-3.0	+6.2
DDES CCG	+3.6	-0.7
North Durham CCG	-10.8	+13.1

Key:

Increasing
Decreasing

- Nationally, incidence of prostate cancer between 2001-04 and 2010-14 increased (9%).
- Over the same period locally incidence fell in County Durham (-3%) and North Durham (-10.8%) but increased in DDES (3.6%).
- Nationally, premature prostate cancer mortality between 2001-04 and 2010-14 decreased (-18.2%).
- Over the same period locally mortality fell by less than 1% in DDES (-0.7%), but increased in County Durham (6.2%) and North Durham (13.1%).

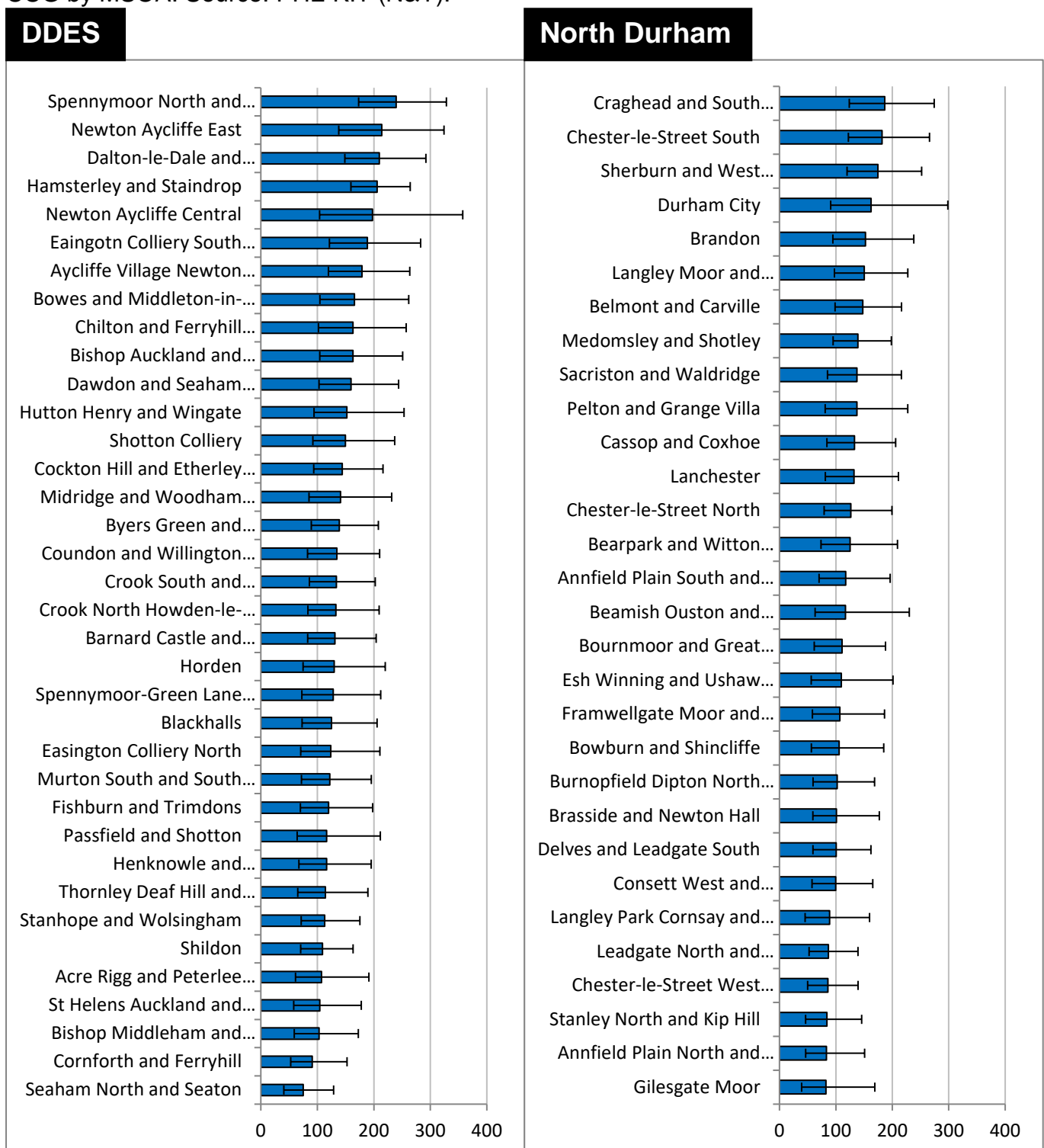
Figure 58: Absolute and relative gaps in incidence and premature mortality rates per 100,000, comparing 2001-05 to 2010-14, prostate cancer. Source: CancerStats, PHE.

	Males	
	2001-05	2010-14
Average number of tumours in County Durham per year	256	314
Absolute gap between County Durham and England	-23.3	-42.5
Relative gap	-14.1	-23.6
Average number of premature deaths in County Durham per year	26	32
Absolute gap between County Durham and England	-1.0	2.5
Relative gap	-6.9	20.8

- Between 2010 and 2014 an average of 314 males were diagnosed with prostate cancer per year. Over the same period there was an average of 32 deaths per year.
- The absolute and relative gaps for incidence between County Durham and England have reduced due to rising incidence nationally and falling incidence in County Durham.
- Over time there has been a small increase in the absolute gap between County Durham and England, whilst the relative has risen from -6.9% to 20.8%. This is due to falling rates of prostate cancer mortality nationally and increasing rates locally.

3.10 Prostate cancer – MSOA and deprivation analysis

Figure 59: Incidence (2008-12) rates per 100,000, prostate cancer, North Durham and DDES CCG by MSOA. Source: PHE KIT (N&Y).

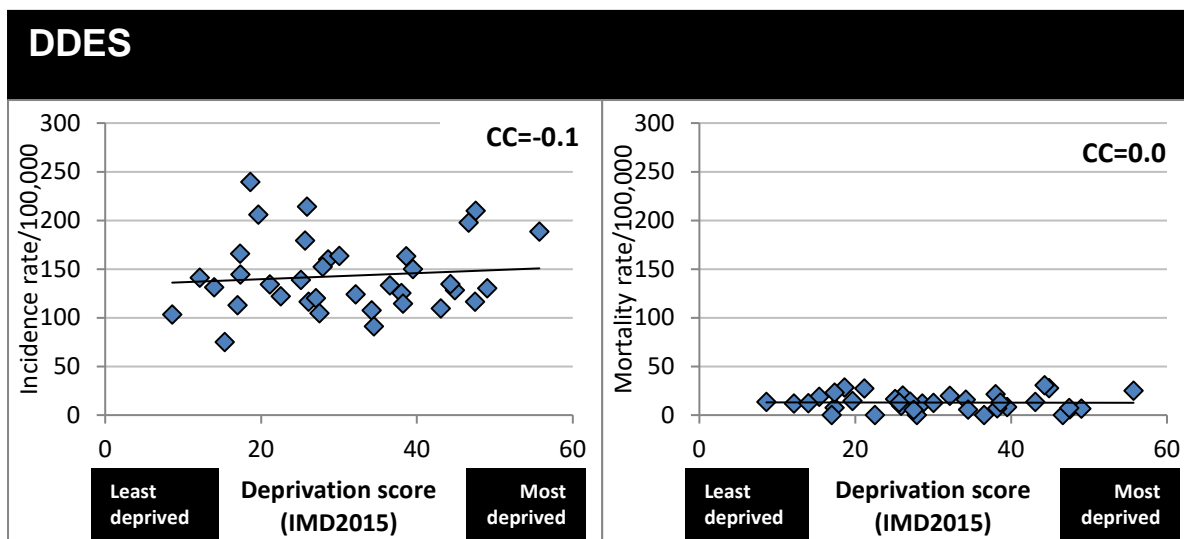
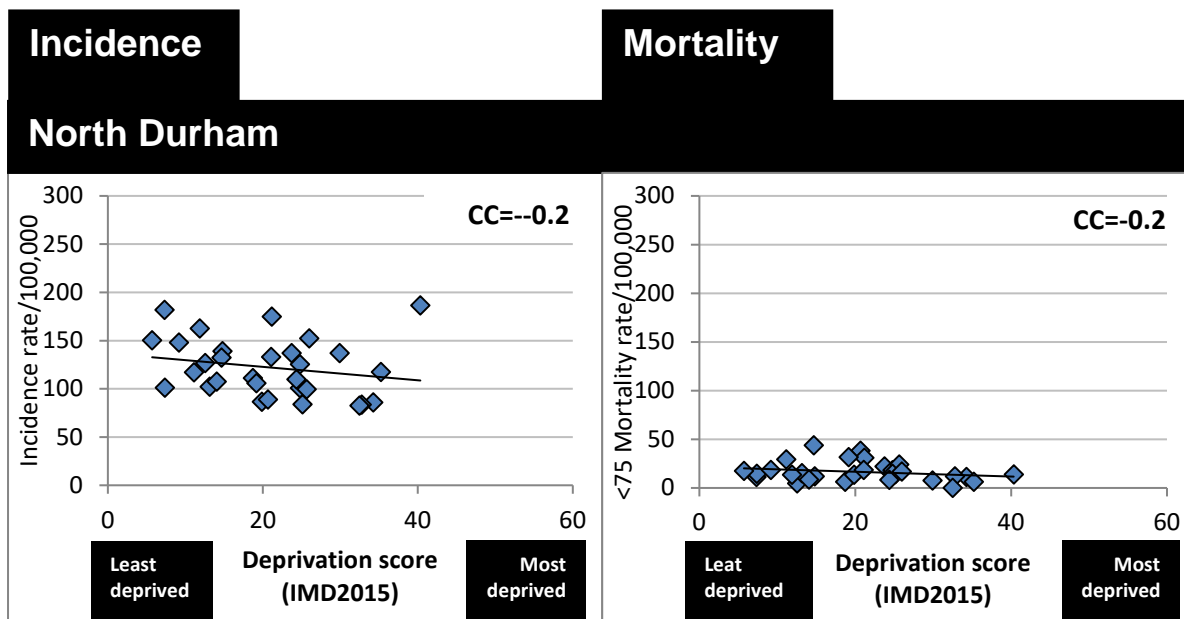


In DDES there is statistically significant variation in prostate cancer incidence between Spennymoor North & Tudhoe and Seaham North & Seaton (although the numbers in Seaham North are relatively low so caution must be used in interpreting these data).

There is no statistically significant difference in prostate cancer incidence within North Durham MSOAs.

Due to small numbers at MSOA level it is not possible to replicate this analysis for prostate cancer premature mortality.

Figure 60: Incidence (2008-12) and premature mortality (2010-14) directly age standardised rates per 100,000, prostate cancer, by MSOA and deprivation score (IMD2015), North Durham CCG and DDES CCG. Source: CancerStats (incidence) and PCMD (mortality).



Strength of relationship (correlation co-efficient):
 -1 or +1=perfect; 0.7 to 1=strong; 0.3 to 0.6=moderate; 0-0.2=weak

The distribution of prostate cancer incidence and premature mortality within North Durham and DDES CCGs is unequal, but it does not have a social gradient. The relationship between incidence or mortality and deprivation is weak.

4. 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.

Staging data for England has been improving in quality and completeness for a number of years, and was made publicly available for the first time in 2012. In 2014 all but one of the PHOF cancers had a completeness of over 80%. 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.

Stage 1: Localised with no spread to lymph nodes. Tumours typically less than 2-3cm.

Stage 2: Some spread to lymph nodes. Tumours typically between 3-5cm.

Stage 3: Cancer spread to lymph nodes and other areas around the site.

Stage 4: Cancer spread to other parts of the body.

Unknown: There are many reasons why cancers are not staged, generally because there is not enough information to work out the stage.

Early stage at diagnosis is one of the most important factors that affect cancer outcomes, and promoting earlier stage at diagnosis is one of the key aims of the National Awareness and Early Diagnosis Initiative led by The Department of Health, Cancer Research UK, and Public Health England (National Cancer Intelligence and Analysis Service, PHE). Improved recording of cancer staging at diagnosis would allow more detailed and actionable analyses of outcomes by treatment type, patient pathway, and case mix.

Given the relatively large proportion of cancers still diagnosed at a late stage, both locally and nationally (figure 60) there remains a need for continued awareness campaigns, promotion of healthy lifestyle choices, screening and access to appropriate diagnostics for General Practices.

Figure 61: Percentage of cancers diagnosed by stage, Breast, Bowel and Lung, 2012-14. Source: National Cancer Registration and Analysis Service (NCRAS), PHE.

