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Cancer Incidence by Deprivation England, 1995-2004

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Introduction

One of the key goals of the Cancer Reform Strategy[1] is to reduce inequalities in the incidence of cancer in England. The Strategy sets out a number of actions, within a new National Cancer Equality Initiative, designed to achieve this objective. Inequalities in cancer incidence in relation to socio-economic deprivation are one of the major concerns as it is known that risk factors for cancer, especially smoking, are strongly influenced by socio-economic determinants. This report aims to provide a set of summary statistics describing the relationship between the incidence of the most common types of cancer in relation to socio-economic deprivation within England. Previous such analyses have been carried out by the Office for National Statistics, for England and Wales, based on incidence rates in 1992-93[2] and in 1990-2002[3] although the latter report was restricted to breast, prostate and lung cancers, and also by the North West Cancer Intelligence Service and other members of the United Kingdom Association of Cancer Registries examining incidence by deprivation for 1998-2003 for breast, lung and cervical cancers and malignant melanoma.[4]

This report provides analyses for patients diagnosed in two five-year time periods 1995-99 and 2000-04 for 23 of the more common cancer sites or groups, and for an overall grouping of all malignancies combined (excluding non-melanoma skin cancer). Analyses are presented showing the relationship between the incidence of each cancer or cancer group and the relative socio-economic deprivation for males, females and both sexes combined.

Information is presented for 17 specific sites of solid cancer together with groupings of “head and neck” cancers (comprising lip, oral cavity, pharynx and larynx) and “brain and other central nervous system” cancers. In addition, there are results for Hodgkin disease, non-Hodgkin lymphoma, myeloma and all leukaemias. Results cover cancers diagnosed at all ages.

A geographical based measure of socio-economic deprivation, the Income Domain of the Index of Multiple Deprivation (IMD) 2007[5], has been used to classify cancer patients and populations. This provides a deprivation score based on Lower Super Output Areas assigned to the postcode of residence. While this is not a perfect index for all individuals, it has the advantage of being estimated using a standard methodology and it is readily available for the entire population (as long as the postcode is known). IMD scores are ordered with the lowest quintile having the least deprivation and divided into five quintiles of socio-economic deprivation. For further details, please see the methodology section.

In the 2000-04 time period, the all malignancies site group and 11 of the 23 site groups showed a statistically significant association between cancer incidence and socio-economic deprivation with rates being higher in relatively more deprived sections of the population. For two of these site groups, the association was only present in one sex (colorectal cancer in males and mesothelioma in females).

Five of the sites (head and neck, stomach, liver, lung and cervical cancers) had particularly strong associations with social deprivation and, for these groups, rates in the most deprived quintile of the population were close to or more than double those in the most affluent quintile: head and neck cancers had a ratio of 2.1 to 1 comparing the incidence rates in the most deprived with the most affluent (males and females combined). This ratio was 1.8 to 1 for both stomach and liver cancers, 2.5 to 1 for lung cancer and 1.9 to 1 for women with cervical cancer. Other sites that showed a statistically significant association with socio-economic deprivation were oesophageal cancer (1.4 to 1), male colorectal cancer (1.1 to 1), pancreatic cancer (1.2 to 1), female mesothelioma (1.2 to 1), kidney cancer (1.2 to 1) and bladder cancer (1.2 to 1).

In the 2000-04 time period, seven of the sites showed a statistically significant inverse association between cancer incidence and social deprivation with rates being higher in relatively affluent sections of the population. Malignant melanoma was the site with the strongest inverse association with socio-economic deprivation and these cancers had a ratio of 0.5 to 1 comparing the incidence rates in the most deprived with the most affluent (males and females combined). Female breast cancer and prostate cancer also showed an inverse association both with ratios of 0.8 to 1. Other sites that showed a statistically significant inverse association were testicular cancer (0.8 to 1), male brain cancer (0.8 to 1), male non-Hodgkin lymphoma (0.9 to 1) and male myeloma (0.9 to 1).

Across all sites combined, the ratio between the most deprived and the least deprived was 1.2 to 1. This obviously represents a balance between those sites showing a positive association and those showing an inverse association. In terms of numbers the site groups contributing most to the overall positive association are (in order of contribution) lung, head and neck, stomach, oesophageal and bladder cancers. For these site groups, if all socio-economic deprivation quintiles had the rates of the most affluent, there would be around 11,250, 1,800, 1,800, 1,000 and 900 fewer cancers diagnosed respectively each year.

Smoking plays an aetiological role in all of these cancers, especially lung cancer, and it is the association between smoking and socio-economic deprivation that could be said, therefore, to be driving the overall relationship. Other sites of cancer with a strong association with socio-economic deprivation (liver and cervical cancers) are relatively less common and, thus, do not contribute greatly to the all malignancies pattern.

It is, however, of interest that the most important risk factors for these two cancers (and stomach cancer) are infectious agents (Hepatitis B and C viruses for liver cancer, human papilloma virus for cervical cancers and *Helicobacter pylori* for stomach cancer) that are also likely to be associated with socio-economic deprivation. Excess alcohol consumption is an important risk factor for head and neck, oesophageal and liver cancers and also associated with socio-economic deprivation.

It is notable that for nearly all the site groups showing strong associations with socio-economic deprivation and for all malignancies combined, the association was statistically more significant among men than women. This would suggest that risk factors such as smoking and alcohol consumption may make a greater contribution to the incidence of these cancers in males.

The greatest numerical contributions in the inverse direction are made by prostate cancer, female breast cancer and malignant melanoma. For these site groups, if all socio-economic deprivation quintiles had the rates of the most affluent there would be around 3,100, 2,500 and 2,000 more cancers diagnosed respectively each year. Prostate cancer is one of the few site groups showing a statistically significant change in the trends with socio-economic deprivation between the two time periods, with the inverse association being much more pronounced in 2000-04 than in 1995-99. It is very likely that the use of prostate specific antigen testing as a means of diagnosing prostate cancer has become relatively much more common among the more affluent sections of the population and this has influenced the association and its change over time. The pattern for breast cancer is likely to be determined by the relationships between socio-economic deprivation and the established risk factors for the disease, especially reproductive history, and also uptake into the mammography screening programme. For malignant melanoma, it would seem that the inverse association between socio-economic deprivation and the major risk factor, excess exposure to sunlight, is the most likely explanation.

Apart from the significant change over time in relation to prostate cancer noted above, the only other site group showing a statistically significant difference between the trends for 1995-99 and 2000-04 was kidney cancer. There was a significant increase in the strength of the association among females; and a change from there being no association in the earlier time period to having a significant trend in the later time period for males.

Overall it is estimated that if the entire population had the incidence rates of the least deprived quintile, there would be approximately 14,300 fewer cancers each year (6.2% of the total). Of these 8,700 (7.5% of the total) would be in men and 5,600 (4.9%) in women. This net burden of excess cases represents, to some extent, a target for the scope of disease reduction that could be achieved by control of the exposure to socio-economically determined risk factors. Additional control of risk factors which are associated with relative affluence, such as excessive sun exposure could bring about a further reduction.

Thanks are due to Jonathan Shelton for undertaking the statistical analyses and for constructing and formatting this report; and to many staff in the English cancer registries and the Office for National Statistics for providing and quality assuring the underlying data.

The advice and input from Paul Silcocks (Trent Cancer Registry) and Catherine Thomson (Cancer Research UK) is particularly appreciated.

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1. Department of Health (2007) Cancer Reform Strategy (ref 283524). DH Publications: London.

2. Quinn M J et al (2001) Cancer Trends in England and Wales 1950–1999, ONS Series SMPS no. 66, TSO: London.

3. Rowan S (2007) Trends in cancer incidence by deprivation, England and Wales, 1990-2002. *Health Statistics Quarterly* 36:24-35.

4. Shack L et al (2008) Variation in incidence of breast, lung and cervical cancer and malignant melanoma of skin by socioeconomic group in England. *BMC Cancer* 2008 Sep 26;8:271.

5. http://www.communities.gov.uk/communities/neighbourhoodrenewal/deprivation/deprivation07/

Cancer incidence by deprivation quintile, England, 1995 - 2004

C00-C97 excl. C44: All malignant neoplasms (excl. non-melanoma skin cancer)

Males

Deprivation Quintile	Number of Cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	95,652	410.1	358.7	356.5 -	361.0	1.0	0
2	109,400	465.7	384.9	382.6 -	387.2	1.1	7,445
3	114,030	483.9	401.9	399.5 -	404.2	1.1	12,238
4	115,193	483.0	429.2	426.8 -	431.7	1.2	18,923
Most deprived	112,825	463.4	458.0	455.3 -	460.7	1.3	24,456
Overall	547,100	461.4	405.5	404.4 -	406.6		
2000-2004							
Least deprived	110,752	452.1	375.9	373.7 -	378.1	1.0	0
2	120,446	495.0	386.7	384.5 -	388.8	1.0	3,364
3	121,379	499.8	400.4	398.1 -	402.6	1.1	7,429
4	117,792	483.0	423.6	421.2 -	426.0	1.1	13,281
Most deprived	110,289	449.4	456.1	453.4 -	458.8	1.2	19,396
Overall	580,658	475.8	406.0	405.0 -	407.1		

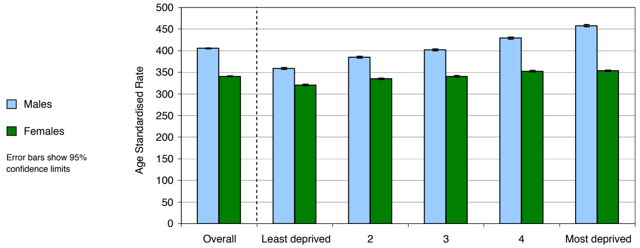
Females

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	100,082	412.0	320.7	318.7 -	322.7	1.0	0
2	112,903	457.4	335.1	333.2 -	337.1	1.0	4,867
3	117,776	472.8	340.8	338.9 -	342.8	1.1	6,962
4	117,743	466.1	352.6	350.6 -	354.6	1.1	10,655
Most deprived	108,131	421.3	353.5	351.4 -	355.6	1.1	10,042
Overall	556,635	446.0	340.8	339.9 -	341.7		
2000-2004							
Least deprived	108,402	433.2	327.8	325.8 -	329.7	1.0	0
2	120,986	479.1	339.7	337.8 -	341.6	1.0	4,244
3	122,652	483.1	343.7	341.8 -	345.7	1.0	5,697
4	119,077	465.9	351.2	349.2 -	353.2	1.1	7,947
Most deprived	106,775	416.7	362.7	360.5 -	364.9	1.1	10,290
Overall	577,892	455.6	344.5	343.6 -	345.4		

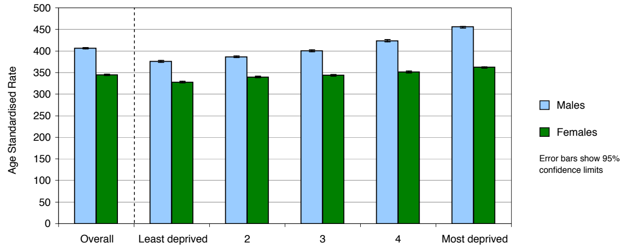
Persons

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	195,734	411.1	330.5	329.1 -	332.0	1.0	0
2	222,303	461.4	349.9	348.5 -	351.4	1.1	12,313
3	231,806	478.2	360.5	359.0 -	361.9	1.1	19,201
4	232,936	474.3	378.7	377.2 -	380.3	1.1	29,578
Most deprived	220,956	441.8	393.0	391.4 -	394.7	1.2	34,498
Overall	1,103,735	453.5	362.2	361.6 -	362.9		
2000-2004							
Least deprived	219,154	442.5	345.0	343.5 -	346.4	1.0	0
2	241,432	486.9	355.7	354.3 -	357.2	1.0	7,607
3	244,031	491.3	363.2	361.8 -	364.6	1.1	13,126
4	236,869	474.3	377.4	375.8 -	378.9	1.1	21,228
Most deprived	217,064	432.7	399.0	397.4 -	400.7	1.2	29,686
Overall	1,158,550	465.5	366.7	366.0 -	367.3		

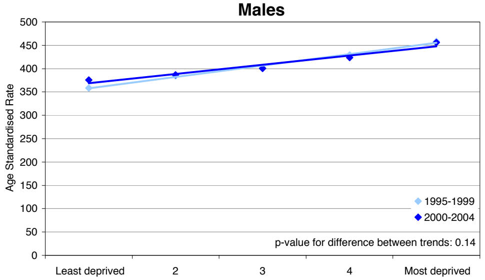
1995-1999



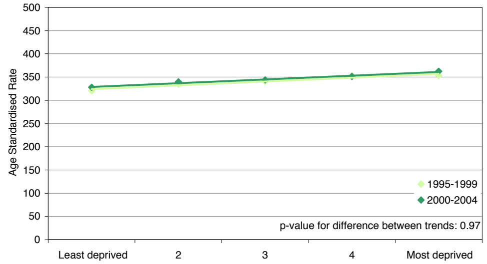
2000-2004



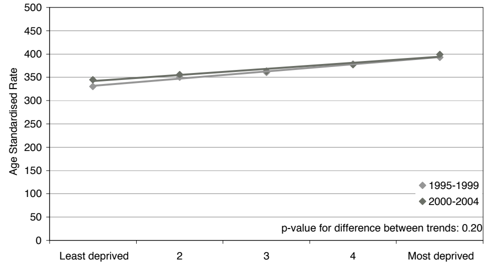
Males



Females



Persons



Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	97.8	83.3 -	112.2	27%	<0.001
2000-2004	81.0	48.1 -	114.0	22%	0.004

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	33.0	17.3 -	48.7	10%	0.007
2000-2004	32.8	23.7 -	41.8	10%	0.001

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	61.5	53.2 -	69.8	19%	<0.001
2000-2004	52.9	33.5 -	72.4	15%	0.003