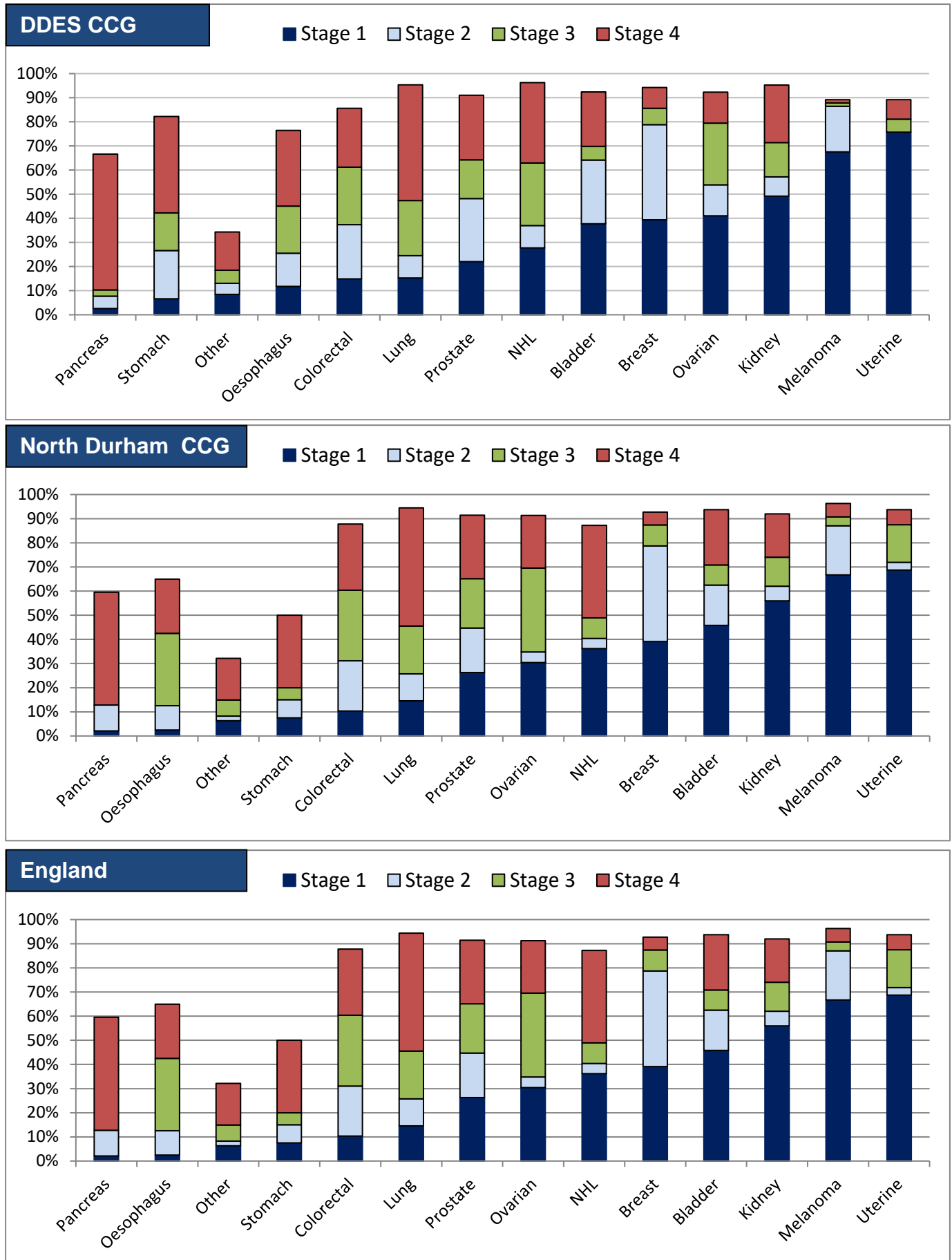
	Cancer	Staging		
		1 & 2	3 & 4	Unknown
DDES	Breast	78.8	15.4	5.8
	Bowel	37.4	48.2	14.4
	Lung	24.5	70.9	4.6
North Durham	Breast	78.7	14.0	7.2
	Bowel	31.1	56.7	12.2
	Lung	25.8	68.7	5.6
England	Breast	75.8	13.5	10.7
	Bowel	38.7	48.4	12.9
	Lung	22.6	67.5	9.9

Focussing on breast, bowel and lung cancer in 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 stage 1 and 2 is higher in DDES (24.5%) and North Durham (25.8%) than England (22.6%).
- Bowel cancers at stage 1 and 2 is lower in North Durham (31.1%) than DDES (37.4%) and England (38.7%).

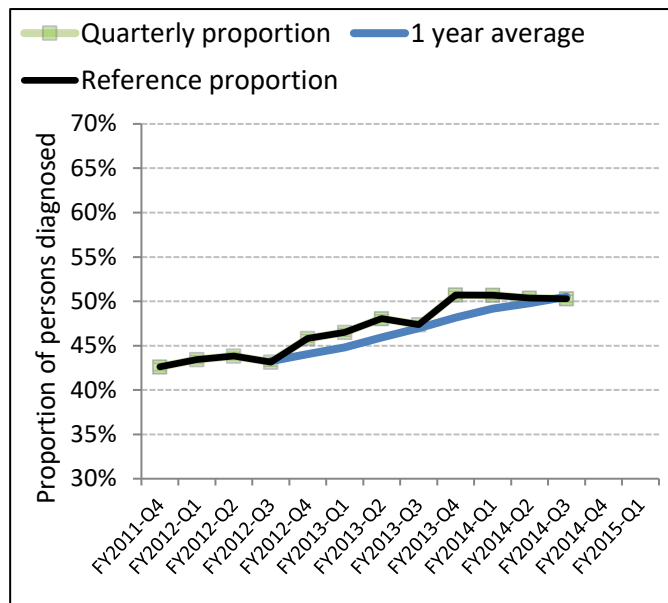
Figure 62: Stage at diagnosis (without unknowns), 2012-14, DDES CCG, North Durham CCG and England. Source: NCRAS, PHE.



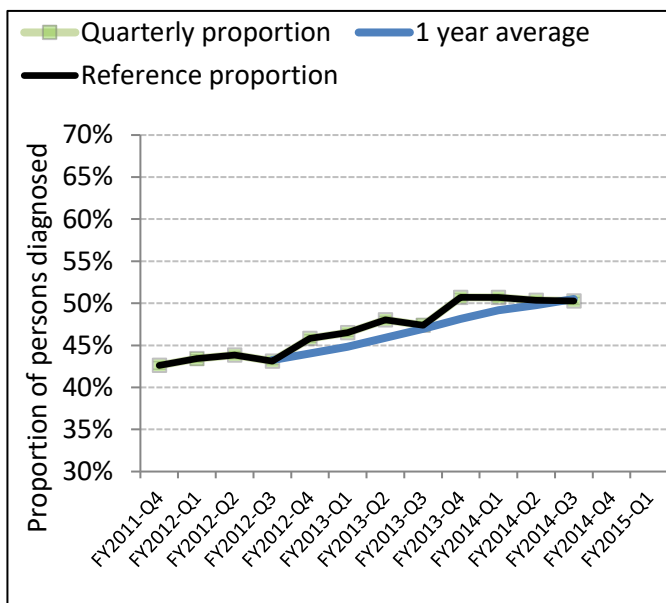
Around a fifth of cancer patients are currently diagnosed following an emergency admission to hospital and go on to have poorer outcomes than those who are diagnosed during an earlier stage of their illness.

Figure 63: Proportion diagnosed at early stage, DDES CCG and England, North Durham CCG and England, quarterly Q4 2011 to Q1 2015. Source: NCRAS, PHE.

DDES CCG



North Durham CCG



Data warnings - Stage at Diagnosis:

- This indicator aligns with the cancer stage indicators in the Public Health Outcomes Framework (PHOF indicator 2.19) and the CCG outcomes Indicator Set (CCG OIS indicators 1.17 and 1.18) on the proportion of cancers diagnosed at stages 1 and 2.
- The % staged is important contextual information for understanding the % early stage, as a low % staged means the data quality of the indicator is low for this CCG. Improvement in recording of stage continues to be part of the work programme for the NCRS; the % of cases staged continues to improve year on year.
- Improvements in this indicator are likely to be the result of improved staging coverage, so inferences about changes over time can only be made if it is clear that staging completeness did not change significantly.
- Note that not all cancers are included in the indicator.
- The case-mix of cancers diagnosed will impact on the proportion of early stage cancers. For example breast cancer is far more likely to be diagnosed at an early stage than lung cancer, so areas with a high proportion of breast cancer will have better outcomes on this indicator in comparison with areas with a high proportion of lung cancer.
- Smaller numbers at CCG level may result in large variability in the confidence intervals.

Data warnings - Emergency Presentation

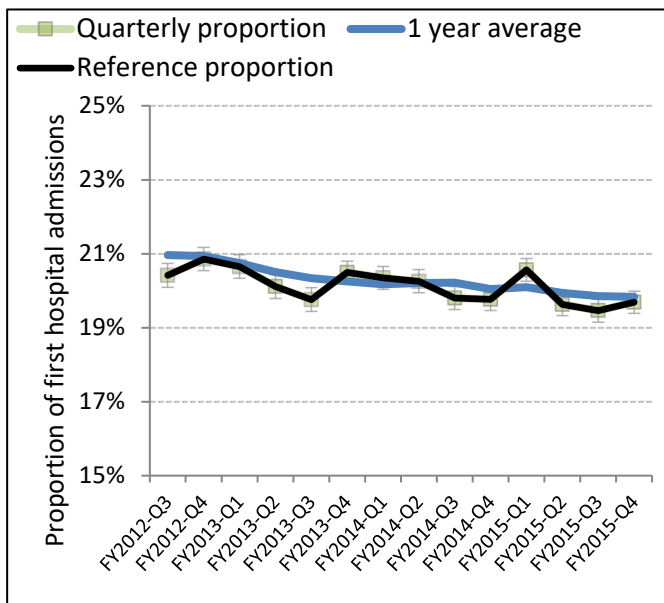
The Emergency Presentation metric shows the estimated proportion of all malignant cancers** which present as an emergency. This is also an important driver of cancer outcomes: patients with cancers that present as an emergency suffer significantly worse outcomes. The recent cancer strategy for England recommended that the proportion of emergency presentations should be regularly reported and reviewed. The metric estimates the true proportion of emergency presentations using first admissions to hospital as a proxy for diagnosis to allow more rapid reporting.

- There are some cancers, e.g. brain or children’s cancers (e.g. Leukaemia, Neuroblastoma etc.), where emergency presentation is likely to be the most appropriate route to diagnosis.
- While the measure itself may correlate with improved survival where emergency presentations fall, this is not necessarily a direct cause and many other factors will be involved.

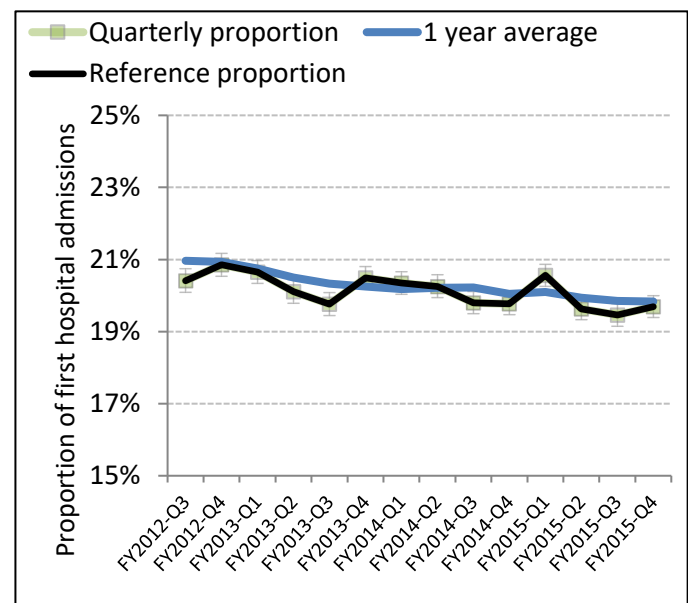
- The denominator is all tumours identified from Inpatient HES and therefore does not include all diagnosed tumours registered by the NCRS. As a result, the results presented here may differ from publicly available results such as Routes to Diagnosis.
- The indicator is not adjusted for case-mix. In particular CCGs with an older population can be expected to see a larger number of Emergency Presentations. CCGs with a larger number of lung cancers (due to smoking prevalence) or smaller number of breast cancers (due to broader socio-economic factors) can be expected to see a larger proportion of emergency presentations.
- Smaller numbers at CCG level may result in large variability in the confidence intervals.