Notes

• The increase in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value <0.001 for males; 0.007 for females) and 2000-2004 (p-value 0.004 for males; 0.001 for females)
• There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for either sex (p-value 0.14 for males; 0.97 for females)
• The increase in ASR in relation to deprivation quintile was greater for males compared to females and the difference was statistically significant (p-value <0.001)
• In 2000-2004, there would have been around 14,300 fewer cases of cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C00-C14 & C30-C32: Head and neck

Males

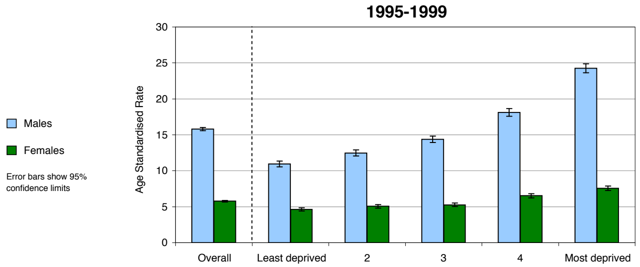
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	2,839	12.2	11.0	10.6 - 11.4	1.0	0
2	3,389	14.4	12.5	12.0 - 12.9	1.1	408
3	3,799	16.1	14.4	13.9 - 14.8	1.3	901
4	4,521	19.0	18.1	17.6 - 18.6	1.7	1,783
Most deprived	5,546	22.8	24.3	23.6 - 24.9	2.2	3,039
Overall	**20,094**	**16.9**	**15.8**	**15.6 - 16.0**		
2000-2004						
Least deprived	3,276	13.4	11.5	11.1 - 11.9	1.0	0
2	3,851	15.8	13.1	12.7 - 13.5	1.1	465
3	4,178	17.2	14.9	14.5 - 15.4	1.3	956
4	4,799	19.7	18.9	18.4 - 19.5	1.6	1,877
Most deprived	5,850	23.8	26.4	25.7 - 27.1	2.3	3,300
Overall	**21,954**	**18.0**	**16.5**	**16.3 - 16.7**		

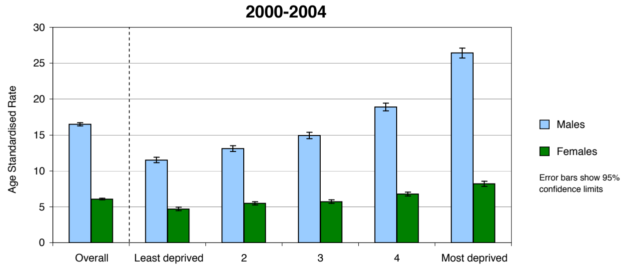
Females

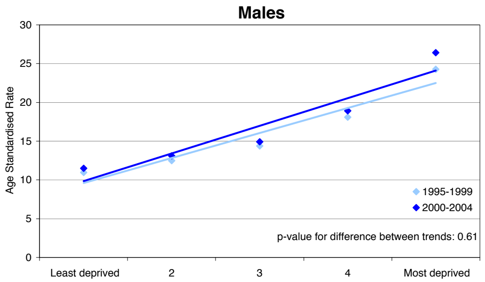
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	1,461	6.0	4.6	4.4 - 4.9	1.0	0
2	1,684	6.8	5.1	4.8 - 5.3	1.1	144
3	1,789	7.2	5.3	5.0 - 5.5	1.1	220
4	2,088	8.3	6.5	6.2 - 6.8	1.4	609
Most deprived	2,140	8.3	7.6	7.2 - 7.9	1.6	833
Overall	**9,162**	**7.3**	**5.8**	**5.7 - 5.9**		
2000-2004						
Least deprived	1,568	6.3	4.7	4.5 - 4.9	1.0	0
2	1,931	7.6	5.5	5.2 - 5.7	1.2	277
3	1,979	7.8	5.7	5.5 - 6.0	1.2	353
4	2,133	8.3	6.8	6.5 - 7.1	1.4	654
Most deprived	2,180	8.5	8.2	7.9 - 8.5	1.7	931
Overall	**9,791**	**7.7**	**6.1**	**6.0 - 6.2**		

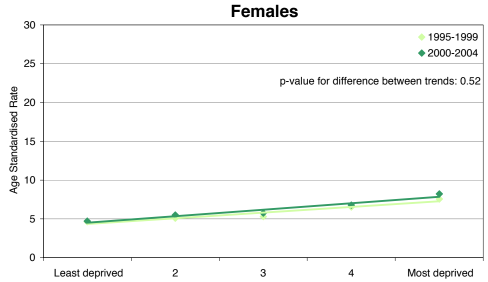
Persons

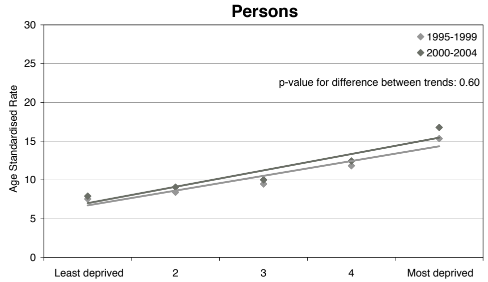
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	4,300	9.0	7.5	7.3 - 7.8	1.0	0
2	5,073	10.5	8.4	8.2 - 8.6	1.1	553
3	5,588	11.5	9.5	9.2 - 9.7	1.3	1,121
4	6,609	13.5	11.8	11.6 - 12.1	1.6	2,393
Most deprived	7,686	15.4	15.3	15.0 - 15.7	2.0	3,872
Overall	**29,256**	**12.0**	**10.4**	**10.3 - 10.5**		
2000-2004						
Least deprived	4,844	9.8	7.9	7.7 - 8.1	1.0	0
2	5,782	11.7	9.1	8.8 - 9.3	1.1	742
3	6,157	12.4	10.0	9.8 - 10.3	1.3	1,309
4	6,932	13.9	12.4	12.1 - 12.7	1.6	2,532
Most deprived	8,030	16.0	16.8	16.4 - 17.1	2.1	4,231
Overall	**31,745**	**12.8**	**11.0**	**10.8 - 11.1**		











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	13.9	6.7 - 21.1	153%	0.009
2000-2004	15.8	6.5 - 25.1	173%	0.01

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	3.1	1.6 - 4.5	71%	0.007
2000-2004	3.5	1.9 - 5.0	79%	0.006

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	8.2	4.0 - 12.3	126%	0.008
2000-2004	9.3	4.0 - 14.5	139%	0.01

Notes

- The increase in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value 0.009 for males; 0.007 for females) and 2000-2004 (p-value 0.01 for males; 0.006 for females)
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for either sex (p-value 0.61 for males; 0.52 for females)
- The increase in ASR in relation to deprivation quintile was greater for males compared to females and the difference was statistically significant (p-value <0.001)
- In 2000-2004, there would have been around 1,800 fewer cases of head and neck cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C15: Oesophagus

Males

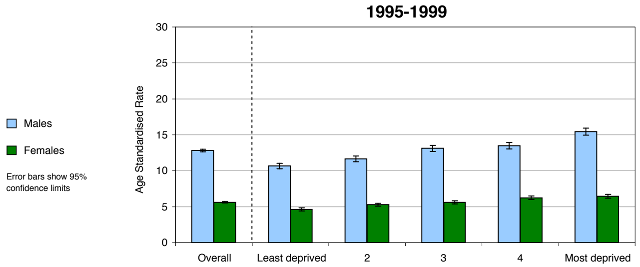
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	2,844	12.2	10.7	10.3 - 11.1	1.0	0
2	3,314	14.1	11.7	11.3 - 12.1	1.1	286
3	3,684	15.6	13.1	12.7 - 13.6	1.2	691
4	3,553	14.9	13.5	13.0 - 13.9	1.3	742
Most deprived	3,731	15.3	15.4	14.9 - 15.9	1.4	1,154
Overall	17,126	14.4	12.8	12.6 - 13.0		
2000-2004						
Least deprived	3,431	14.0	11.5	11.1 - 11.9	1.0	0
2	3,932	16.2	12.5	12.1 - 12.9	1.1	320
3	4,105	16.9	13.6	13.2 - 14.1	1.2	641
4	4,168	17.1	15.2	14.7 - 15.7	1.3	1,012
Most deprived	3,874	15.8	16.5	16.0 - 17.0	1.4	1,176
Overall	19,510	16.0	13.7	13.5 - 13.9		

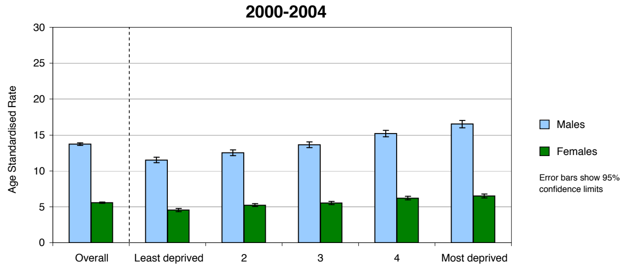
Females

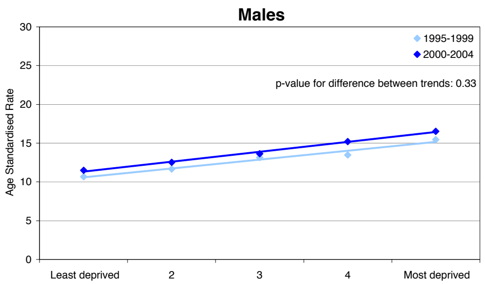
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	1,803	7.4	4.6	4.4 - 4.8	1.0	0
2	2,245	9.1	5.3	5.1 - 5.5	1.1	278
3	2,424	9.7	5.6	5.4 - 5.8	1.2	423
4	2,535	10.0	6.2	6.0 - 6.5	1.4	657
Most deprived	2,261	8.8	6.4	6.2 - 6.7	1.4	636
Overall	11,268	9.0	5.6	5.5 - 5.7		
2000-2004						
Least deprived	1,816	7.3	4.5	4.3 - 4.8	1.0	0
2	2,329	9.2	5.2	5.0 - 5.4	1.2	306
3	2,463	9.7	5.5	5.3 - 5.7	1.2	435
4	2,583	10.1	6.2	6.0 - 6.5	1.4	694
Most deprived	2,200	8.6	6.5	6.2 - 6.8	1.4	662
Overall	11,391	9.0	5.6	5.5 - 5.7		

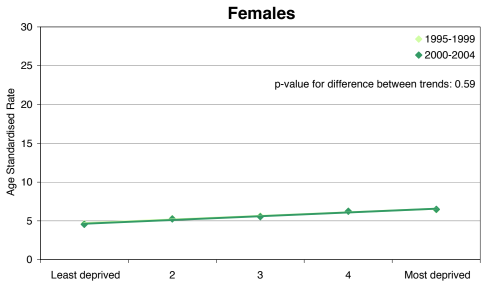
Persons

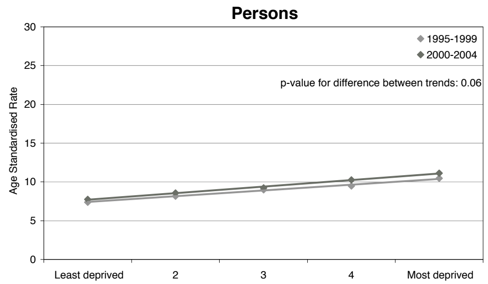
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	4,647	9.8	7.4	7.2 - 7.6	1.0	0
2	5,559	11.5	8.2	8.0 - 8.4	1.1	563
3	6,108	12.6	9.0	8.8 - 9.2	1.2	1,114
4	6,088	12.4	9.5	9.2 - 9.7	1.3	1,399
Most deprived	5,992	12.0	10.5	10.2 - 10.7	1.4	1,790
Overall	28,394	11.7	8.9	8.8 - 9.0		
2000-2004						
Least deprived	5,247	10.6	7.7	7.5 - 8.0	1.0	0
2	6,261	12.6	8.6	8.4 - 8.8	1.1	626
3	6,568	13.2	9.2	9.0 - 9.5	1.2	1,077
4	6,751	13.5	10.3	10.0 - 10.5	1.3	1,706
Most deprived	6,074	12.1	11.1	10.8 - 11.4	1.4	1,838
Overall	30,901	12.4	9.3	9.2 - 9.4		











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	4.6	3.0 - 6.2	44%	0.003
2000-2004	5.1	4.4 - 5.9	45%	<0.001

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	1.8	1.2 - 2.4	38%	0.002
2000-2004	1.9	1.4 - 2.4	42%	0.001

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	3.0	2.5 - 3.5	41%	<0.001
2000-2004	3.4	3.0 - 3.8	44%	<0.001

Notes

- The increase in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value 0.003 for males; 0.002 for females) and 2000-2004 (p-value <0.001 for males; 0.001 for females)
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for either sex (p-value 0.33 for males; 0.59 for females)
- The increase in ASR in relation to deprivation quintile was greater for males compared to females and the difference was statistically significant (p-value <0.001)
- In 2000-2004, there would have been around 1,000 fewer cases of oesophageal cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C16: Stomach

Males

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	3,863	16.6	14.4	13.9 -	14.8	1.0	0
2	4,840	20.6	16.7	16.2 -	17.1	1.2	675
3	5,500	23.3	19.0	18.5 -	19.5	1.3	1,353
4	6,009	25.2	22.1	21.6 -	22.7	1.5	2,115
Most deprived	6,445	26.5	25.9	25.3 -	26.5	1.8	2,876
Overall	26,657	22.5	19.5	19.3 -	19.7		
2000-2004							
Least deprived	3,606	14.7	12.0	11.6 -	12.4	1.0	0
2	4,285	17.6	13.3	12.9 -	13.7	1.1	434
3	4,757	19.6	15.3	14.8 -	15.7	1.3	1,026
4	5,236	21.5	18.4	17.9 -	18.9	1.5	1,826
Most deprived	5,354	21.8	21.8	21.2 -	22.4	1.8	2,413
Overall	23,238	19.0	15.8	15.6 -	16.0		

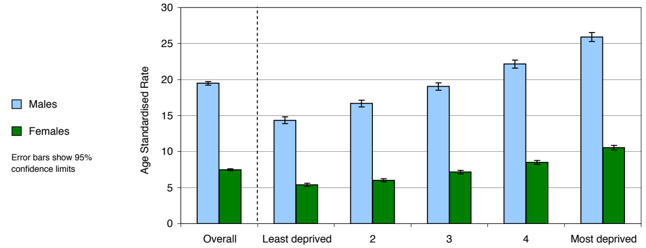
Females

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	2,089	8.6	5.4	5.2 -	5.6	1.0	0
2	2,581	10.5	6.0	5.8 -	6.2	1.1	260
3	3,168	12.7	7.2	6.9 -	7.4	1.3	782
4	3,554	14.1	8.5	8.2 -	8.8	1.6	1,298
Most deprived	3,897	15.2	10.5	10.2 -	10.9	2.0	1,904
Overall	15,289	12.2	7.5	7.4 -	7.6		
2000-2004							
Least deprived	1,871	7.5	4.7	4.5 -	4.9	1.0	0
2	2,272	9.0	5.1	4.9 -	5.3	1.1	181
3	2,794	11.0	6.2	6.0 -	6.4	1.3	669
4	2,951	11.5	6.9	6.6 -	7.1	1.5	933
Most deprived	3,215	12.5	9.1	8.7 -	9.4	1.9	1,545
Overall	13,103	10.3	6.3	6.2 -	6.4		

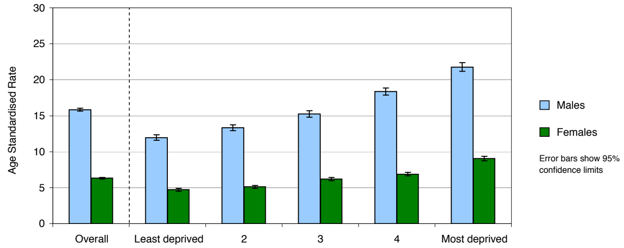
Persons

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	5,952	12.5	9.4	9.1 -	9.6	1.0	0
2	7,421	15.4	10.6	10.4 -	10.9	1.1	935
3	8,668	17.9	12.3	12.0 -	12.5	1.3	2,135
4	9,563	19.5	14.3	14.0 -	14.6	1.5	3,414
Most deprived	10,342	20.7	17.2	16.8 -	17.5	1.8	4,780
Overall	41,946	17.2	12.7	12.6 -	12.8		
2000-2004							
Least deprived	5,477	11.1	8.0	7.8 -	8.2	1.0	0
2	6,557	13.2	8.7	8.5 -	8.9	1.1	616
3	7,551	15.2	10.2	9.9 -	10.4	1.3	1,695
4	8,187	16.4	11.9	11.6 -	12.1	1.5	2,759
Most deprived	8,569	17.1	14.6	14.3 -	14.9	1.8	3,958
Overall	36,341	14.6	10.5	10.4 -	10.6		

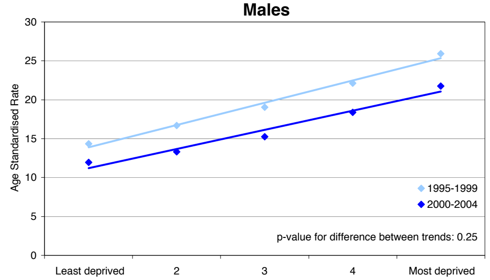
1995-1999



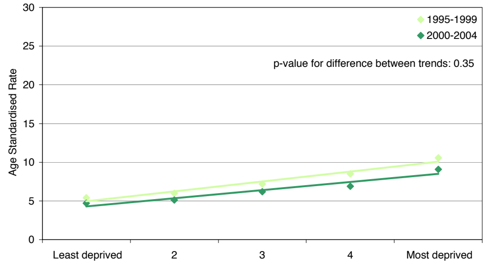
2000-2004



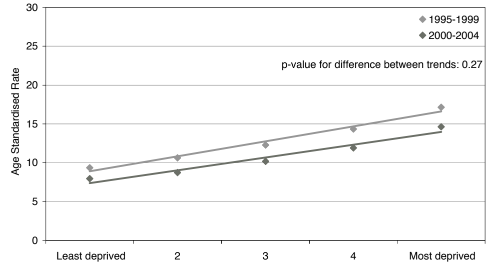
Males



Females



Persons



Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	11.7	9.3 -	14.0	85%	0.001
2000-2004	10.3	7.1 -	13.5	93%	0.002

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	5.3	3.4 -	7.2	109%	0.003
2000-2004	4.5	2.2 -	6.7	106%	0.008

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	8.0	5.8 -	10.2	90%	0.001
2000-2004	6.8	4.2 -	9.6	94%	0.004

Notes

- The increase in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value 0.001 for males; 0.003 for females) and 2000-2004 (p-value 0.002 for males; 0.008 for females)
- There was no statistically significant difference between the trends for the time periods 1995-99 and 2000-04 in the relation of ASR to deprivation quintile for either sex (p-value 0.25 for males; 0.35 for females)
- The increase in ASR in relation to deprivation quintile was greater for males compared to females and the difference was statistically significant (p-value <0.001)
- In 2000-2004, there would have been around 1,800 fewer cases of stomach cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C18-C20: Colorectum

Males

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	13,886	59.5	52.0	51.2 -	52.9	1.0	0
2	15,336	65.3	54.0	53.2 -	54.9	1.0	560
3	15,812	67.1	55.5	54.7 -	56.4	1.1	993
4	14,970	62.8	55.8	54.9 -	56.7	1.1	1,012
Most deprived	13,894	57.1	56.3	55.3 -	57.2	1.1	1,046
Overall	**73,898**	**62.3**	**54.7**	**54.3 -**	**55.1**		
2000-2004							
Least deprived	15,265	62.3	51.3	50.5 -	52.1	1.0	0
2	16,444	67.6	52.1	51.3 -	52.9	1.0	256
3	16,385	67.5	53.3	52.5 -	54.1	1.0	623
4	15,522	63.7	55.3	54.5 -	56.2	1.1	1,135
Most deprived	13,826	56.3	56.8	55.8 -	57.7	1.1	1,340
Overall	**77,442**	**63.5**	**53.6**	**53.2 -**	**54.0**		

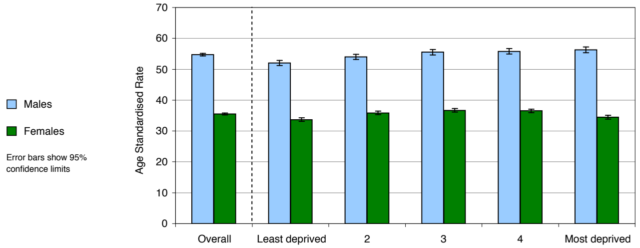
Females

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	11,911	49.0	33.7	33.1 -	34.3	1.0	
2	13,954	56.5	35.9	35.3 -	36.5	1.1	No
3	14,714	59.1	36.7	36.1 -	37.3	1.1	Significant
4	14,092	55.8	36.5	35.9 -	37.1	1.1	Difference
Most deprived	12,002	46.8	34.4	33.8 -	35.1	1.0	
Overall	**66,673**	**53.4**	**35.5**	**35.3 -**	**35.8**		
2000-2004							
Least deprived	12,137	48.5	32.8	32.2 -	33.3	1.0	
2	14,101	55.8	34.3	33.8 -	34.9	1.0	No
3	14,436	56.9	34.6	34.0 -	35.2	1.1	Significant
4	13,431	52.6	34.1	33.5 -	34.7	1.0	Difference
Most deprived	11,150	43.5	33.4	32.8 -	34.1	1.0	
Overall	**65,255**	**51.4**	**33.9**	**33.6 -**	**34.2**		

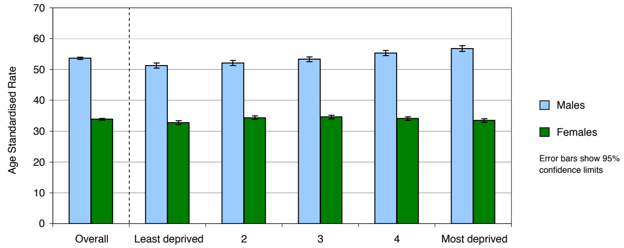
Persons

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	25,797	54.2	41.8	41.3 -	42.4	1.0	
2	29,290	60.8	43.9	43.4 -	44.4	1.0	No
3	30,526	63.0	44.8	44.3 -	45.3	1.1	Significant
4	29,062	59.2	45.0	44.4 -	45.5	1.1	Difference
Most deprived	25,896	51.8	44.0	43.5 -	44.5	1.1	
Overall	**140,571**	**57.8**	**44.0**	**43.7 -**	**44.2**		
2000-2004							
Least deprived	27,402	55.3	41.2	40.7 -	41.6	1.0	
2	30,545	61.6	42.3	41.8 -	42.8	1.0	
3	30,821	62.0	42.9	42.4 -	43.4	1.0	
4	28,953	58.0	43.4	42.9 -	43.9	1.1	
Most deprived	24,976	49.8	43.8	43.3 -	44.3	1.1	
Overall	**142,697**	**57.3**	**42.7**	**42.5 -**	**42.9**		

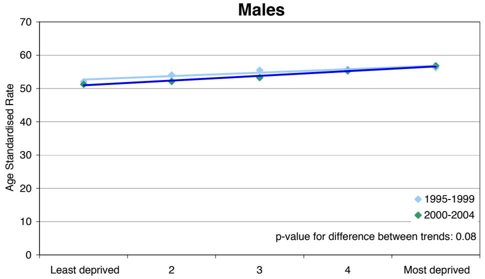
1995-1999



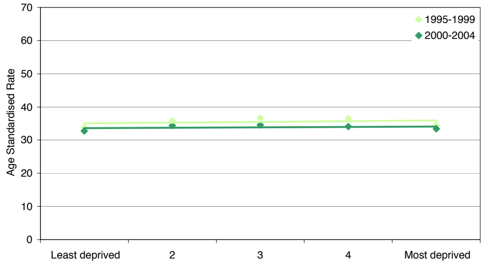
2000-2004



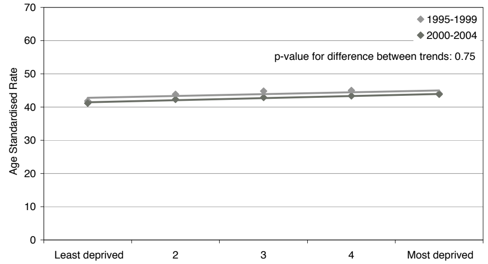
Males



Females



Persons



Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	4.1	1.4 -	6.7	8%	0.02
2000-2004	5.7	4.3 -	7.2	11%	0.001

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	0.8	-5.1 -	6.7		0.68
2000-2004	0.4	-2.9 -	3.7		0.72

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	2.1	-2.1 -	6.3		0.21
2000-2004	2.5	1.6 -	3.5	6%	0.004

Notes

- The increase in ASR in relation to deprivation quintile was statistically significant for males in both 1995-1999 (p-value 0.02) and 2000-2004 (p-value 0.001) whilst for females there was no statistically significant change for either cohort
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for males (p-value 0.08)
- In 2000-2004, there would have been around 700 fewer cases of colorectal cancer in males each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C22: Liver

Males

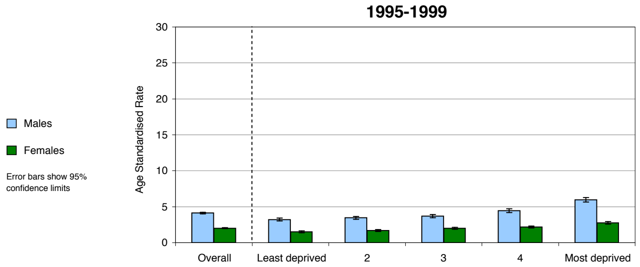
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	859	3.7	3.2	3.0 - 3.4	1.0	0
2	978	4.2	3.5	3.2 - 3.7	1.1	65
3	1,035	4.4	3.7	3.5 - 3.9	1.1	135
4	1,175	4.9	4.5	4.2 - 4.7	1.4	324
Most deprived	1,439	5.9	6.0	5.6 - 6.3	1.8	660
Overall	5,486	4.6	4.1	4.0 - 4.2		
2000-2004						
Least deprived	1,195	4.9	4.0	3.8 - 4.3	1.0	0
2	1,236	5.1	3.9	3.7 - 4.2	1.0	-32
3	1,313	5.4	4.4	4.1 - 4.6	1.1	103
4	1,433	5.9	5.3	5.0 - 5.5	1.3	335
Most deprived	1,738	7.1	7.3	7.0 - 7.7	1.8	781
Overall	6,915	5.7	4.9	4.8 - 5.0		

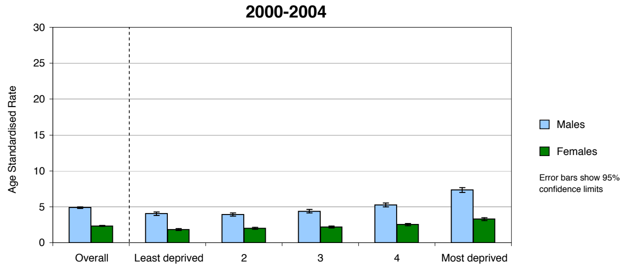
Females

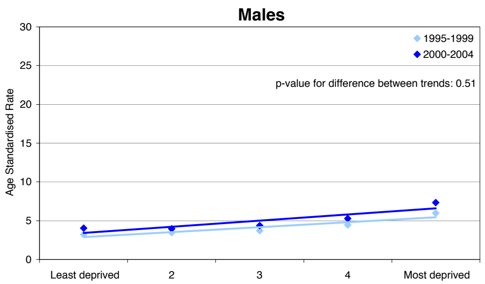
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	547	2.3	1.5	1.4 - 1.6	1.0	0
2	647	2.6	1.7	1.6 - 1.8	1.1	65
3	789	3.2	2.0	1.9 - 2.1	1.3	189
4	845	3.3	2.2	2.0 - 2.3	1.4	261
Most deprived	924	3.6	2.8	2.6 - 2.9	1.8	416
Overall	3,752	3.0	2.0	2.0 - 2.1		
2000-2004						
Least deprived	711	2.8	1.8	1.7 - 2.0	1.0	0
2	836	3.3	2.0	1.9 - 2.1	1.1	70
3	911	3.6	2.2	2.0 - 2.3	1.2	145
4	973	3.8	2.5	2.4 - 2.7	1.4	273
Most deprived	1,099	4.3	3.3	3.1 - 3.5	1.8	489
Overall	4,530	3.6	2.3	2.3 - 2.4		