Figure 64: Proportion of 1st hospital admissions that are emergencies: DDES CCG and England, North Durham CCG and England, quarterly Q3 2012 to Q4 2015. Source: NCRAS, PHE.

DDES CCG



North Durham CCG



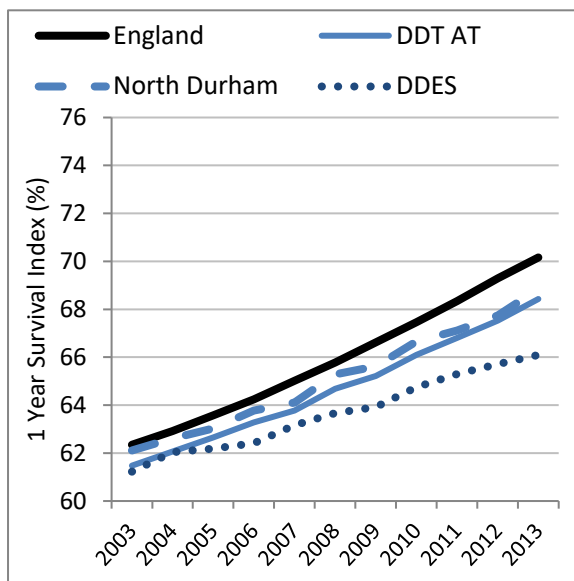
5. Cancer survival

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 used. It provides an estimate of the percentage of patients still alive while taking into account other, non-cancer related, and causes of death (e.g. the percentage of patients that would be expected to have dies 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.

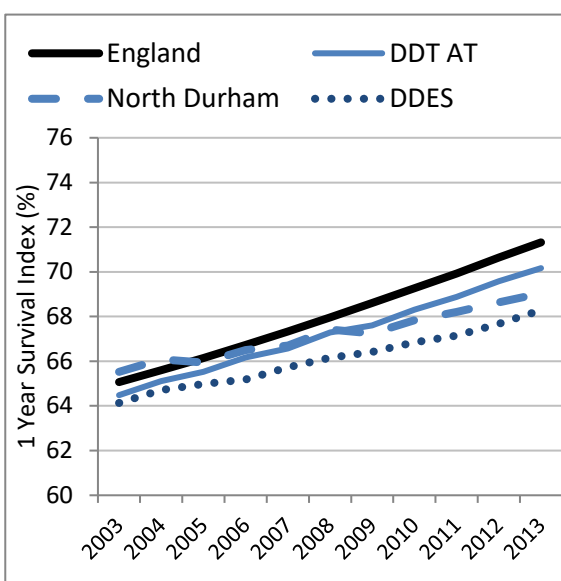
Late diagnosis is a major factor in poor survival rates. Lack of symptom awareness applies to affluent and disadvantaged groups but is more acute in disadvantaged groups. Surveys of public awareness, anticipated delay and perceived barriers to seeking medical advice suggest that males, younger people,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

Figure 65: One-year survival index (%), (1) all cancers and (2) 3 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. Cancer and End of Life Care Analysis Team, ONS.

All cancers



3 cancers combined



All cancers

	Increase in survival index (% points)	% increase in survival index
England	7.8	12.5
DDT AT*	7.0	11.3
DDES	4.9	8.0
North Durham	6.7	10.8

3 cancers combined

	Increase in survival index	% increase in survival index
England	6.3	9.6
DDT AT*	5.7	8.8
DDES	4.2	6.5
North Durham	3.5	5.4

*- Durham, Darlington and Tees Area Team

- 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 increases of 10.8% (North Durham) and 8% (DDES). These increases were proportionally lower than in DDT AT (11.3%).
- 3 cancer survival rates (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 increases of 5.4% (North Durham) and 6.5% (DDES). These increases were proportionally lower than in DDT AT (8.8%).

6. GP Profiles (Cancer Services profiles)

In December 2015 a new cancer domain was added to the National General Practice Profiles. This coincided with the launch of a Cancer Services tool on PHE's Fingertips platform. This tool contains data on cancer services at GP and CCG level collated by The National Cancer Intelligence Network (NCIN). It replaces the GP Cancer Profiles that were previously contained within the Cancer Commissioning Toolkit. They provide readily available and comparative information for benchmarking and reviewing variation at a GP level.

The profiles are not intended for performance management purposes rather they are designed to support GPs, CCGs and local authorities when assessing the impact of cancer on their local population and to ensure they are providing and commissioning effective and appropriate healthcare services for their local population.

Figure 66: CCG Summary Indicators for Cancer. Source: National General Practice Profiles, PHE.

Indicator	Period	DDES	North Durham	England
Cancer: QOF prevalence (all ages)	2015/16	2.8%	2.6%	2.4%
Exception rate for cancer indicator	2015/16	32.2%	25.5%	25.0%
New cancer cases (Crude incidence rate: new cases per 100,000)	2013/14	595	555	515
% reporting cancer in the last 5 years	2015/16	2.8%	3.1%	3.2%
CAN003: review within 6 mths of diagnosis	2015/16	65.2%	70.6%	71.0%
Exception rate for the cervical screening indicator	2015/16	3.9%	5.3%	6.5%
CS002: Women, aged 25-64, with a record of cervical screening (last 5 yrs)	2015/16	79.6%	78.8%	76.1%
Females, 25-64, attending cervical screening within target period (3.5 or 5.5 year coverage, %)	2015/16	77.0%	76.9%	72.8%
Females, 50-70, screened for breast cancer in last 36 months (3 year coverage, %)	2015/16	75.0%	78.5%	72.5%
Females, 50-70, screened for breast cancer within 6 months of invitation (Uptake, %)	2015/16	72.4%	77.1%	73.8%
Persons, 60-69, screened for bowel cancer within 6 months of invitation (Uptake, %)	2015/16	57.3%	59.4%	55.6%
Persons, 60-69, screened for bowel cancer in last 30 months (2.5 year coverage, %)	2015/16	59.8%	61.7%	57.8%
Two-week wait referrals (number per 100,000)	2015/16	3414	3115	2975
Number of new cancer cases treated (Detection rate: % of which resulted from a TWW referral)	2015/16	45.5%	47.4%	49.7%
Two-week wait referrals for suspected breast cancer (per 100,000)	2014/15	634	576	541
Two-week wait referrals for suspected lower GI cancers (per 100,000)	2015/16	551	466	453
Two-week wait referrals for suspected lung cancer (per 100,000)	2015/16	216.8	120.0	103.3
Two-week wait referrals for suspected skin cancer (per 100,000)	2015/16	435	562	572
In-patient or day-case colonoscopy procedures (per 100,000)	2015/16	1048	803	733
In-patient or day-case sigmoidoscopy procedures (per 100,000)	2015/16	785	557	478
In-patient or day-case upper GI endoscopy procedures (per 100,000)	2015/16	1703	1893	1302
Number of emergency admissions with cancer (per 100,000)	2015/16	685	676	538
Number of emergency presentations [cancer] (per 100,000)	2015/16	112	95	89
Number of other presentations [cancer] (per 100,000)	2015/16	465	394	361

N.B Higher or lower does not indicate better or worse, polarity should be considered for each indicator.

	20% lower than England
	20% higher than England

- DDES CCG has higher values (20%) than England for nine out of the 24 indicators presented in the table above compared to North Durham CCG which has two.
- DDES CCG has a high rate of colonoscopy, sigmoidoscopy and upper GI endoscopy procedures.
- Both DDES and North Durham CCGs have high rates of emergency admissions with cancer.

The following tables and charts (figures 67 to 98) illustrate practice level variation within the two CCGs and their federations. They should be used to indicate where improvements could be made and inform further investigation.

GP profiles - Demographics

Figure 67: Selected demographic indicators, DDES, North Durham and England. Source: National General Practice Profiles, PHE.

	% population aged 65 or over	IMD 2015 score	IDAOPi index 2015	IDACi index 2015
England	17.1	21.8	16.2	19.9
DDES CCG	19.7	30.2	20.6	27
North Durham CCG	18.6	20.7	18	20.1

Figures 68-71: DDES Practice level demographic variation by federation. Source: National General Practice Profiles, PHE.

Figure 68: Percentage of the population aged 65 or over, DDES, 2016.

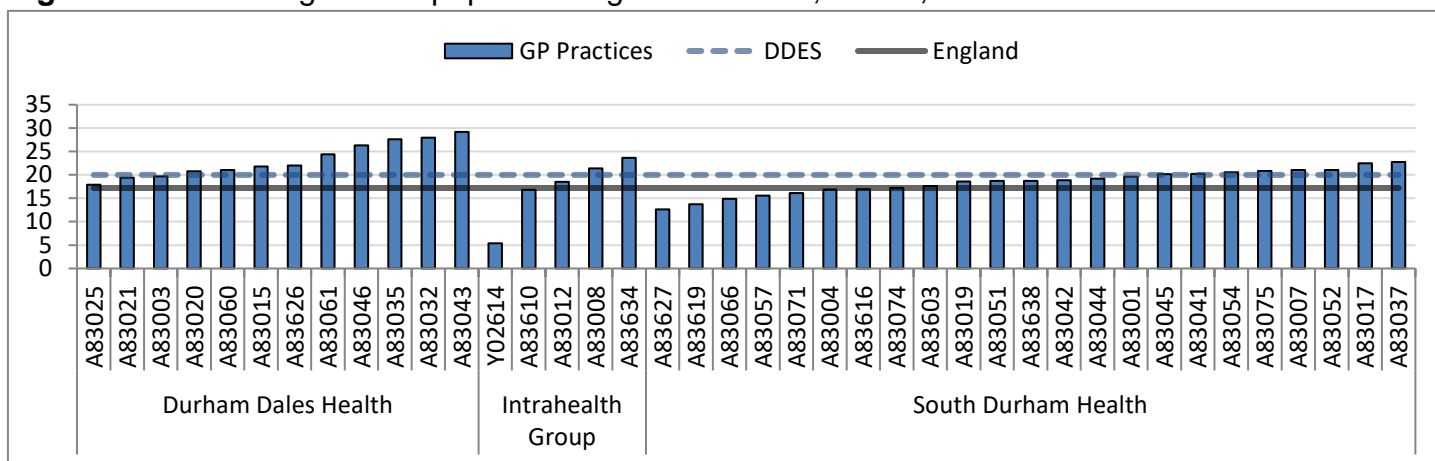


Figure 69: Index of multiple deprivation score, DDES, 2015.

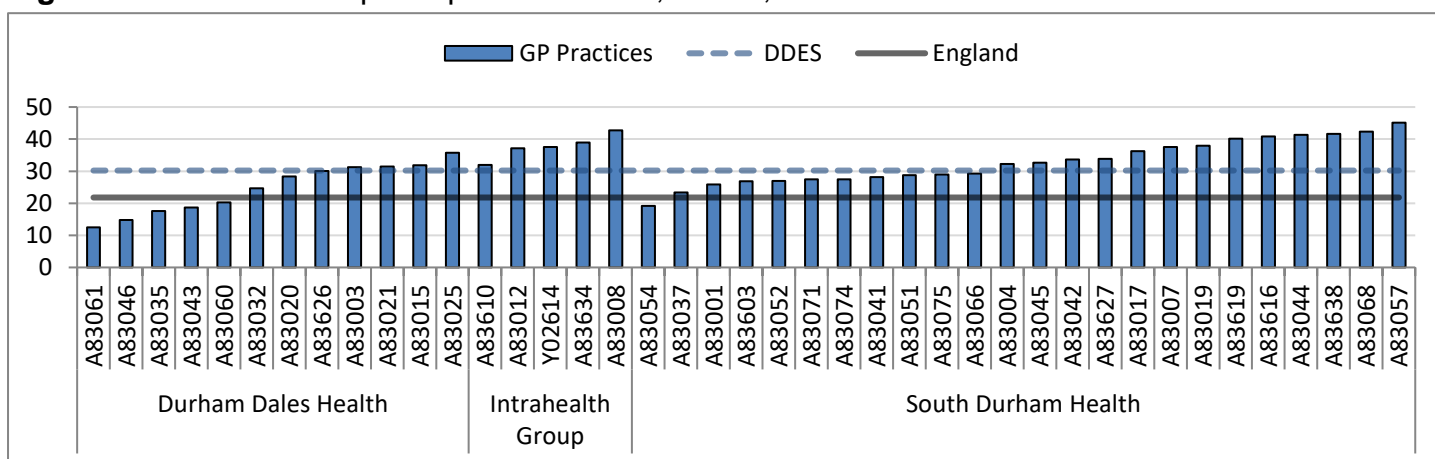


Figure 70: Income deprivation affecting older people index, DDES, 2015.