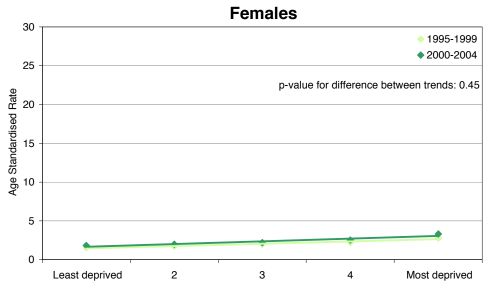
Persons

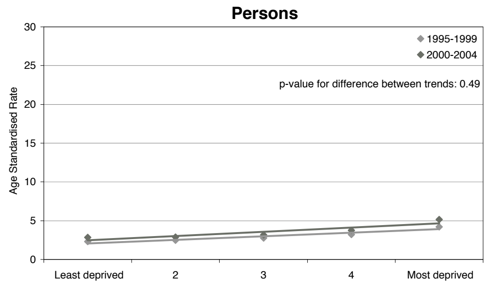
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	1,406	3.0	2.3	2.2 - 2.4	1.0	0
2	1,625	3.4	2.5	2.4 - 2.6	1.1	130
3	1,824	3.8	2.8	2.6 - 2.9	1.2	324
4	2,020	4.1	3.2	3.1 - 3.4	1.4	585
Most deprived	2,363	4.7	4.2	4.0 - 4.4	1.8	1,076
Overall	9,238	3.8	3.0	2.9 - 3.0		
2000-2004						
Least deprived	1,906	3.8	2.8	2.7 - 3.0	1.0	0
2	2,072	4.2	2.9	2.8 - 3.0	1.0	38
3	2,224	4.5	3.2	3.0 - 3.3	1.1	248
4	2,406	4.8	3.8	3.6 - 3.9	1.3	607
Most deprived	2,837	5.7	5.2	5.0 - 5.3	1.8	1,270
Overall	11,445	4.6	3.5	3.4 - 3.6		











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	2.8	0.8 - 4.8	101%	0.02
2000-2004	3.6	0.6 - 6.6	109%	0.03

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	1.2	0.7 - 1.8	89%	0.005
2000-2004	1.5	0.6 - 2.4	92%	0.01

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	2.0	0.8 - 3.1	97%	0.013
2000-2004	2.5	0.5 - 4.4	104%	0.026

Notes

- The increase in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value 0.02 for males; 0.005 for females) and 2000-2004 (p-value 0.03 for males; 0.01 for females)
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for either sex (p-value 0.51 for males; 0.45 for females)
- The increase in ASR in relation to deprivation quintile was greater for males compared to females and the difference was statistically significant (p-value 0.04)
- In 2000-2004, there would have been around 430 fewer cases of liver cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C25: Pancreas

Males

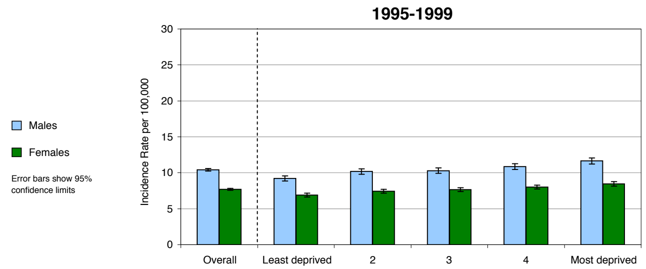
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	2,469	10.6	9.2	8.8 -	9.6	1.0	0
2	2,884	12.3	10.2	9.8 -	10.6	1.1	275
3	2,918	12.4	10.3	9.9 -	10.7	1.1	308
4	2,895	12.1	10.9	10.5 -	11.3	1.2	441
Most deprived	2,838	11.7	11.6	11.2 -	12.1	1.3	594
Overall	14,004	11.8	10.4	10.2 -	10.6		
2000-2004							
Least deprived	2,767	11.3	9.3	8.9 -	9.6	1.0	0
2	3,084	12.7	9.8	9.4 -	10.1	1.1	156
3	3,137	12.9	10.3	9.9 -	10.7	1.1	312
4	3,059	12.5	11.1	10.7 -	11.5	1.2	502
Most deprived	2,803	11.4	11.7	11.2 -	12.1	1.3	574
Overall	14,850	12.2	10.3	10.2 -	10.5		

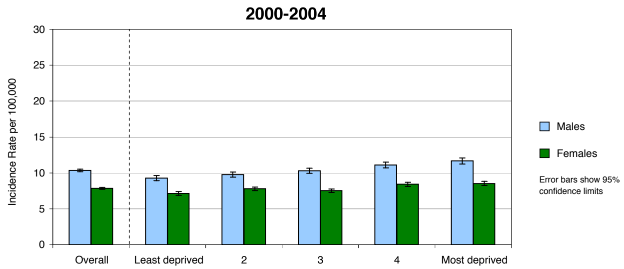
Females

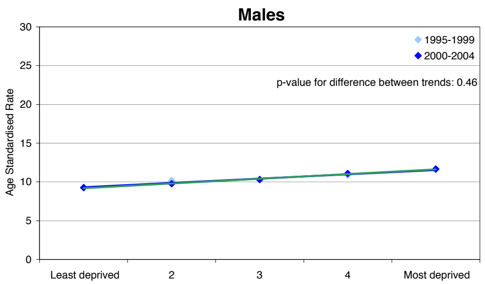
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	2,572	10.6	6.9	6.7 -	7.2	1.0	0
2	3,012	12.2	7.4	7.2 -	7.7	1.1	208
3	3,200	12.8	7.6	7.4 -	7.9	1.1	305
4	3,200	12.7	8.0	7.7 -	8.3	1.2	439
Most deprived	2,969	11.6	8.5	8.2 -	8.8	1.2	540
Overall	14,953	12.0	7.7	7.6 -	7.8		
2000-2004							
Least deprived	2,777	11.1	7.1	6.9 -	7.4	1.0	0
2	3,297	13.1	7.8	7.5 -	8.0	1.1	278
3	3,291	13.0	7.5	7.3 -	7.8	1.1	172
4	3,382	13.2	8.4	8.1 -	8.7	1.2	518
Most deprived	2,900	11.3	8.5	8.2 -	8.8	1.2	480
Overall	15,647	12.3	7.8	7.7 -	8.0		

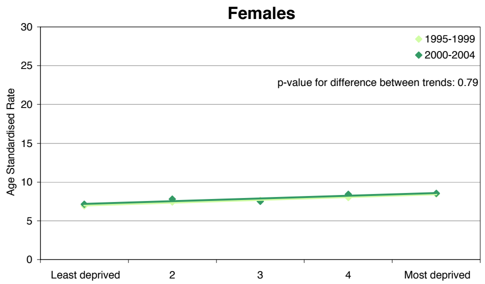
Persons

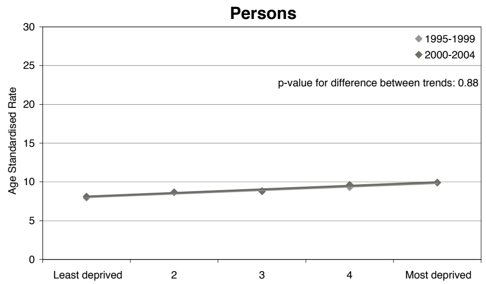
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	5,041	10.6	7.9	7.7 -	8.2	1.0	0
2	5,896	12.2	8.7	8.5 -	8.9	1.1	483
3	6,118	12.6	8.8	8.6 -	9.1	1.1	613
4	6,095	12.4	9.3	9.1 -	9.5	1.2	880
Most deprived	5,807	11.6	9.9	9.6 -	10.1	1.2	1,134
Overall	28,957	11.9	8.9	8.8 -	9.0		
2000-2004							
Least deprived	5,544	11.2	8.1	7.9 -	8.3	1.0	0
2	6,381	12.9	8.7	8.5 -	8.9	1.1	434
3	6,428	12.9	8.8	8.6 -	9.0	1.1	484
4	6,441	12.9	9.6	9.4 -	9.9	1.2	1,019
Most deprived	5,703	11.4	9.9	9.7 -	10.2	1.2	1,054
Overall	30,497	12.3	9.0	8.9 -	9.1		











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	2.2	1.4 -	3.1	24%	0.004
2000-2004	2.5	2.1 -	2.8	27%	<0.001

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	1.5	1.2 -	1.8	21%	0.001
2000-2004	1.4	0.3 -	2.4	19%	0.02

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	1.8	1.3 -	2.4	23%	0.002
2000-2004	1.8	1.2 -	2.5	23%	0.003

Notes

- The increase in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value 0.004 for males; 0.001 for females) and 2000-2004 (p-value <0.001 for males; 0.02 for females)
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for either sex (p-value 0.46 for males; 0.79 for females)
- The increase in ASR in relation to deprivation quintile was greater for males compared to females and the difference was statistically significant (p-value 0.002)
- In 2000-2004, there would have been around 600 fewer cases of pancreatic cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C33-C34: Trachea, bronchus and lung

Males

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	12,794	54.9	47.1	46.3 -	47.9	1.0	0
2	17,053	72.6	58.7	57.8 -	59.5	1.2	3,355
3	20,225	85.8	70.1	69.1 -	71.0	1.5	6,623
4	23,793	99.8	87.7	86.6 -	88.8	1.9	11,005
Most deprived	27,443	112.7	110.9	109.6 -	112.2	2.4	15,786
Overall	101,308	85.4	74.1	73.6 -	74.5		
2000-2004							
Least deprived	12,544	51.2	41.3	40.6 -	42.1	1.0	0
2	15,920	65.4	49.6	48.8 -	50.4	1.2	2,647
3	18,525	76.3	59.7	58.8 -	60.5	1.4	5,693
4	21,525	88.3	76.3	75.3 -	77.3	1.8	9,866
Most deprived	24,351	99.2	100.6	99.4 -	101.9	2.4	14,345
Overall	92,865	76.1	63.7	63.3 -	64.1		

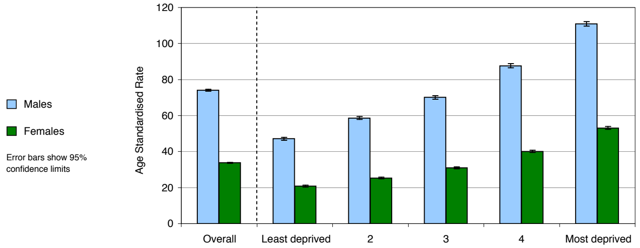
Females

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	7,175	29.5	20.8	20.4 -	21.3	1.0	0
2	9,397	38.1	25.3	24.8 -	25.9	1.2	1,670
3	11,578	46.5	31.0	30.4 -	31.5	1.5	3,785
4	14,122	55.9	40.1	39.5 -	40.8	1.9	6,785
Most deprived	16,733	65.2	53.1	52.3 -	53.9	2.5	10,165
Overall	59,005	47.3	33.8	33.5 -	34.0		
2000-2004							
Least deprived	7,691	30.7	20.9	20.5 -	21.4	1.0	0
2	10,290	40.8	26.0	25.5 -	26.5	1.2	2,003
3	12,140	47.8	31.1	30.5 -	31.7	1.5	3,972
4	14,719	57.6	40.7	40.0 -	41.3	1.9	7,143
Most deprived	17,024	66.4	55.9	55.0 -	56.7	2.7	10,647
Overall	61,864	48.8	34.0	33.8 -	34.3		

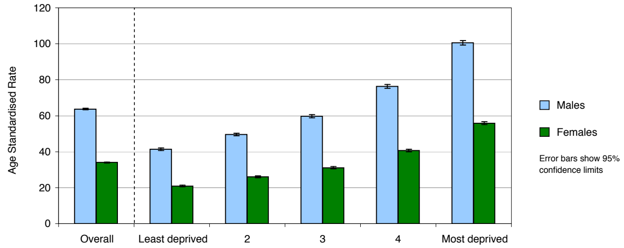
Persons

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	19,969	41.9	32.0	31.5 -	32.4	1.0	0
2	26,450	54.9	39.6	39.1 -	40.0	1.2	5,025
3	31,803	65.6	47.5	47.0 -	48.0	1.5	10,409
4	37,915	77.2	60.1	59.5 -	60.7	1.9	17,790
Most deprived	44,176	88.3	77.8	77.1 -	78.6	2.4	25,951
Overall	160,313	65.9	50.9	50.7 -	51.2		
2000-2004							
Least deprived	20,235	40.9	29.8	29.4 -	30.3	1.0	0
2	26,210	52.9	36.3	35.8 -	36.7	1.2	4,650
3	30,665	61.7	43.3	42.9 -	43.8	1.5	9,666
4	36,244	72.6	55.8	55.3 -	56.4	1.9	17,008
Most deprived	41,375	82.5	75.2	74.5 -	75.9	2.5	24,993
Overall	154,729	62.2	46.9	46.6 -	47.1		

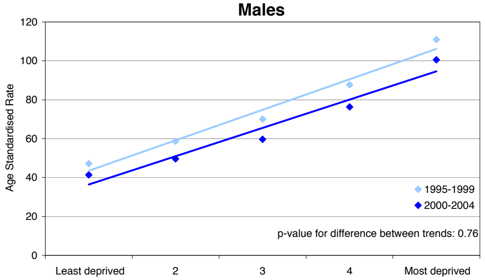
1995-1999



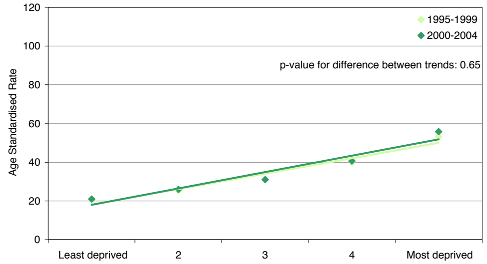
2000-2004



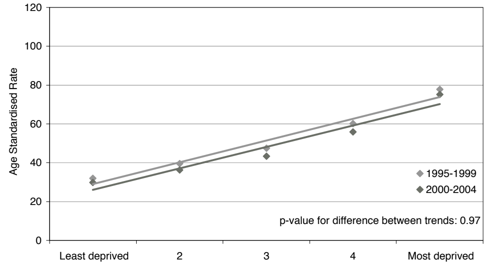
Males



Females



Persons



Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	65.5	46.0 -	85.1	155%	0.002
2000-2004	62.4	37.5 -	87.4	182%	0.004

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	33.8	20.7 -	46.9	196%	0.004
2000-2004	36.8	20.3 -	53.3	222%	0.006

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	47.4	31.1 -	63.7	171%	0.003
2000-2004	47.7	27.2 -	68.3	196%	0.005

Notes

- The increase in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value 0.002 for males; 0.004 for females) and 2000-2004 (p-value 0.004 for males; 0.006 for females)
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for either sex (p-value 0.76 for males; 0.65 for females)
- The increase in ASR in relation to deprivation quintile was greater for males compared to females and the difference was statistically significant (p-value 0.006)
- In 2000-2004, there would have been around 11,250 fewer cases of lung cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C40-C41: Bone and articular cartilage

Males

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	222	1.0	0.9	0.8 - 1.0	1.0	
2	228	1.0	0.9	0.8 - 1.0	1.0	No
3	283	1.2	1.2	1.0 - 1.3	1.3	Significant
4	205	0.9	0.8	0.7 - 1.0	0.9	Difference
Most deprived	245	1.0	1.0	0.9 - 1.1	1.1	
Overall	**1,183**	**1.0**	**1.0**	**0.9 - 1.0**		
2000-2004						
Least deprived	224	0.9	0.9	0.8 - 1.0	1.0	
2	242	1.0	0.9	0.8 - 1.0	1.1	No
3	245	1.0	1.0	0.9 - 1.1	1.1	Significant
4	230	0.9	0.9	0.8 - 1.0	1.1	Difference
Most deprived	243	1.0	1.0	0.9 - 1.1	1.1	
Overall	**1,184**	**1.0**	**0.9**	**0.9 - 1.0**		

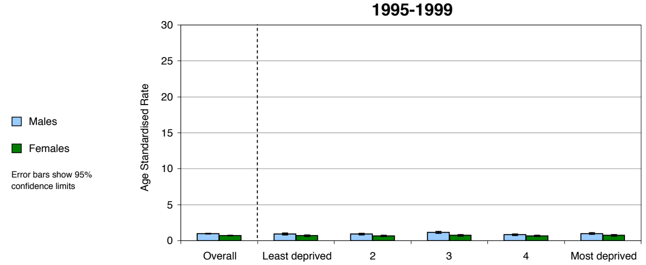
Females

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	184	0.8	0.7	0.6 - 0.8	1.0	
2	185	0.7	0.7	0.6 - 0.8	0.9	No
3	203	0.8	0.7	0.6 - 0.8	1.1	Significant
4	187	0.7	0.7	0.6 - 0.8	1.0	Difference
Most deprived	204	0.8	0.7	0.6 - 0.8	1.1	
Overall	**963**	**0.8**	**0.7**	**0.7 - 0.7**		
2000-2004						
Least deprived	192	0.8	0.7	0.6 - 0.8	1.0	
2	185	0.7	0.6	0.5 - 0.7	0.9	No
3	211	0.8	0.8	0.7 - 0.9	1.1	Significant
4	195	0.8	0.7	0.6 - 0.8	1.0	Difference
Most deprived	183	0.7	0.7	0.6 - 0.8	1.0	
Overall	**966**	**0.8**	**0.7**	**0.6 - 0.7**		

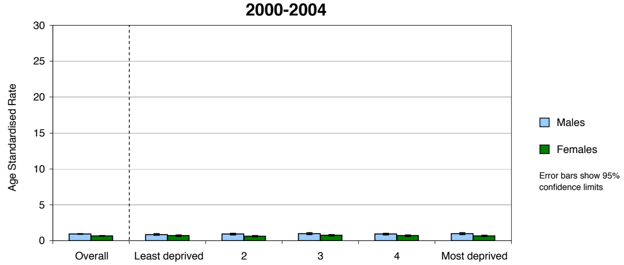
Persons

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	406	0.9	0.8	0.7 - 0.9	1.0	
2	413	0.9	0.8	0.7 - 0.9	1.0	No
3	486	1.0	0.9	0.9 - 1.0	1.2	Significant
4	392	0.8	0.8	0.7 - 0.8	0.9	Difference
Most deprived	449	0.9	0.9	0.8 - 0.9	1.1	
Overall	**2,146**	**0.9**	**0.8**	**0.8 - 0.9**		
2000-2004						
Least deprived	416	0.8	0.8	0.7 - 0.9	1.0	
2	427	0.9	0.8	0.7 - 0.8	1.0	No
3	456	0.9	0.9	0.8 - 0.9	1.1	Significant
4	425	0.9	0.8	0.7 - 0.9	1.0	Difference
Most deprived	426	0.8	0.8	0.7 - 0.9	1.1	
Overall	**2,150**	**0.9**	**0.8**	**0.8 - 0.8**		

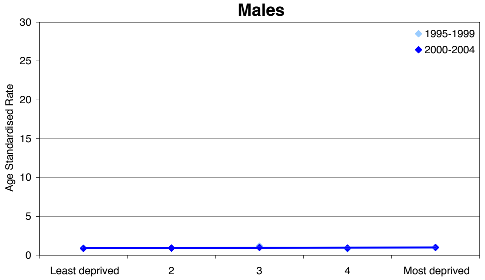
1995-1999



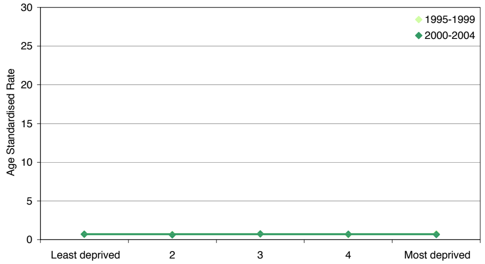
2000-2004



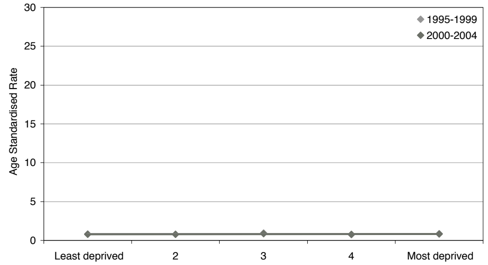
Males



Females



Persons



Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	0.0	-0.6 - 0.6		0.89
2000-2004	0.1	0.0 - 0.2		0.13

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	0.0	-0.1 - 0.2		0.53
2000-2004	0.0	-0.2 - 0.2		0.92

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	0.0	-0.3 - 0.4		0.81
2000-2004	0.0	-0.1 - 0.2		0.40

Notes

• The was no statistically significant change in the ASR in relation to deprivation quintile for either sex in both 1995-1999 (p-value 0.89 for males; 0.53 for females) and 2000-2004 (p-value 0.13 for males; 0.92 for females)

Cancer incidence by deprivation quintile, England, 1995 - 2004

C43: Malignant melanoma of skin

Males

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	2,721	11.7	10.7	10.3 - 11.2	1.0	0
2	2,580	11.0	9.9	9.5 - 10.3	0.9	-229
3	2,287	9.7	8.8	8.5 - 9.2	0.8	-496
4	1,839	7.7	7.3	7.0 - 7.6	0.7	-870
Most deprived	1,138	4.7	4.8	4.5 - 5.0	0.4	-1,426
Overall	10,565	8.9	8.4	8.2 - 8.5		
2000-2004						
Least deprived	4,004	16.3	14.4	14.0 - 14.9	1.0	0
2	3,599	14.8	12.6	12.2 - 13.0	0.9	-522
3	3,262	13.4	11.7	11.3 - 12.1	0.8	-751
4	2,383	9.8	9.1	8.7 - 9.4	0.6	-1,408
Most deprived	1,528	6.2	6.5	6.2 - 6.8	0.5	-1,858
Overall	14,776	12.1	11.1	10.9 - 11.2		

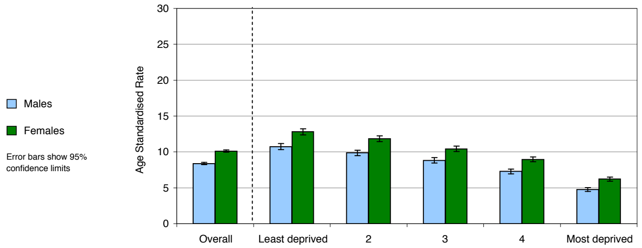
Females

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	3,527	14.5	12.8	12.4 - 13.2	1.0	0
2	3,433	13.9	11.9	11.5 - 12.3	0.9	-276
3	3,085	12.4	10.4	10.1 - 10.8	0.8	-704
4	2,616	10.4	9.0	8.6 - 9.3	0.7	-1,124
Most deprived	1,782	6.9	6.2	5.9 - 6.5	0.5	-1,886
Overall	14,443	11.6	10.1	10.0 - 10.3		
2000-2004						
Least deprived	4,738	18.9	16.0	15.5 - 16.4	1.0	0
2	4,581	18.1	14.9	14.5 - 15.4	0.9	-322
3	4,075	16.1	13.2	12.8 - 13.6	0.8	-848
4	3,153	12.3	10.5	10.2 - 10.9	0.7	-1,632
Most deprived	2,048	8.0	7.4	7.1 - 7.7	0.5	-2,382
Overall	18,595	14.7	12.6	12.4 - 12.8		

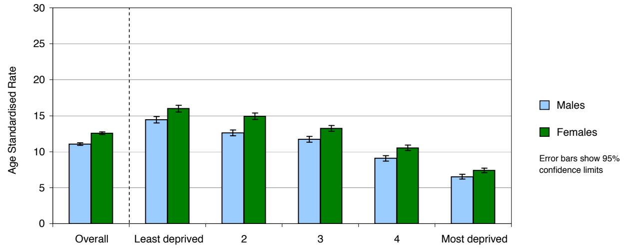
Persons

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	6,248	13.1	11.7	11.4 - 12.0	1.0	0
2	6,013	12.5	10.8	10.6 - 11.1	0.9	-505
3	5,372	11.1	9.6	9.3 - 9.8	0.8	-1,200
4	4,455	9.1	8.1	7.9 - 8.3	0.7	-1,994
Most deprived	2,920	5.8	5.5	5.3 - 5.7	0.5	-3,311
Overall	25,008	10.3	9.2	9.1 - 9.3		
2000-2004						
Least deprived	8,742	17.7	15.1	14.8 - 15.4	1.0	0
2	8,180	16.5	13.7	13.4 - 14.0	0.9	-844
3	7,337	14.8	12.4	12.1 - 12.7	0.8	-1,599
4	5,536	11.1	9.7	9.5 - 10.0	0.6	-3,040
Most deprived	3,576	7.1	6.9	6.7 - 7.2	0.5	-4,240
Overall	33,371	13.4	11.7	11.6 - 11.9		

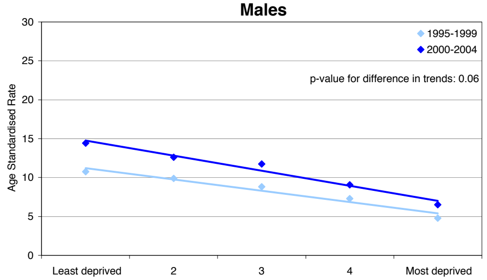
1995-1999



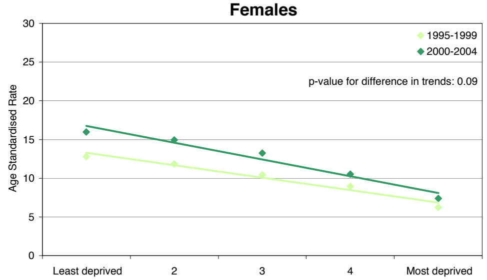
2000-2004



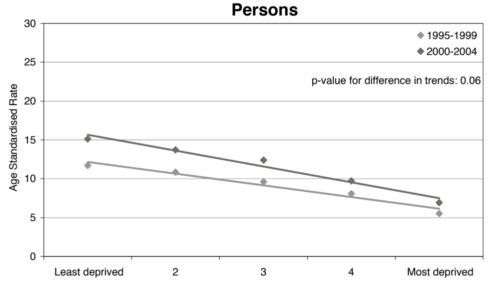
Males



Females



Persons



Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	-5.5	-7.9 - -3.1	-50%	0.005
2000-2004	-7.5	-10.0 - -5.0	-51%	0.002

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	-6.1	-8.4 - -3.9	-47%	0.003
2000-2004	-8.3	-11.6 - -5.0	-50%	0.004

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	-5.8	-8.0 - -3.5	-48%	0.004
2000-2004	-7.9	-10.6 - -5.1	-51%	0.003

Notes

- The decrease in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value 0.005 for males; 0.003 for females) and 2000-2004 (p-value 0.002 for males; 0.004 for females)
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for either sex (p-value 0.06 for males; 0.09 for females)
- There was no statistically significant difference in the decrease in ASR in relation to deprivation quintile between the sexes (p-value 0.58)
- In 2000-2004, there would have been around 2,000 more cases of malignant melanoma skin cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C45: Mesothelioma