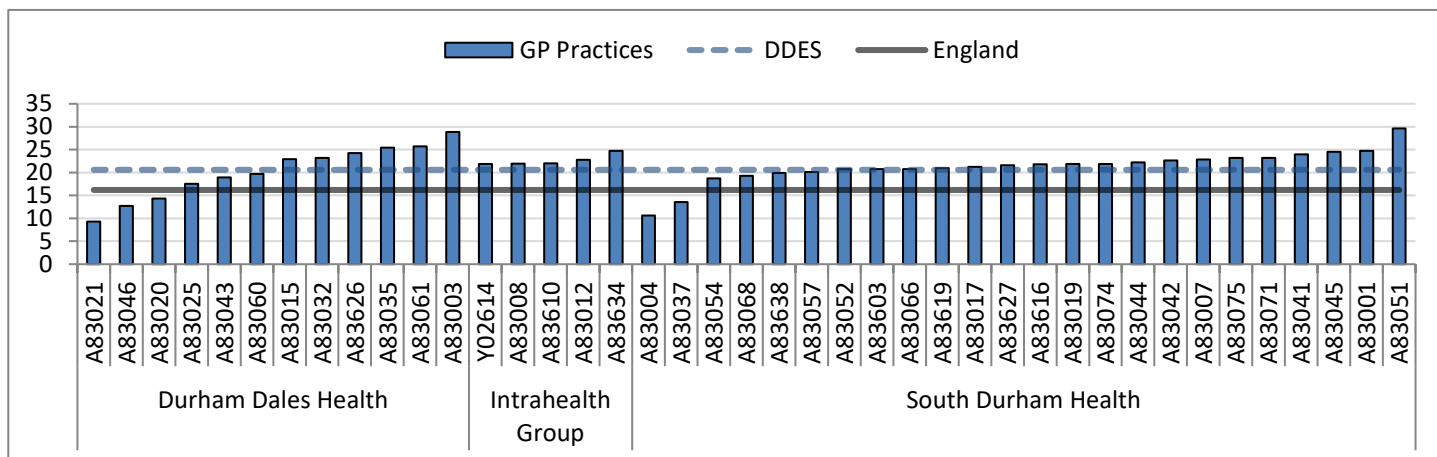
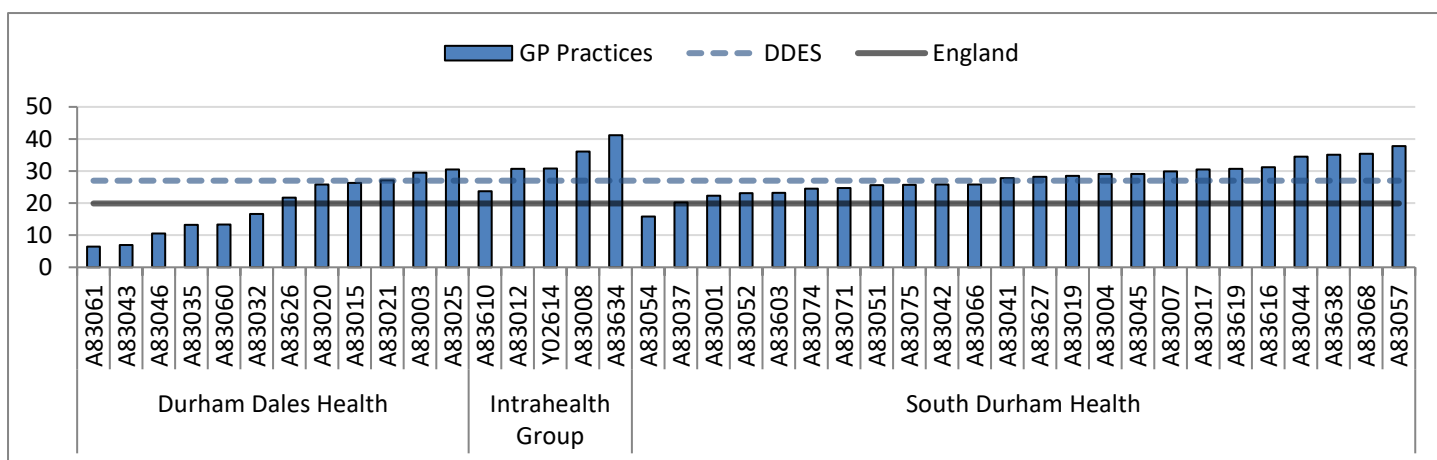


Figure 71: Income deprivation affecting children index, DDES, 2015.



Figures 72-75: North Durham Practice level demographic variation by federation. Source: National General Practice Profiles, PHE.

Figure 72: Percentage of the population aged 65 or over, North Durham, 2016.

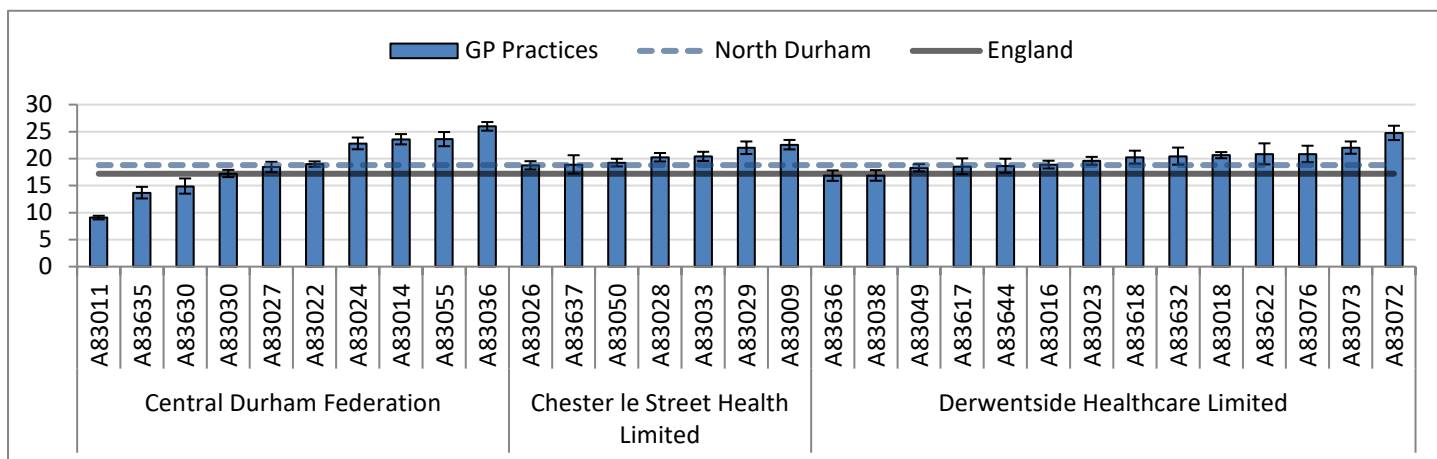


Figure 73: Index of multiple deprivation score, North Durham, 2015.

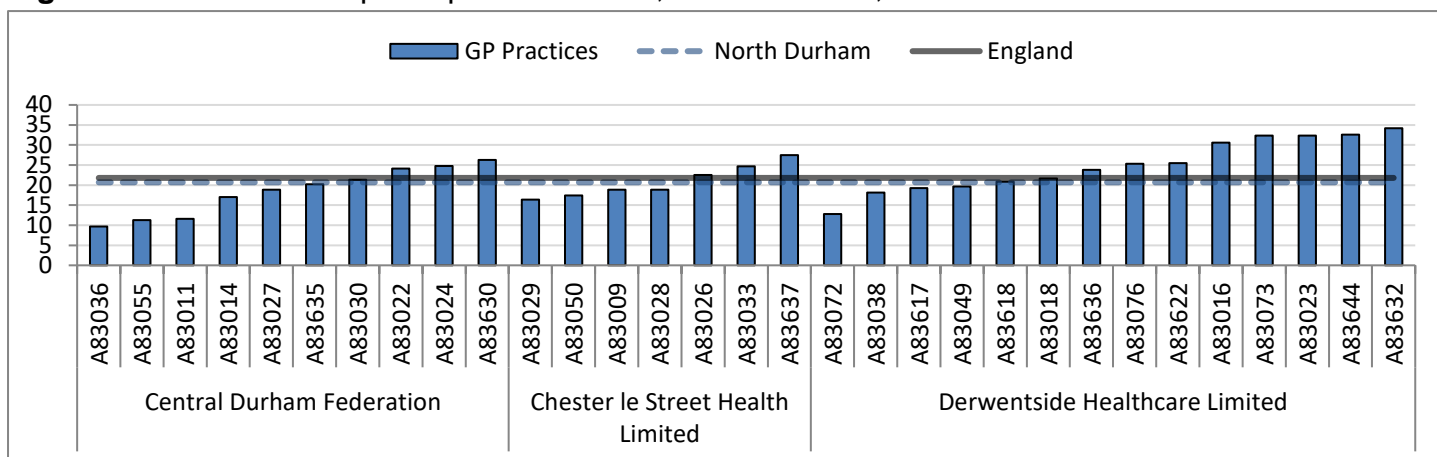


Figure 74: Income deprivation affecting older people index, North Durham, 2015.

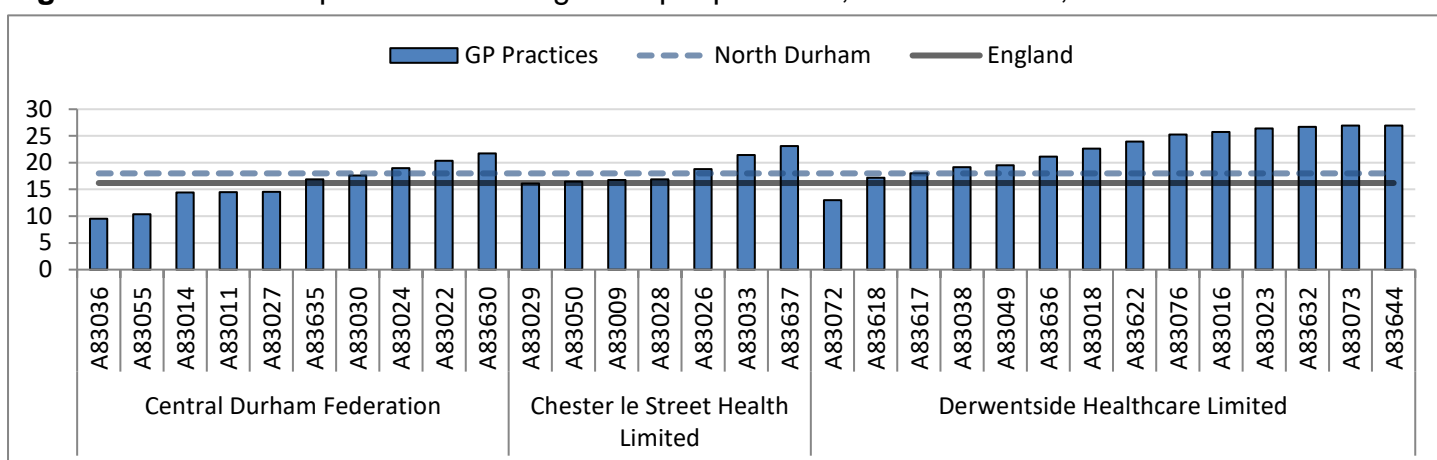
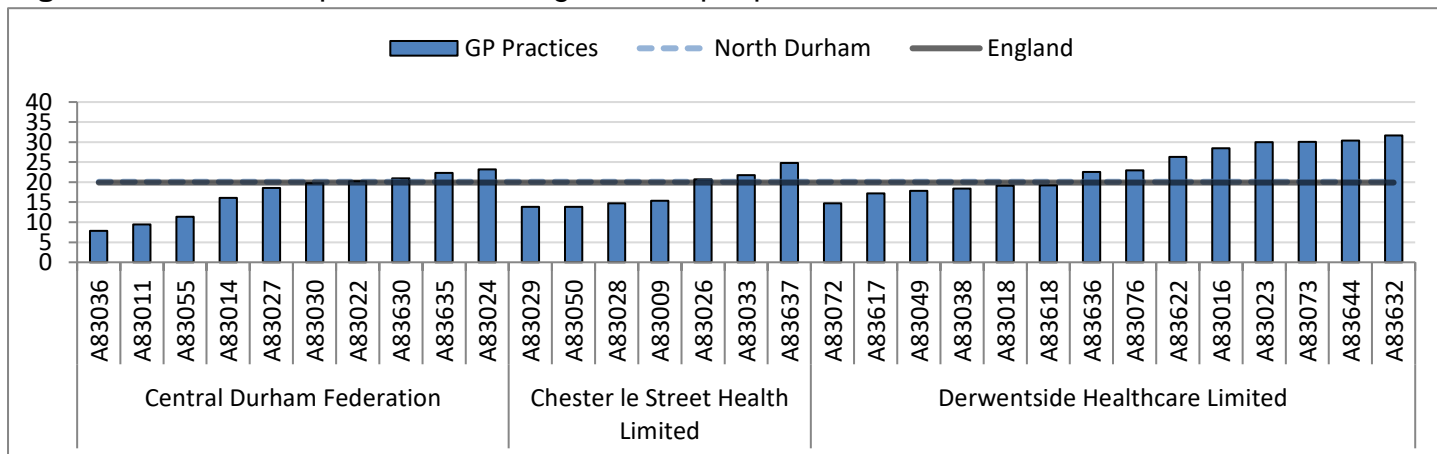


Figure 75: Income deprivation affecting children people index, North Durham, 2015.