Males

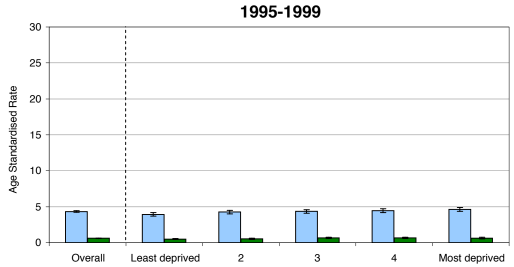
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	1,036	4.4	3.9	3.7 -	4.2	1.0	0
2	1,185	5.0	4.3	4.0 -	4.5	1.1	91
3	1,178	5.0	4.4	4.1 -	4.6	1.1	112
4	1,158	4.9	4.5	4.2 -	4.7	1.1	136
Most deprived	1,126	4.6	4.6	4.4 -	4.9	1.2	168
Overall	**5,683**	**4.8**	**4.3**	**4.2 -**	**4.4**		
2000-2004							
Least deprived	1,472	6.0	5.0	4.7 -	5.2	1.0	
2	1,585	6.5	5.1	4.8 -	5.3	1.0	No
3	1,658	6.8	5.5	5.2 -	5.7	1.1	Significant
4	1,455	6.0	5.3	5.0 -	5.5	1.1	Difference
Most deprived	1,249	5.1	5.2	4.9 -	5.5	1.0	
Overall	**7,419**	**6.1**	**5.2**	**5.1 -**	**5.3**		

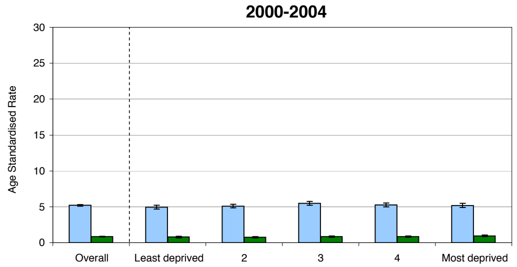
Females

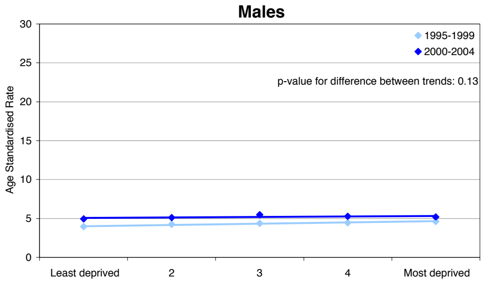
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	158	0.7	0.5	0.4 -	0.6	1.0	
2	182	0.7	0.5	0.5 -	0.6	1.1	No
3	220	0.9	0.6	0.6 -	0.7	1.3	Significant
4	220	0.9	0.7	0.6 -	0.8	1.3	Difference
Most deprived	200	0.8	0.6	0.6 -	0.7	1.3	
Overall	**980**	**0.8**	**0.6**	**0.6 -**	**0.6**		
2000-2004							
Least deprived	263	1.1	0.8	0.7 -	0.9	1.0	0
2	290	1.1	0.8	0.7 -	0.9	1.0	-5
3	312	1.2	0.9	0.8 -	0.9	1.1	25
4	314	1.2	0.8	0.7 -	0.9	1.1	20
Most deprived	298	1.2	1.0	0.8 -	1.1	1.2	54
Overall	**1,477**	**1.2**	**0.8**	**0.8 -**	**0.9**		

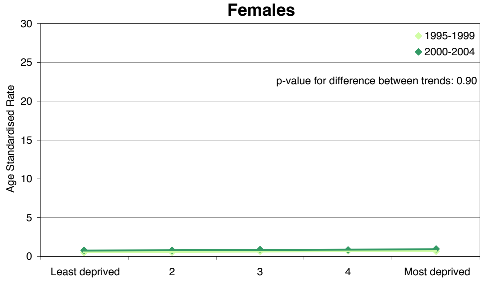
Persons

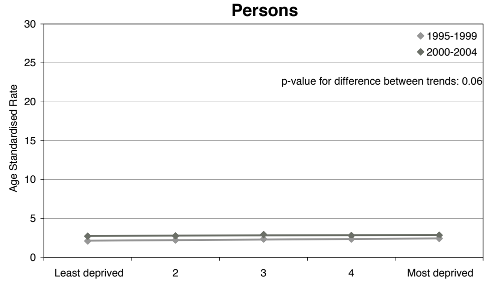
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	1,194	2.5	2.1	2.0 -	2.2	1.0	
2	1,367	2.8	2.2	2.1 -	2.3	1.1	
3	1,398	2.9	2.3	2.2 -	2.5	1.1	
4	1,378	2.8	2.4	2.2 -	2.5	1.1	
Most deprived	1,326	2.7	2.4	2.3 -	2.5	1.2	
Overall	**6,663**	**2.7**	**2.3**	**2.2 -**	**2.3**		
2000-2004							
Least deprived	1,735	3.5	2.7	2.6 -	2.8	1.0	
2	1,875	3.8	2.8	2.6 -	2.9	1.0	No
3	1,970	4.0	2.9	2.8 -	3.1	1.1	Significant
4	1,769	3.5	2.8	2.7 -	2.9	1.0	Difference
Most deprived	1,547	3.1	2.8	2.7 -	3.0	1.0	
Overall	**8,896**	**3.6**	**2.8**	**2.7 -**	**2.9**		











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	0.6	0.3 -	0.9	16%	0.006
2000-2004	0.2	-0.6 -	1.0		0.42

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	0.2	0.0 -	0.3		0.07
2000-2004	0.2	0.0 -	0.3	23%	0.04

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	0.3	0.1 -	0.5	15%	0.011
2000-2004	0.1	-0.2 -	0.4		0.34

Notes

- The increase in ASR in relation to deprivation quintile was statistically significant for males in 1995-1999 (p-value 0.006) but not in 2000-2004 (p-value 0.42)
- The increase in ASR in relation to deprivation quintile was not statistically significant for females in 1995-1999 (p-value 0.07) but was statistically significant in 2000-2004 (p-value 0.04)
- Although there were significant increases for males and females in ASR in relation to deprivation quintile, these increases were relatively small

Cancer incidence by deprivation quintile, England, 1995 - 2004

C50: Breast

Males

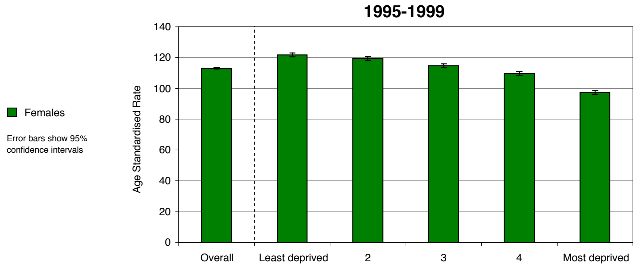
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived						
2						
3						
4						
Most deprived						
Overall						
2000-2004						
Least deprived						
2						
3						
4						
Most deprived						
Overall						

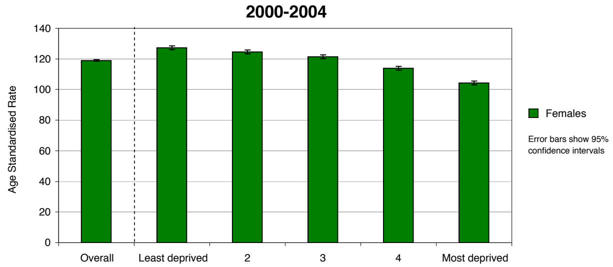
Females

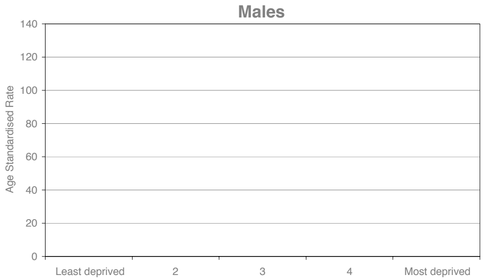
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	34,782	143.2	121.7	120.5 - 123.0	1.0	0
2	36,104	146.3	119.4	118.2 - 120.7	1.0	-695
3	35,128	141.0	114.6	113.4 - 115.8	0.9	-2,179
4	32,561	128.9	109.7	108.5 - 110.9	0.9	-3,587
Most deprived	26,582	103.6	97.2	96.0 - 98.4	0.8	-6,712
Overall	165,157	132.3	113.1	112.5 - 113.6		
2000-2004						
Least deprived	39,073	156.1	127.2	125.9 - 128.5	1.0	0
2	40,194	159.2	124.5	123.3 - 125.7	1.0	-875
3	38,583	152.0	121.4	120.2 - 122.6	1.0	-1,839
4	34,254	134.0	113.9	112.7 - 115.1	0.9	-4,000
Most deprived	27,583	107.7	104.3	103.1 - 105.6	0.8	-6,048
Overall	179,687	141.7	119.0	118.4 - 119.5		

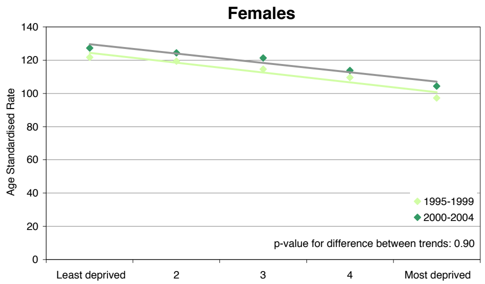
Persons

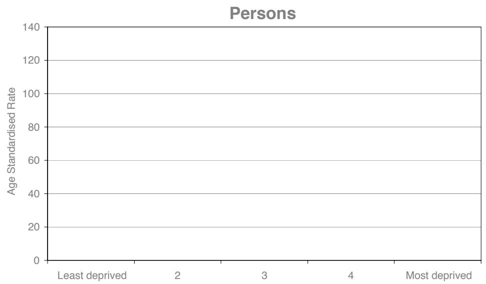
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived						
2						
3						
4						
Most deprived						
Overall						
2000-2004						
Least deprived						
2						
3						
4						
Most deprived						
Overall						











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	-23.2	-36.5 - -9.9	-19%	0.01
2000-2004	-22.5	-33.8 - -11.1	-17%	0.008

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend

Notes

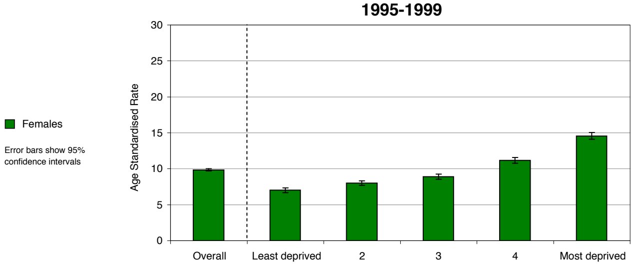
- The decrease in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value 0.01) and 2000-2004 (p-value 0.008)
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile (p-value 0.90)
- In 2000-2004, there would have been around 2,500 more cases of breast cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

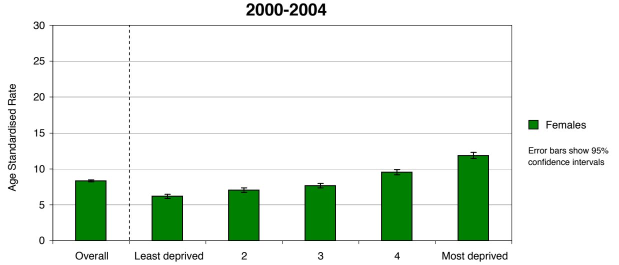
C53: Cervix uteri

Deprivation Quintile	Males: Number of cases	Males: Crude Rate	Males: ASR	Males: 95% Confidence Interval	Males: ASR Ratio	Males: Excess Cases	Females: Number of cases	Females: Crude Rate	Females: ASR	Females: 95% Confidence Interval	Females: ASR Ratio	Females: Excess Cases	Persons: Number of cases	Persons: Crude Rate	Persons: ASR	Persons: 95% Confidence Interval	Persons: ASR Ratio	Persons: Excess Cases
1995-1999																		
Least deprived							1,919	7.9	7.0	6.7 - 7.3	1.0	0						
2							2,278	9.2	8.0	7.7 - 8.3	1.1	285						
3							2,542	10.2	8.9	8.5 - 9.2	1.3	537						
4							3,127	12.4	11.2	10.8 - 11.6	1.6	1,163						
Most deprived							3,833	14.9	14.6	14.1 - 15.0	2.1	1,989						
Overall							13,699	11.0	9.9	9.7 - 10.0								
2000-2004																		
Least deprived							1,728	6.9	6.2	5.9 - 6.5	1.0	0						
2							2,052	8.1	7.0	6.7 - 7.3	1.1	253						
3							2,243	8.8	7.7	7.4 - 8.0	1.2	438						
4							2,745	10.7	9.6	9.2 - 9.9	1.5	972						
Most deprived							3,098	12.1	11.9	11.5 - 12.3	1.9	1,487						
Overall							11,866	9.4	8.3	8.2 - 8.5								

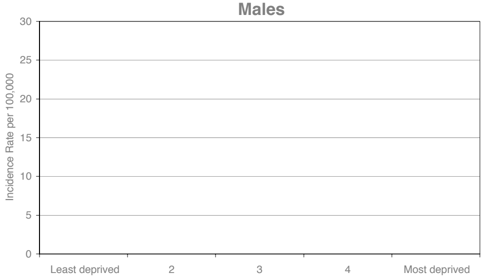
1995-1999



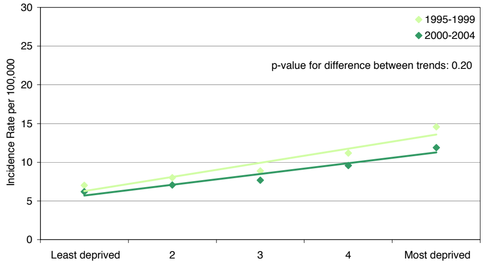
2000-2004



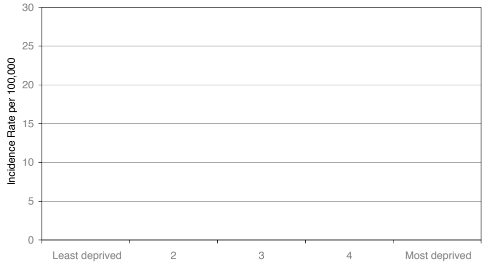
Males



Females



Persons



Cohort	Males: Est. Deprivation Gap (Difference in ASR)	Males: 95% Confidence Interval	Males: Modelled % Change	Males: P-value for Trend	Females: Est. Deprivation Gap (Difference in ASR)	Females: 95% Confidence Interval	Females: Modelled % Change	Females: P-value for Trend	Persons: Est. Deprivation Gap (Difference in ASR)	Persons: 95% Confidence Interval	Persons: Modelled % Change	Persons: P-value for Trend
1995-1999					7.8	3.8 - 11.8	129%	0.009				
2000-2004					5.9	3.2 - 8.5	106%	0.006				

Notes

- The decrease in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value 0.009) and 2000-2004 (p-value 0.006)
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile (p-value 0.20)
- In 2000-2004, there would have been around 650 fewer cases of cervical cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

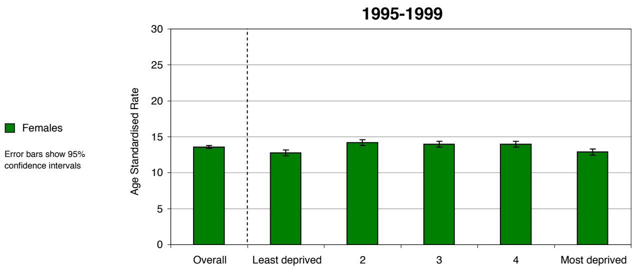
Cancer incidence by deprivation quintile, England, 1995 - 2004

C54: Corpus Uteri

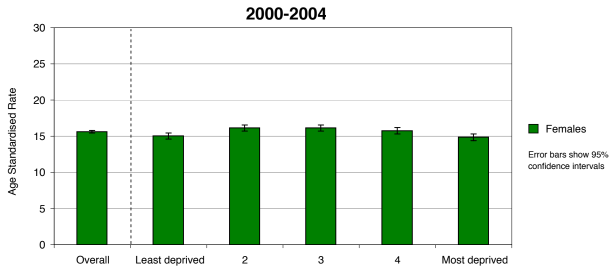
Males and Persons columns contain no data; Females:

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	3,760	15.5	12.8	12.4 -	13.2	1.0	
2	4,437	18.0	14.2	13.8 -	14.6	1.1	No
3	4,450	17.9	14.0	13.6 -	14.4	1.1	Significant
4	4,285	17.0	14.0	13.6 -	14.4	1.1	Difference
Most deprived	3,626	14.1	12.9	12.5 -	13.3	1.0	
Overall	20,558	16.5	13.6	13.4 -	13.8		
2000-2004							
Least deprived	4,802	19.2	15.0	14.6 -	15.5	1.0	
2	5,466	21.6	16.1	15.7 -	16.6	1.1	No
3	5,377	21.2	16.1	15.7 -	16.6	1.1	Significant
4	4,870	19.1	15.8	15.3 -	16.2	1.0	Difference
Most deprived	3,944	15.4	14.9	14.4 -	15.3	1.0	
Overall	24,459	19.3	15.6	15.4 -	15.8		

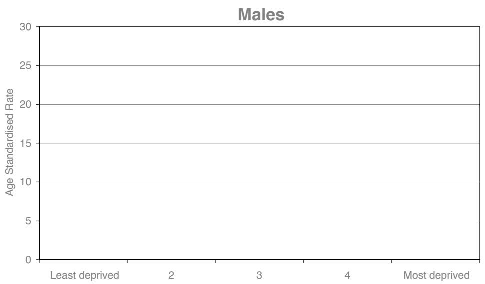
1995-1999



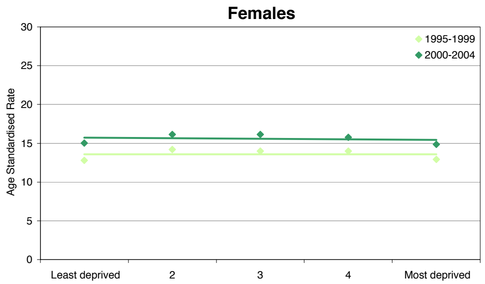
2000-2004



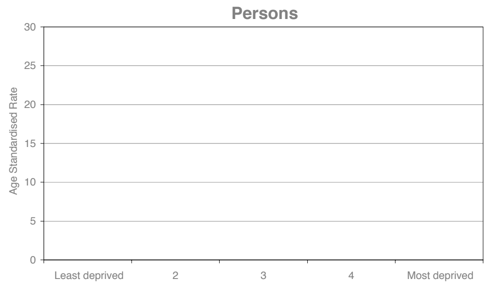
Males



Females



Persons



Females (Males and Persons contain no data):

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	0.0	-3.1 -	3.1		0.98
2000-2004	-0.4	-3.1 -	2.4		0.70

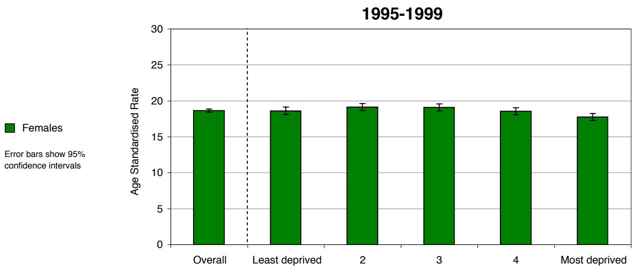
Notes

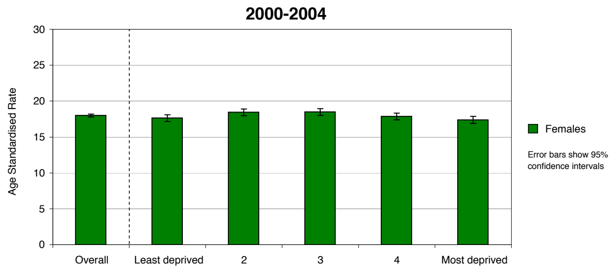
• There was no statistically significant change in ASR in relation to deprivation quintile in both 1995-1999 (p-value 0.98) and 2000-2004 (p-value 0.70)

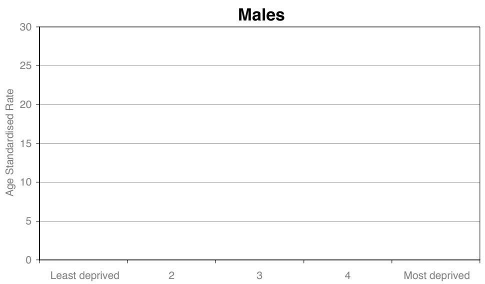
Cancer incidence by deprivation quintile, England, 1995 - 2004

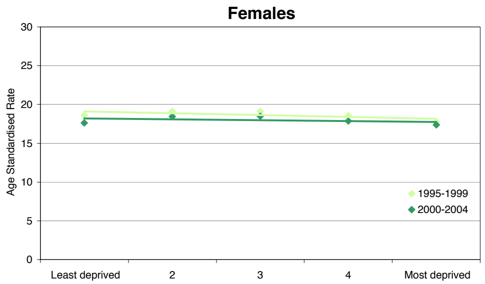
C56: Ovary

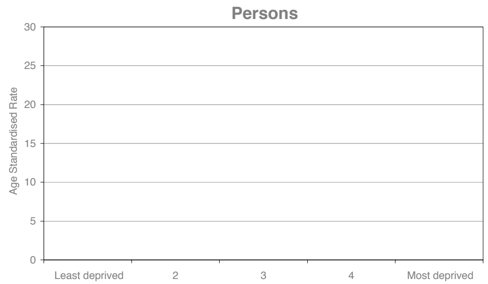
Deprivation Quintile	Males: Number of cases	Males: Crude Rate	Males: ASR	Males: 95% Confidence Interval	Males: ASR Ratio	Males: Excess Cases	Females: Number of cases	Females: Crude Rate	Females: ASR	Females: 95% Confidence Interval	Females: ASR Ratio	Females: Excess Cases	Persons: Number of cases	Persons: Crude Rate	Persons: ASR	Persons: 95% Confidence Interval	Persons: ASR Ratio	Persons: Excess Cases
1995-1999																		
Least deprived							5,431	22.4	18.6	18.1 - 19.1	1.0							
2							5,890	23.9	19.1	18.6 - 19.6	1.0	No						
3							5,989	24.0	19.1	18.6 - 19.6	1.0	Significant						
4							5,569	22.0	18.6	18.1 - 19.0	1.0	Difference						
Most deprived							5,001	19.5	17.7	17.3 - 18.2	1.0							
Overall							27,880	22.3	18.7	18.4 - 18.9								
2000-2004																		
Least deprived							5,615	22.4	17.6	17.2 - 18.1	1.0							
2							6,174	24.5	18.4	18.0 - 18.9	1.0	No						
3							6,178	24.3	18.5	18.0 - 18.9	1.0	Significant						
4							5,589	21.9	17.9	17.4 - 18.3	1.0	Difference						
Most deprived							4,753	18.6	17.4	16.9 - 17.9	1.0							
Overall							28,309	22.3	18.0	17.8 - 18.2								











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	-0.9	-2.9 - 1.0		0.23
2000-2004	-0.5	-2.6 - 1.6		0.52

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend

Notes

- There was no statistically significant change in ASR in relation to deprivation quintile in both 1995-1999 (p-value 0.23) and 2000-2004 (p-value 0.52)

Cancer incidence by deprivation quintile, England, 1995 - 2004

C61: Prostate

Males

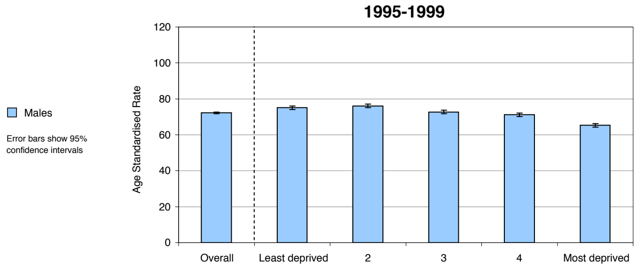
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	20,660	88.6	75.1	74.0 -	76.1	1.0	0
2	22,681	96.5	76.1	75.1 -	77.0	1.0	299
3	21,821	92.6	72.7	71.7 -	73.6	1.0	-716
4	20,049	84.1	71.2	70.2 -	72.2	0.9	-1,092
Most deprived	16,734	68.7	65.3	64.3 -	66.3	0.9	-2,502
Overall	**101,945**	**86.0**	**72.3**	**71.8 -**	**72.7**		
2000-2004							
Least deprived	31,137	127.1	103.7	102.6 -	104.9	1.0	0
2	31,835	130.8	99.3	98.2 -	100.4	1.0	-1,411
3	29,519	121.5	94.1	93.0 -	95.2	0.9	-3,020
4	24,877	102.0	86.6	85.5 -	87.7	0.8	-4,907
Most deprived	19,602	79.9	78.8	77.7 -	80.0	0.8	-6,179
Overall	**136,970**	**112.2**	**93.3**	**92.8 -**	**93.8**		

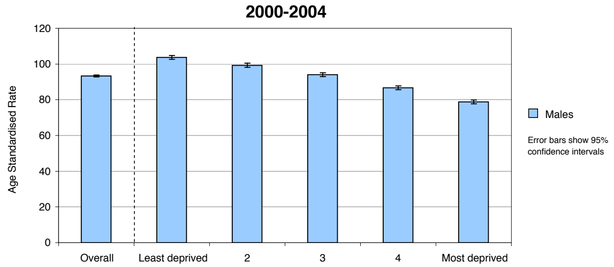
Females

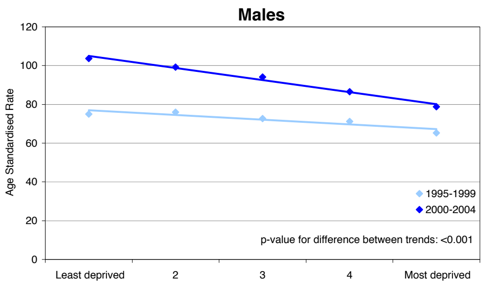
Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases

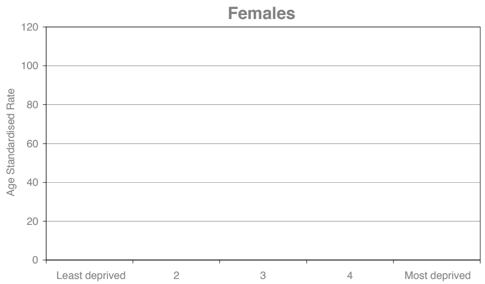
Persons

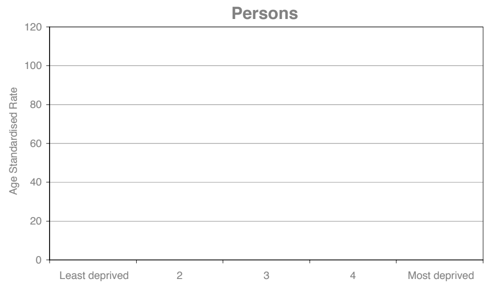
Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases











Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	-9.7	-17.8 -	-1.5	-13%	0.03
2000-2004	-24.9	-30.5 -	-19.3	-24%	0.001

Females:

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend

Persons:

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend

Notes

- The decrease in ASR in relation to deprivation quintile was statistically significant in both 1995-1999 (p-value 0.03) and 2000-2004 (p-value 0.001)
- There was a statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile (p-value <0.001) with the decrease greater in 2000-2004
- In 2000-2004, there would have been around 3,100 more cases of prostate cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C62: Testis