N.B In previous releases of the GP Profiles a practice's deprivation score was based on the Lower Super Output Area (LSOA) score of its physical postcode. This was not an accurate proxy for the deprivation profile of a practice's registered population. This has changed for 2016 to provide a more accurate reflection of a practice's deprivation profile. Estimates for GP practices have been re-calculated by building the population weighted average over the IMD scores of the LSOAs where the practice population lives with 2016 populations. This data is presented in figures 69 and 73 above.

GP profiles – Prevalence and incidence

Figure 76: Selected prevalence indicators, DDES, North Durham and England. Source: National General Practice Profiles, PHE.

	Cancer: QOF prevalence % (all ages)	% reporting cancer in last 5 years	New cases of cancer (rate per 100,000)
England	2.4	3.2	515
DDES CCG	2.8	2.8	595
North Durham CCG	2.6	3.1	555

Figures 77-79: DDES Practice level prevalence variation by federation. Source: National General Practice Profiles, PHE.

Figure 77: Cancer QOF prevalence % (all ages), DDES, 2015/16.

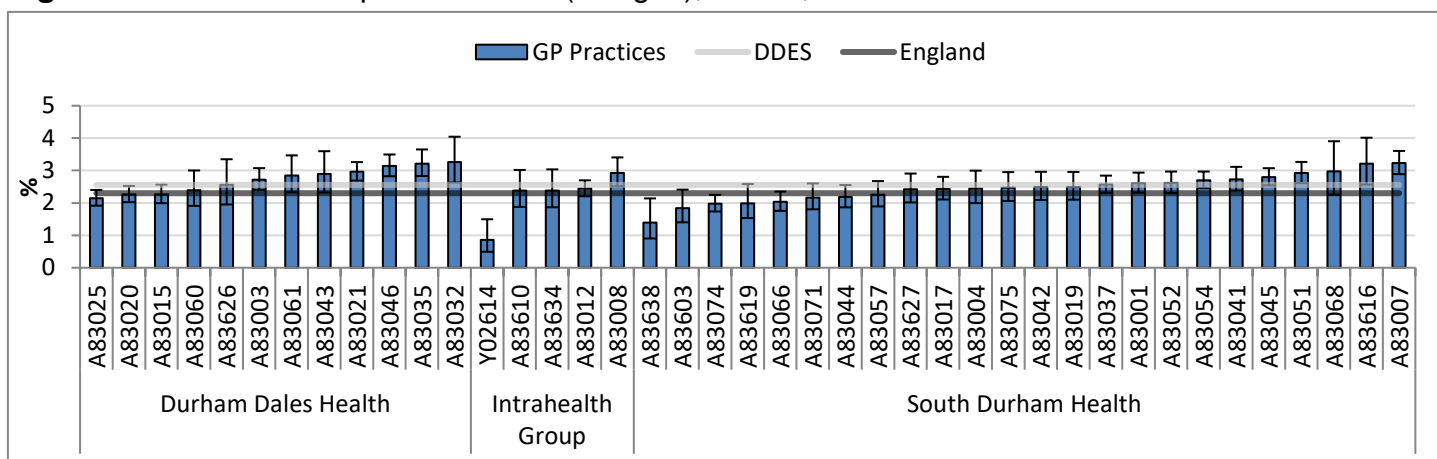


Figure 78: Percentage reporting cancer in the last 5 years, DDES, 2015/16.

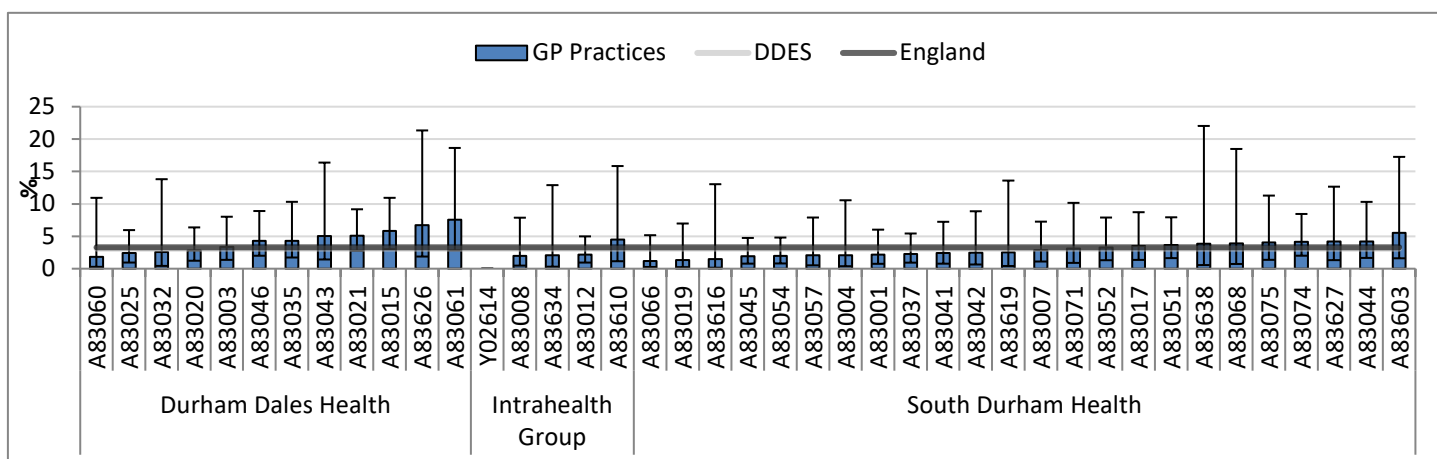
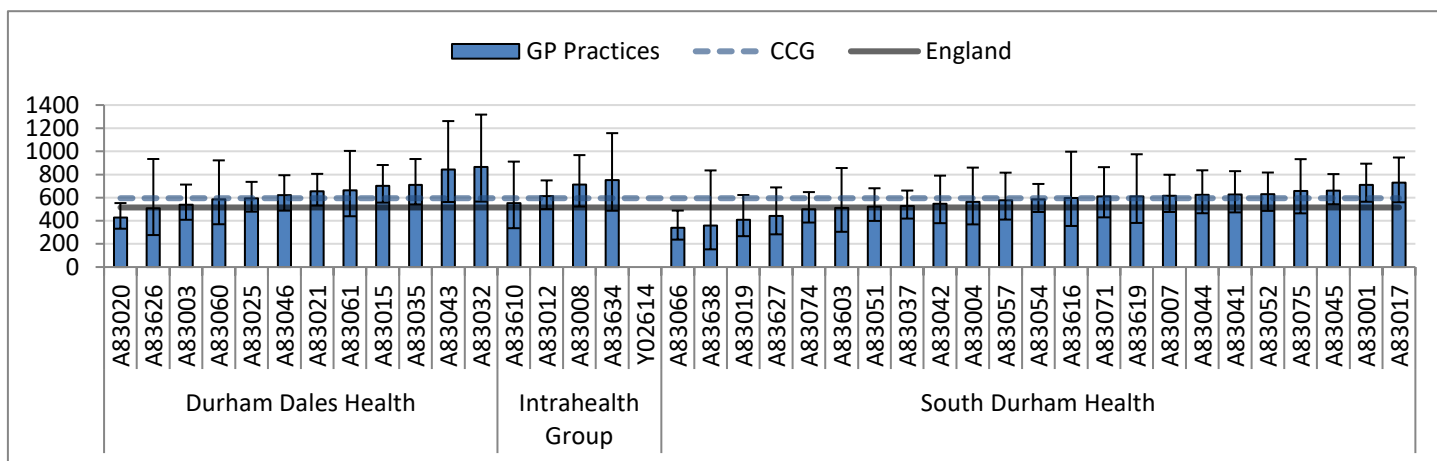


Figure 79: New cancer cases (rate per 100,000), DDES, 2013/14.



Figures 80-82: North Durham practice level prevalence variation by federation. Source: National General Practice Profiles, PHE.

Figure 80: Cancer QOF prevalence (all ages), North Durham, 2015/16.

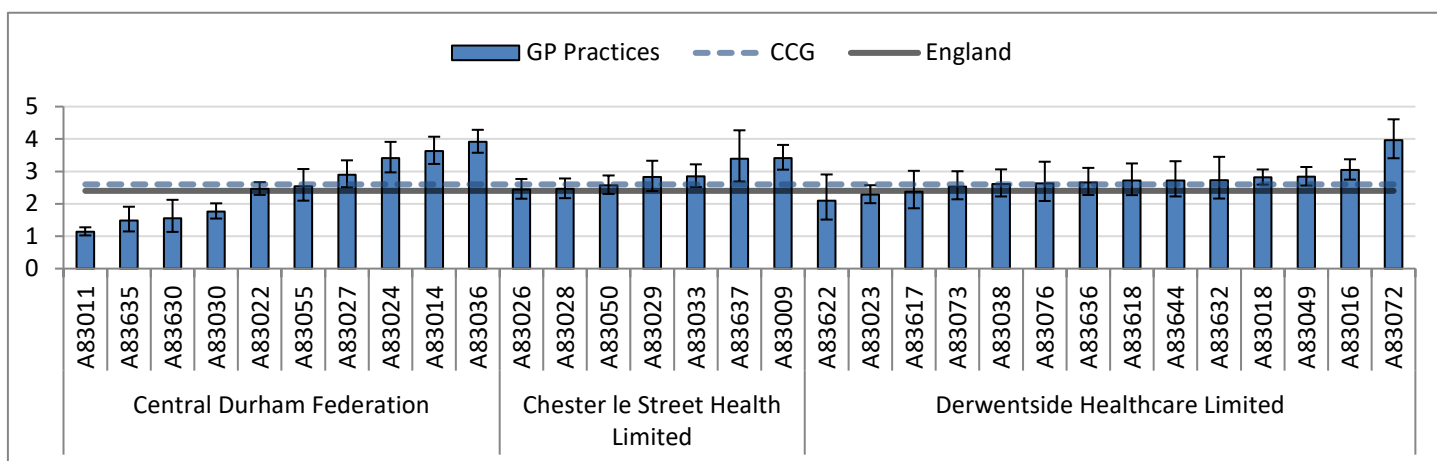


Figure 81: Percentage reporting cancer in the last 5 years, North Durham, 2015/16.

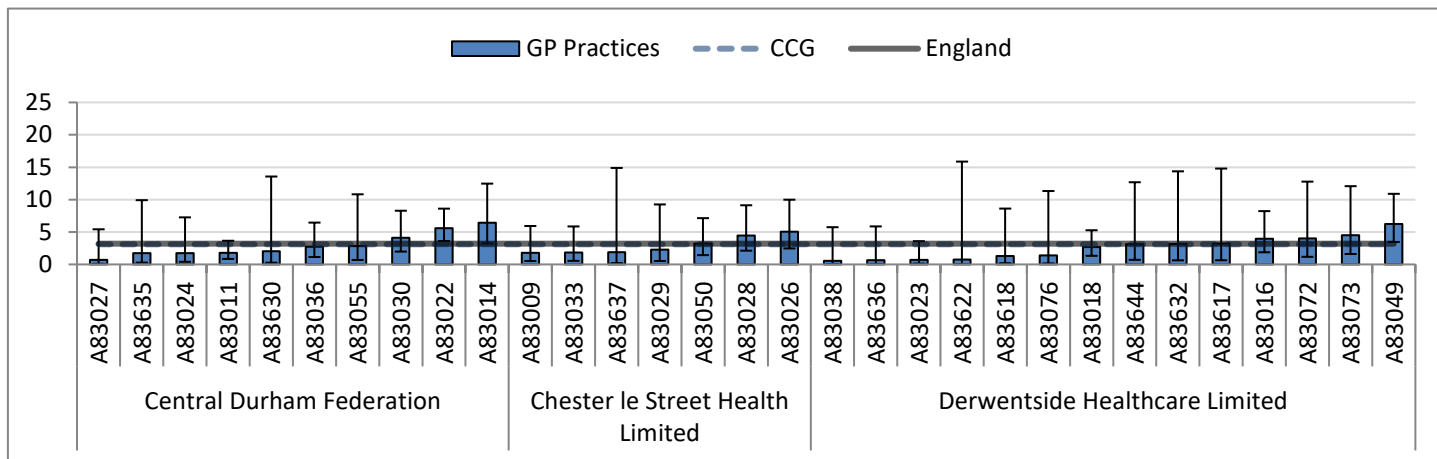
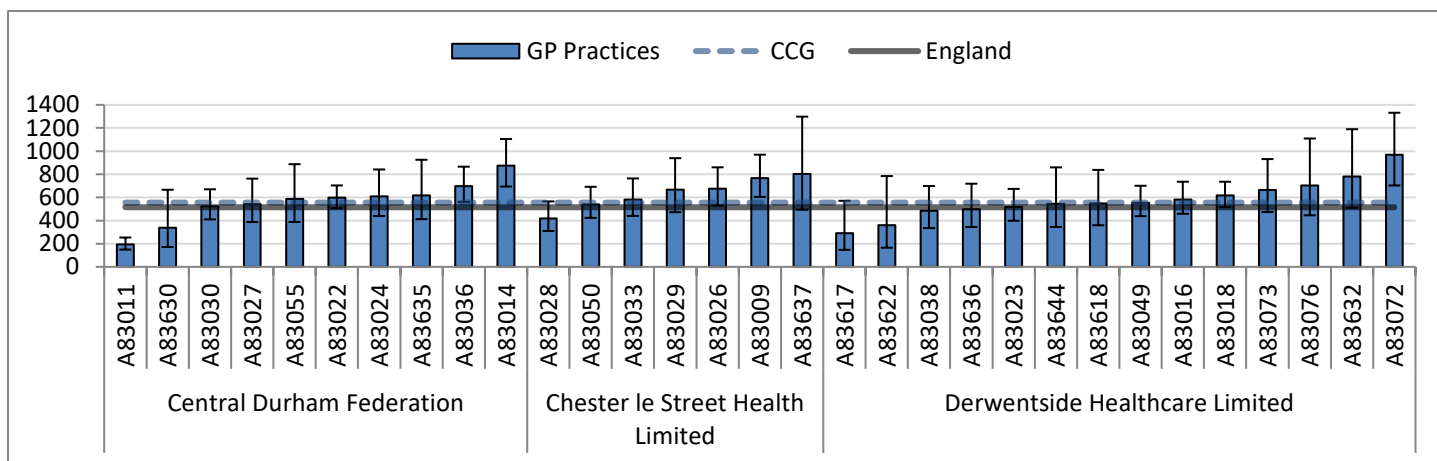


Figure 82: New cancer cases (rate per 100,000), North Durham, 2013/14.



Referrals and presentations

Figure 83: Selected referral and presentation indicators, DDES, North Durham and England. Source: National General Practice Profiles, PHE.

	Two-week wait detection rate (%)	No. of emergency presentations (per 100,000)	No. of other presentations (per 100,000)	No. of emergency admissions with cancer (per 100,000)
England	47.5	89	361	538
DDES CCG	46.3	112	465	685
North Durham CCG	46.3	95	394	676

Figures 84-87: DDES practice level referral and presentation variation by federation. Source: National General Practice Profiles, PHE.

Figure 84: Detection rate (%): The proportion of new cancer cases treated who were referred through the Two Week Wait referral router, DDES, five years combined data 2011/12 – 2015/16.

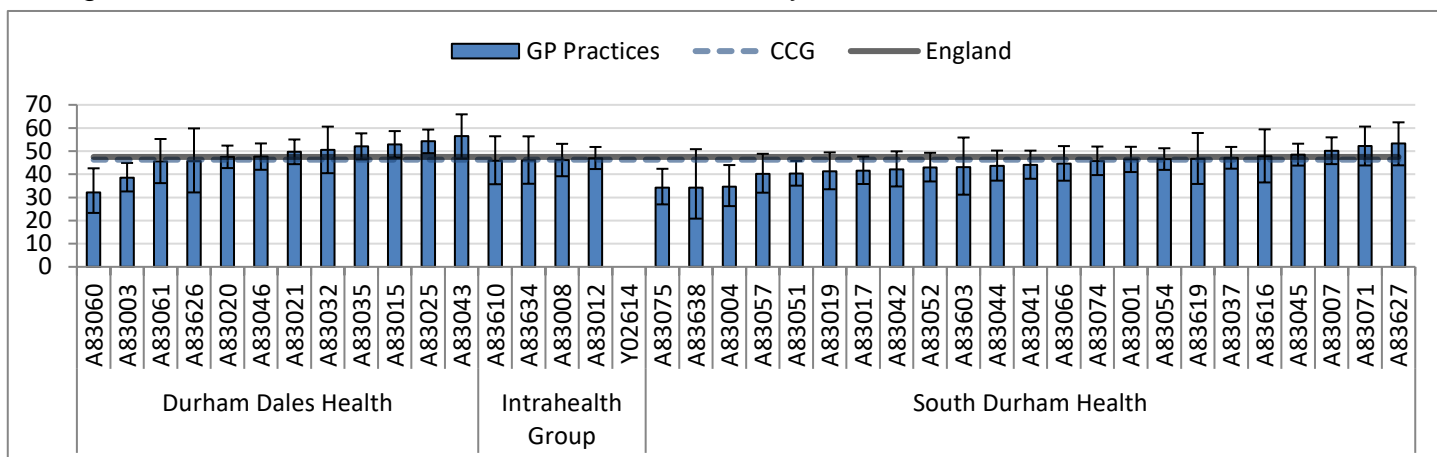


Figure 85: Number of emergency presentations [cancer] (crude rate per 100,000), DDES, 2015/16.

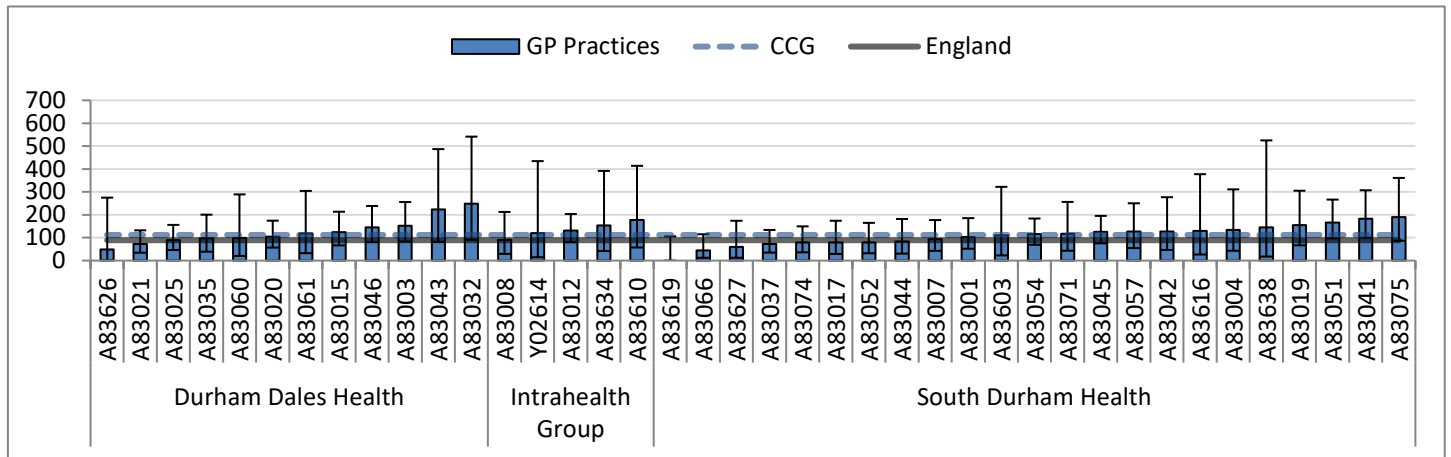


Figure 86: Number of other presentations [cancer] (crude rate per 100,000), DDES, 2015/16.

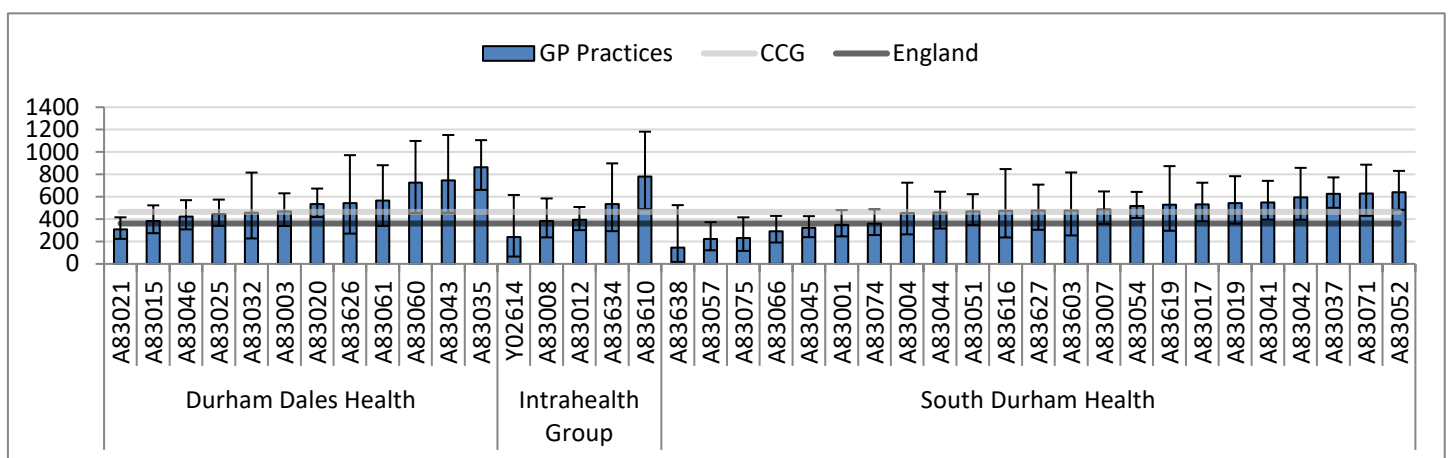
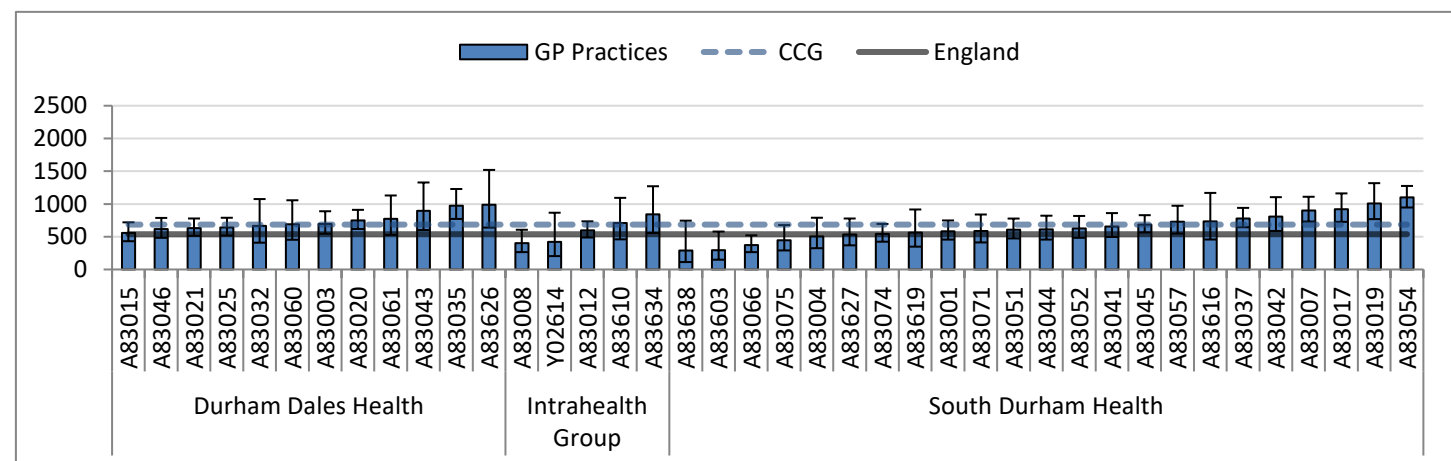


Figure 87: Number of emergency admissions with cancer (crude rate per 100,000), 15/16.



Figures 88-91: North Durham practice level referral and presentation variation by federation.
 Source: National General Practice Profiles, PHE.

Figure 88: Detection rate (%): The proportion of new cancer cases treated who were referred through the Two Week Wait referral router, North Durham, Five years combined data, 2011/12 – 2015/16.

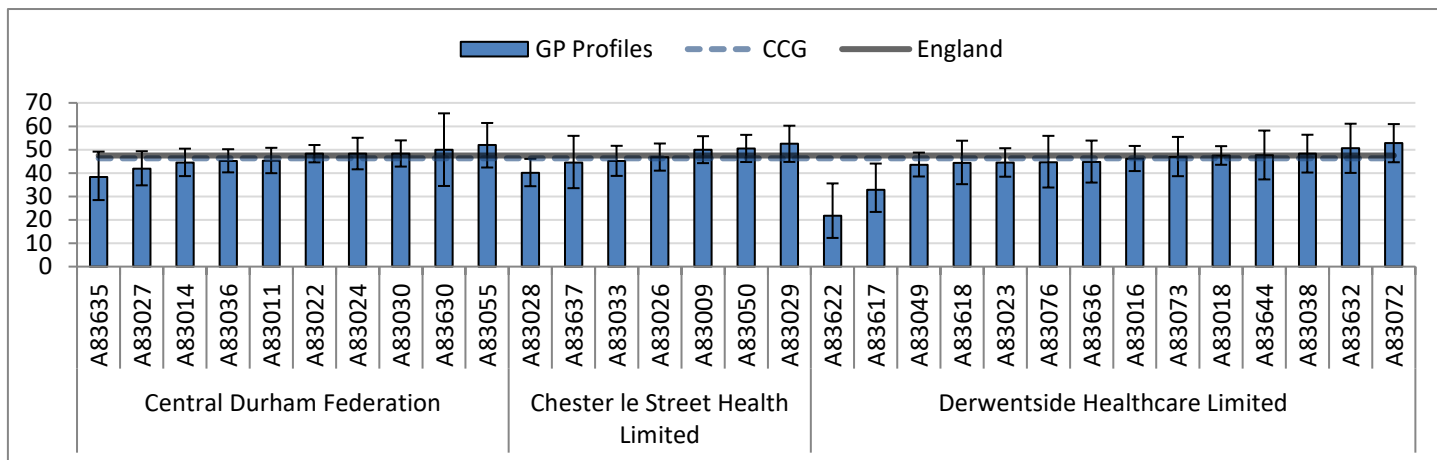


Figure 89: Number of emergency presentations [cancer] (crude rate per 100,000), North Durham, 2015/16.

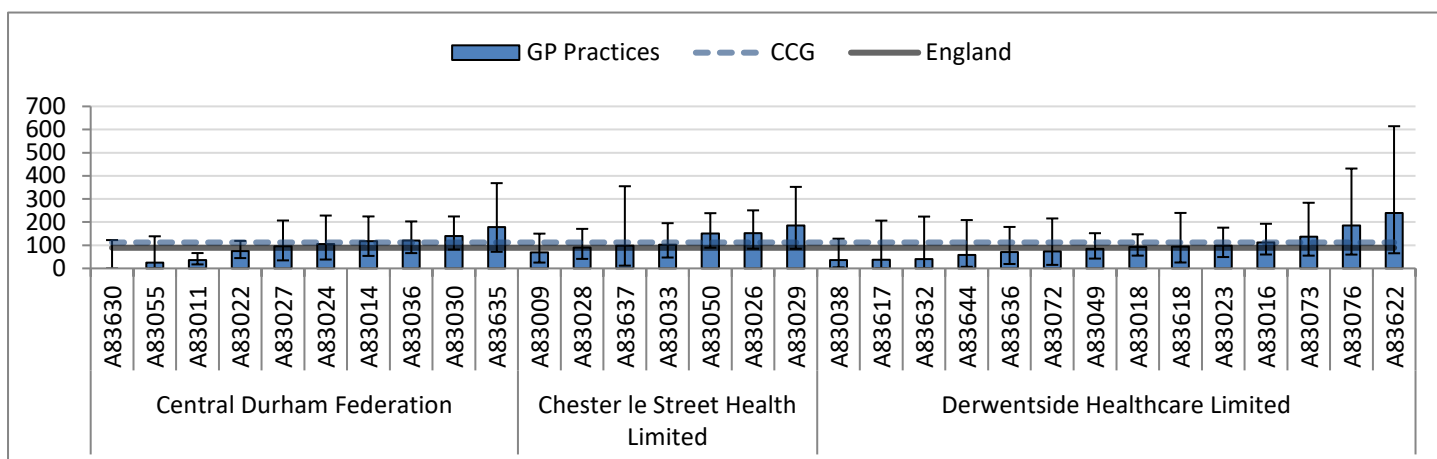


Figure 90: Number of other presentations [cancer] (crude rate per 100,000), North Durham, 2015/16.

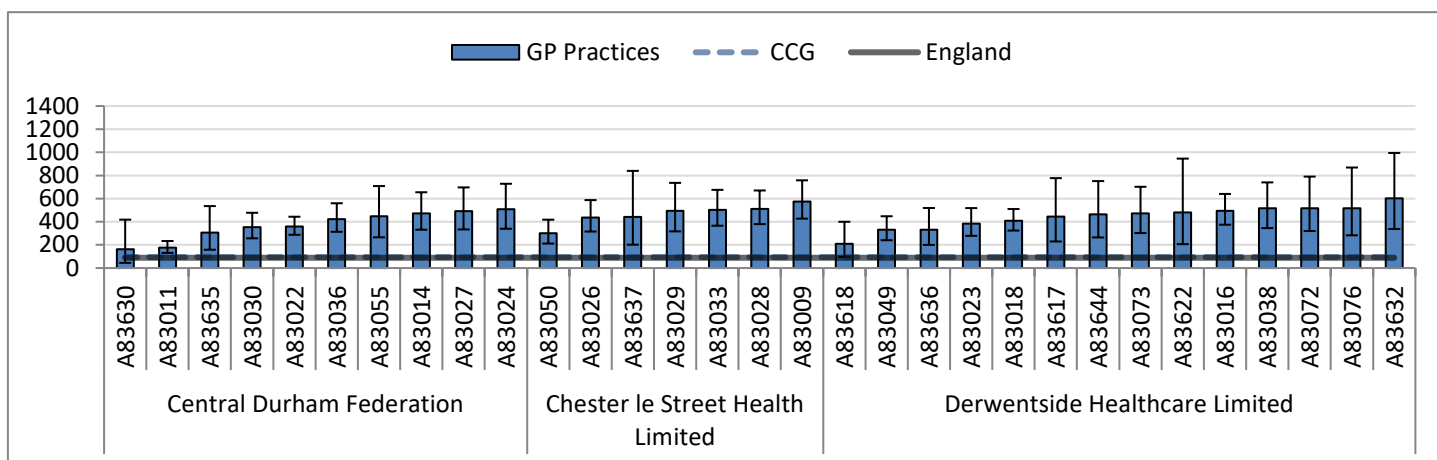
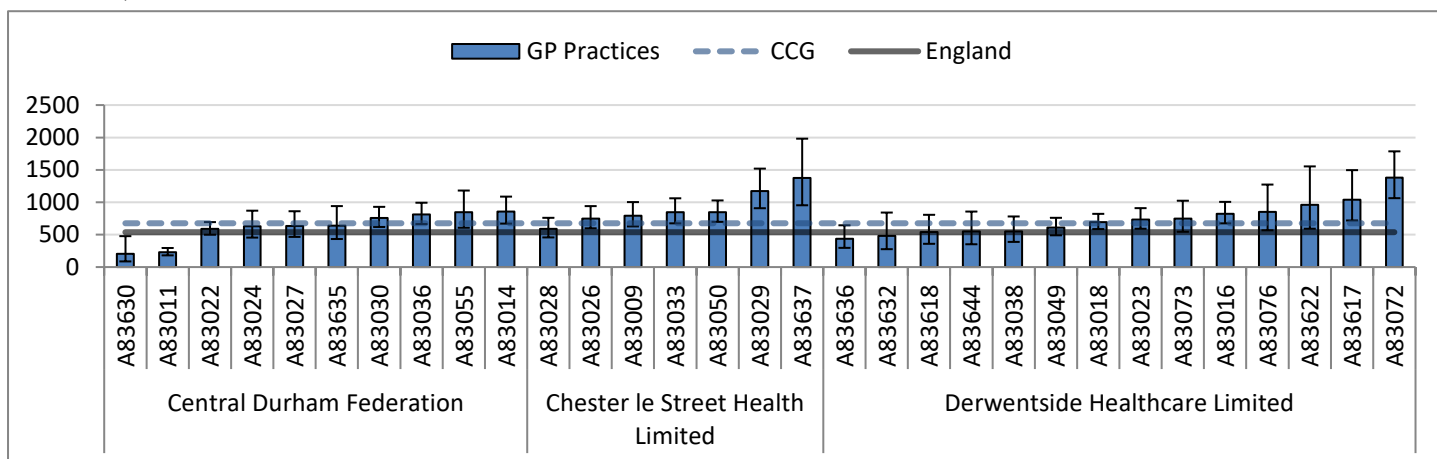


Figure 91: Number of emergency admissions with cancer (crude rate per 100,000), North Durham, 2015/16.



GP profiles - Cancer screening

Figure 92: Selected cancer screening indicators, DDES, North Durham and England. Source: National General Practice Profiles, PHE.

	Breast cancer screening, females 50-70 (3 year coverage %)	% females aged 25-64 attending cervical screening within target period	% Persons aged 60-69 screened for bowel cancer in last 30 months
England	72.5	72.8	57.8
DDES CCG	75.0	77.0	59.8
North Durham CCG	78.5	76.9	61.7

Figures 93-95: DDES practice level cancer screening variation by federation. Source: National General Practice Profiles, PHE.

Figure 93: The proportion of females aged 50-70, screened for breast cancer in the last 3 years, DDES, 2015/16.

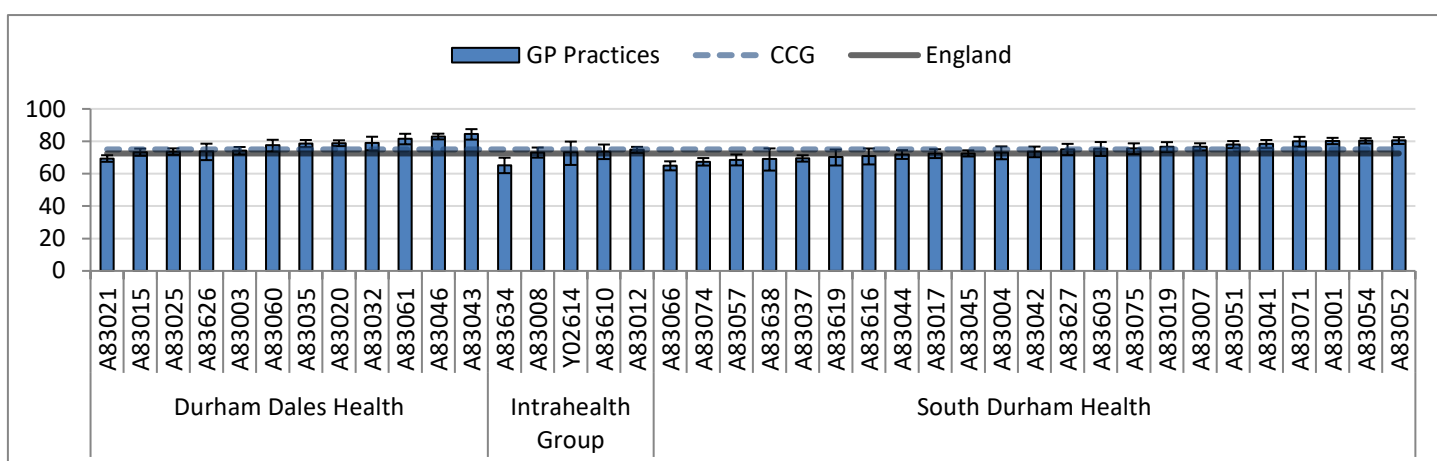


Figure 94: The proportion of females aged 25-64, screened for cervical cancer within the target period, DDES, 2015/16.

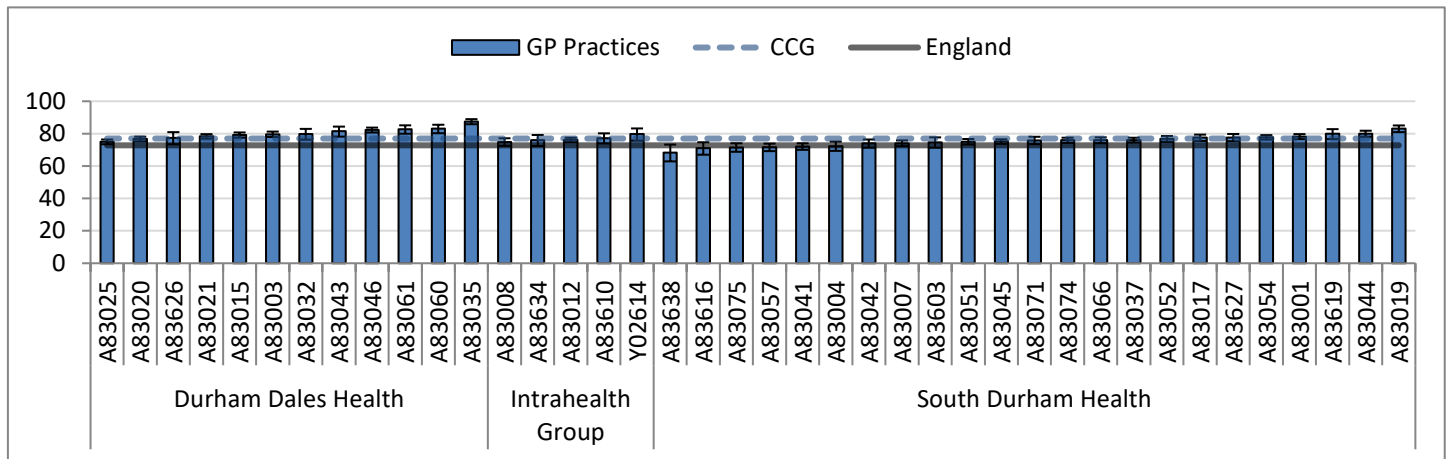
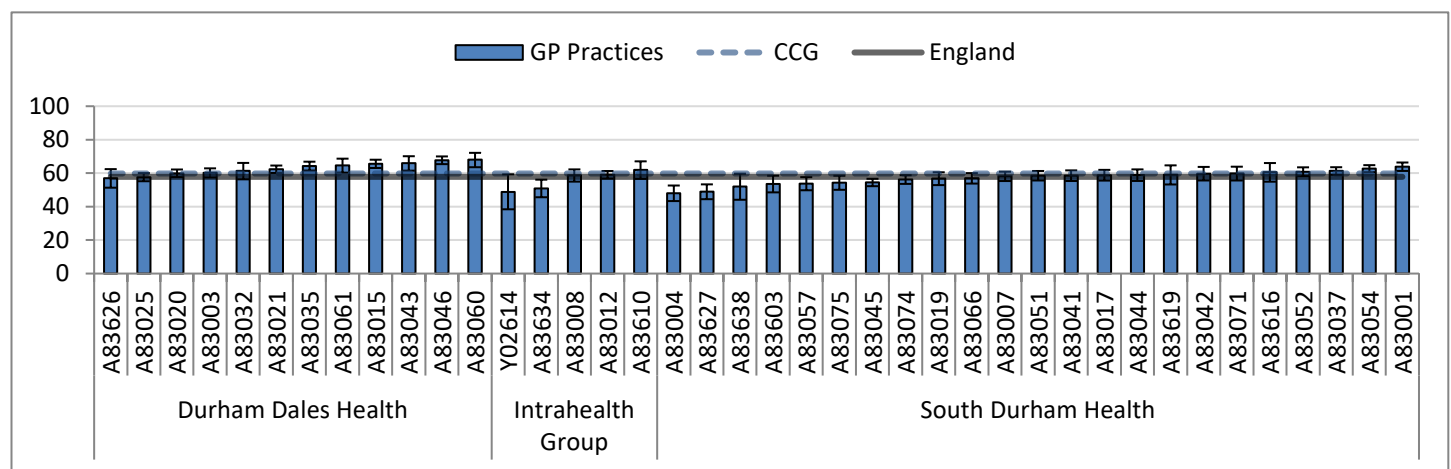


Figure 95: The proportion of persons aged 60-69, screened for bowel cancer within the last 2.5 years, DDES, 2015/16.



Figures 96-98: North Durham practice level cancer screening variation by federation. Source: National General Practice Profiles, PHE.

Figure 96: The proportion of females aged 50-70, screened for breast cancer in the last 3 years, North Durham, 2015/16.

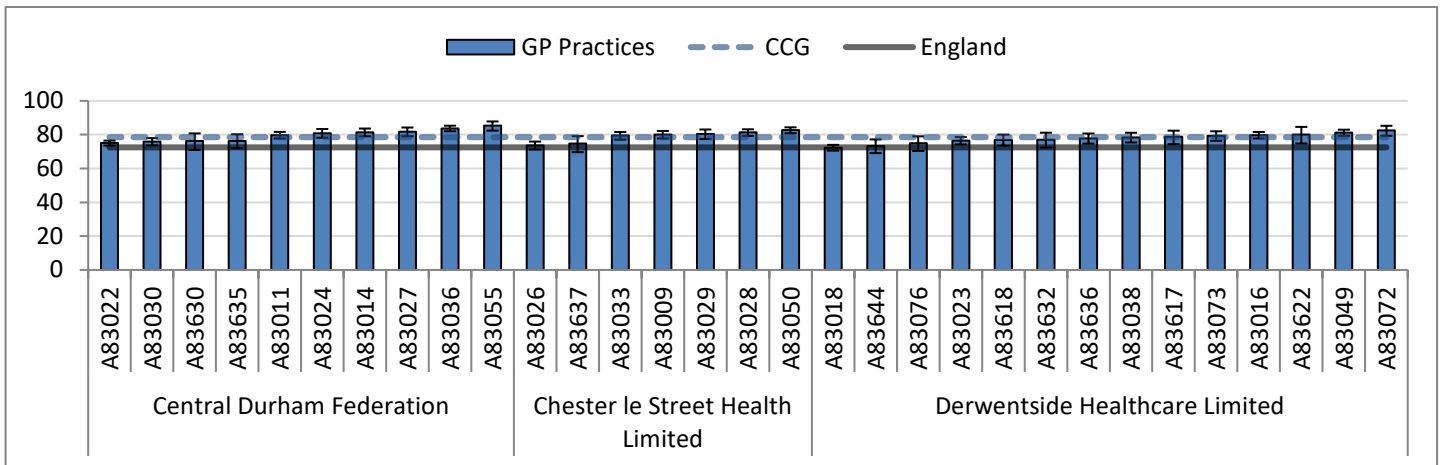


Figure 97: The proportion of females aged 25-64, screened for cervical cancer within the target period, North Durham, 2015/16.

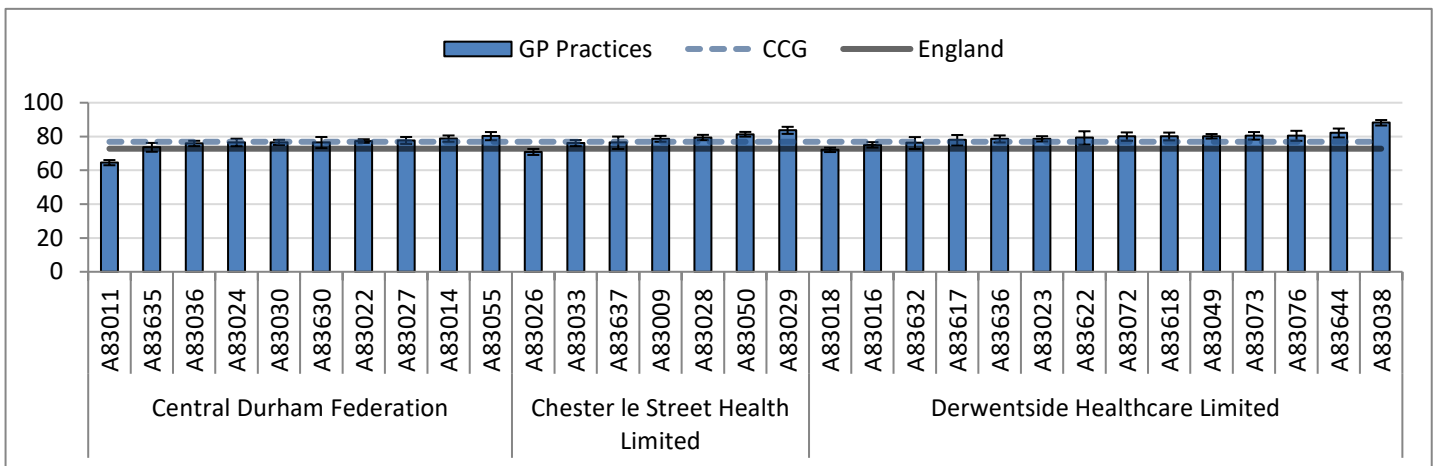
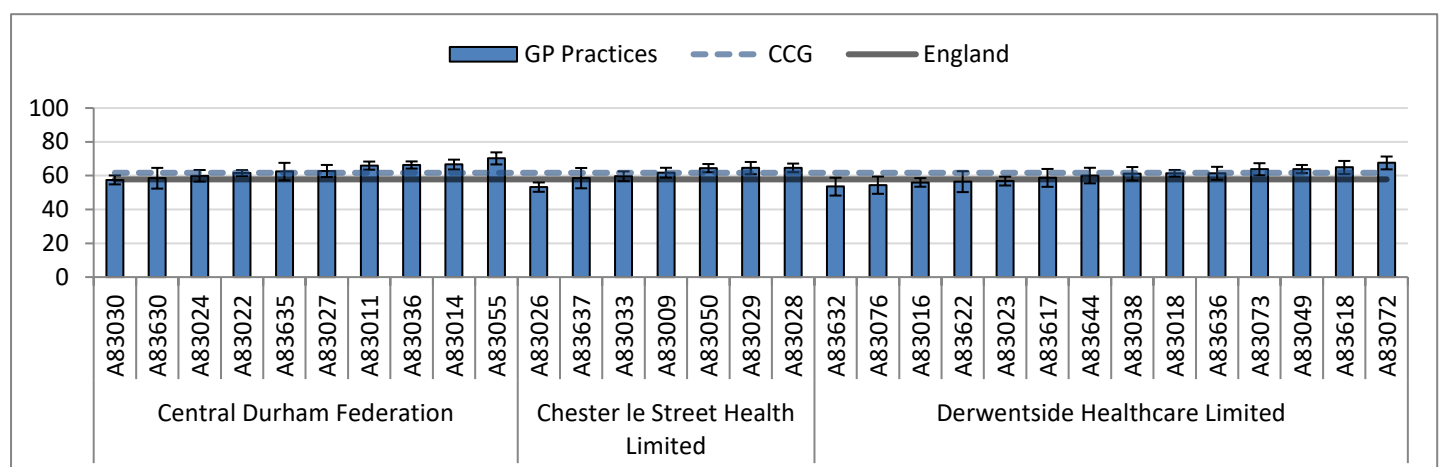


Figure 98: The proportion of persons aged 60-69, screened for bowel cancer within the last 2.5 years, North Durham, 2015/16.



7. Approaches to reducing early deaths from cancer

There are two main approaches to reducing premature mortality rates from cancer.

- Prevention – reduction in lifestyle factors e.g.: smoking, obesity, alcohol consumption, sun exposure.
- Awareness and earlier diagnosis - finding and treating more cancers earlier (including screening).

The first of these is very important and is key public health work for CCGs . However it is a medium to long term approach. Cancer prevention approaches take time to result in decreases in mortality rates. The latter is the approach that should result in better cancer survivorship and may produce a faster reduction in cancer mortality rates as outlined in the Cancer Reform Strategy (2007).

8. Recommendations

This report highlights significant inequities and inequalities between County Durham and England, and within County Durham. Incidence of cancer is still too high and too many diagnoses are made at a late stage, often through emergency presentations. While more people are living with and beyond cancer their quality of life is variable. Coordinated and sustained efforts need to be agreed and implemented by all partners including the local authority, clinical commissioning groups and primary care to make significant improvements in cancer outcomes for the resident population of County Durham.

We recommend that partners develop a strategic plan to:

- Promote healthy lifestyles across the population, taking into account the role of poverty and adopting a targeted approach in the more deprived areas across the County.
- Undertake awareness campaigns aimed at raising the public's awareness of the links between cancer and unhealthy lifestyles.
- Raise awareness about the signs and symptoms of cancer and encourage early visits to GPs.
- Promote screening programmes and examine new ways to engage people who do not initially take up their screening offer.
- Determine ways of making the diagnosis of lung cancer possible at an earlier stage.
- Work with those primary care practices to more effectively utilise the 2 week wait
- Improve the quality of life/access to holistic support for people living with and beyond cancer.