Males

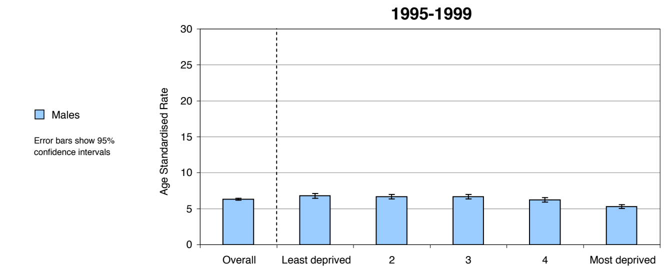
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	1,633	7.0	6.8	6.5 -	7.1	1.0	
2	1,600	6.8	6.7	6.3 -	7.0	1.0	No
3	1,642	7.0	6.7	6.4 -	7.0	1.0	Significant
4	1,566	6.6	6.2	5.9 -	6.5	0.9	Difference
Most deprived	1,347	5.5	5.3	5.0 -	5.6	0.8	
Overall	**7,788**	**6.6**	**6.3**	**6.2 -**	**6.5**		
2000-2004							
Least deprived	1,760	7.2	7.2	6.9 -	7.6	1.0	0
2	1,714	7.0	7.1	6.7 -	7.4	1.0	-47
3	1,664	6.9	6.7	6.3 -	7.0	0.9	-143
4	1,598	6.6	6.2	5.9 -	6.5	0.9	-261
Most deprived	1,394	5.7	5.5	5.2 -	5.8	0.8	-433
Overall	**8,130**	**6.7**	**6.5**	**6.4 -**	**6.7**		

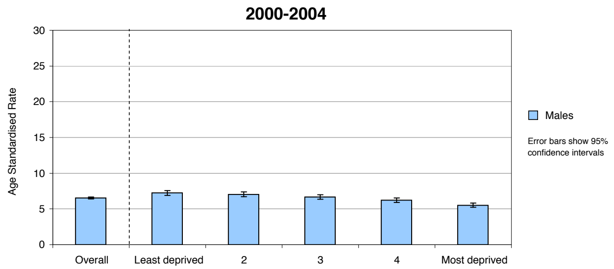
Females

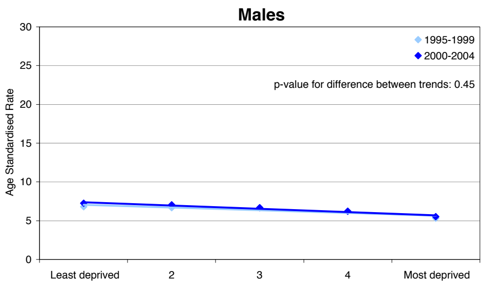
Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases

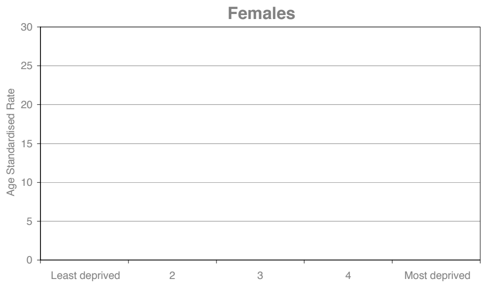
Persons

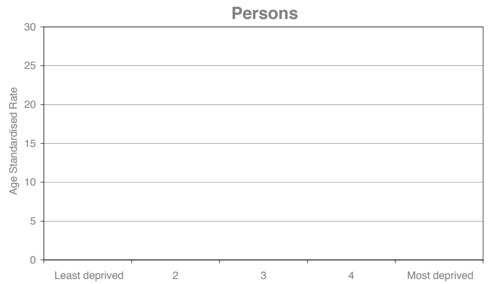
Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	-1.3	-2.7 -	0.1		0.06
2000-2004	-1.7	-2.3 -	-1.0	-23%	0.004

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend

Notes

- The decrease in ASR in relation to deprivation quintile was not statistically significant in 1995-1999 (p-value 0.06) but was statistically significant in 2000-2004 (p-value 0.004)
- In 2000-2004, there would have been around 200 more cases of testicular cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C64-C66 & C68: Kidney and other and unspecified urinary organs

Males

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	2,884	12.4	11.1	10.7 -	11.5	1.0	
2	3,260	13.9	11.9	11.5 -	12.3	1.1	No
3	3,258	13.8	12.0	11.6 -	12.4	1.1	Significant
4	3,032	12.7	11.7	11.3 -	12.1	1.1	Difference
Most deprived	2,827	11.6	11.9	11.4 -	12.3	1.1	
Overall	**15,261**	**12.9**	**11.7**	**11.5 -**	**11.9**		
2000-2004							
Least deprived	3,397	13.9	11.7	11.3 -	12.1	1.0	0
2	3,695	15.2	12.2	11.8 -	12.6	1.0	144
3	3,653	15.0	12.6	12.2 -	13.0	1.1	261
4	3,459	14.2	13.0	12.5 -	13.4	1.1	334
Most deprived	3,059	12.5	13.0	12.6 -	13.5	1.1	312
Overall	**17,263**	**14.1**	**12.5**	**12.3 -**	**12.6**		

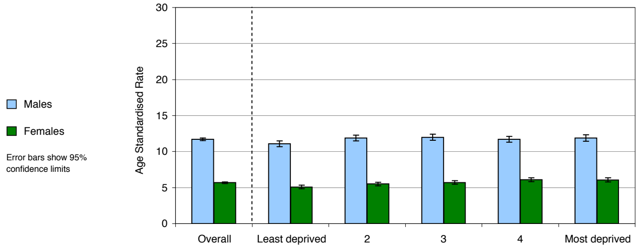
Females

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	1,641	6.8	5.1	4.8 -	5.3	1.0	0
2	1,863	7.5	5.5	5.3 -	5.8	1.1	142
3	1,967	7.9	5.7	5.5 -	6.0	1.1	218
4	2,029	8.0	6.1	5.8 -	6.4	1.2	336
Most deprived	1,823	7.1	6.1	5.8 -	6.3	1.2	296
Overall	**9,323**	**7.5**	**5.7**	**5.6 -**	**5.8**		
2000-2004							
Least deprived	1,841	7.4	5.4	5.2 -	5.7	1.0	0
2	2,146	8.5	5.9	5.6 -	6.1	1.1	166
3	2,257	8.9	6.3	6.0 -	6.5	1.2	306
4	2,188	8.6	6.4	6.2 -	6.7	1.2	348
Most deprived	2,061	8.0	7.0	6.7 -	7.3	1.3	458
Overall	**10,493**	**8.3**	**6.2**	**6.0 -**	**6.3**		

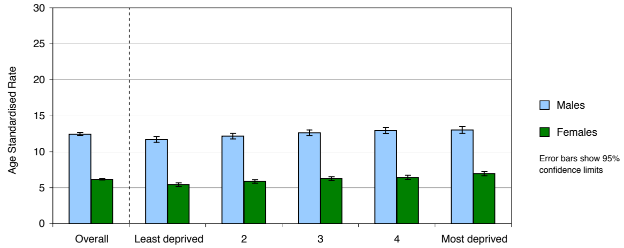
Persons

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	4,525	9.5	7.8	7.6 -	8.0	1.0	
2	5,123	10.6	8.4	8.2 -	8.6	1.1	
3	5,225	10.8	8.5	8.3 -	8.8	1.1	
4	5,061	10.3	8.6	8.3 -	8.8	1.1	
Most deprived	4,650	9.3	8.7	8.4 -	8.9	1.1	
Overall	**24,584**	**10.1**	**8.4**	**8.3 -**	**8.5**		
2000-2004							
Least deprived	5,238	10.6	8.3	8.1 -	8.5	1.0	0
2	5,841	11.8	8.8	8.5 -	9.0	1.1	310
3	5,910	11.9	9.2	8.9 -	9.4	1.1	566
4	5,647	11.3	9.4	9.1 -	9.6	1.1	682
Most deprived	5,120	10.2	9.7	9.4 -	10.0	1.2	769
Overall	**27,756**	**11.2**	**9.0**	**8.9 -**	**9.1**		

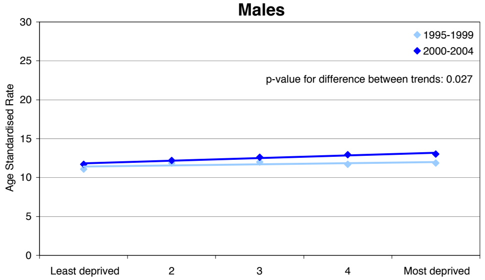
1995-1999



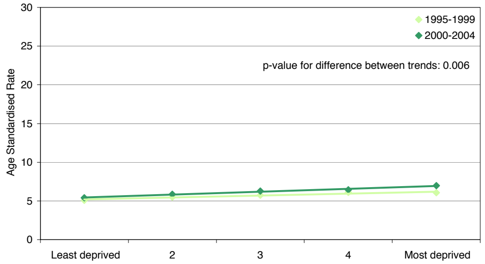
2000-2004



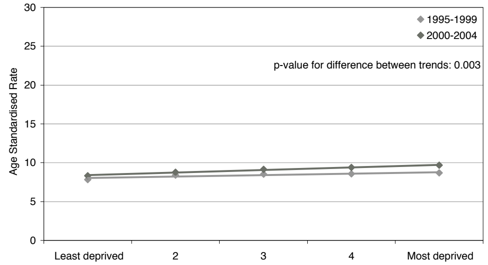
Males



Females



Persons



Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	0.5	-0.8 -	1.9		0.28
2000-2004	1.3	0.8 -	1.9	13%	0.005

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	1.0	0.5 -	1.5	22%	0.01
2000-2004	1.5	1.1 -	1.8	30%	0.001

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	0.7	0.0 -	1.5		0.05
2000-2004	1.3	1.1 -	1.6	18%	0.001

Notes

- The increase in ASR in relation to deprivation quintile was statistically significant in 1995-1999 for females (p-value 0.01) but not males (p-value 0.28). It was statistically significant for both sexes in 2000-2004 (p-value 0.005 for males; 0.001 for females)
- The was a statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for females (p-value 0.006) with the increase greater in 2000-2004
- There was no statistically significant difference in the increase in ASR in relation to deprivation quintile between males and females (p-value 0.5)
- In 2000-2004, there would have been around 450 fewer cases of kidney cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C67: Bladder

Males

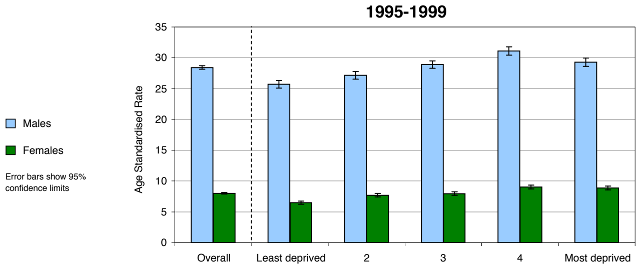
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	6,962	29.9	25.7	25.1 -	26.3	1.0	
2	7,866	33.5	27.2	26.6 -	27.8	1.1	No
3	8,345	35.4	28.9	28.3 -	29.5	1.1	Significant
4	8,450	35.4	31.1	30.4 -	31.8	1.2	Difference
Most deprived	7,278	29.9	29.3	28.6 -	30.0	1.1	
Overall	**38,901**	**32.8**	**28.4**	**28.1 -**	**28.7**		
2000-2004							
Least deprived	5,704	23.3	18.8	18.3 -	19.3	1.0	0
2	6,399	26.3	19.7	19.2 -	20.2	1.0	290
3	6,641	27.3	21.1	20.6 -	21.6	1.1	722
4	6,438	26.4	22.5	21.9 -	23.0	1.2	1,055
Most deprived	5,546	22.6	22.5	21.9 -	23.1	1.2	914
Overall	**30,728**	**25.2**	**20.8**	**20.5 -**	**21.0**		

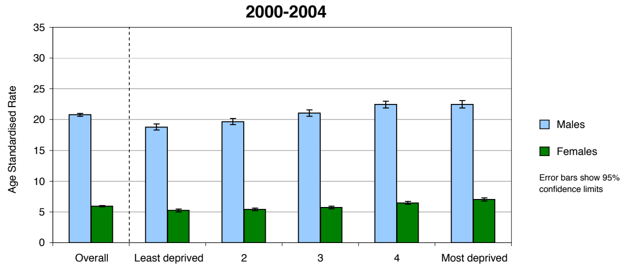
Females

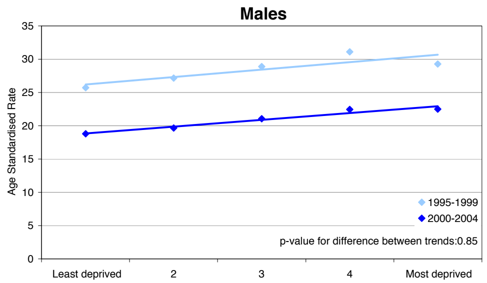
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	2,431	10.0	6.5	6.3 -	6.8	1.0	0
2	3,129	12.7	7.7	7.4 -	8.0	1.2	487
3	3,318	13.3	8.0	7.7 -	8.2	1.2	609
4	3,536	14.0	9.0	8.7 -	9.3	1.4	986
Most deprived	3,117	12.1	8.9	8.6 -	9.2	1.4	835
Overall	**15,531**	**12.4**	**8.0**	**7.9 -**	**8.1**		
2000-2004							
Least deprived	2,079	8.3	5.2	5.0 -	5.5	1.0	0
2	2,407	9.5	5.4	5.2 -	5.6	1.0	76
3	2,596	10.2	5.7	5.5 -	5.9	1.1	220
4	2,747	10.7	6.5	6.2 -	6.7	1.2	526
Most deprived	2,481	9.7	7.0	6.7 -	7.3	1.3	635
Overall	**12,310**	**9.7**	**5.9**	**5.8 -**	**6.0**		

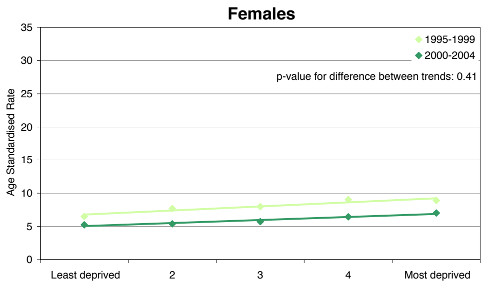
Persons

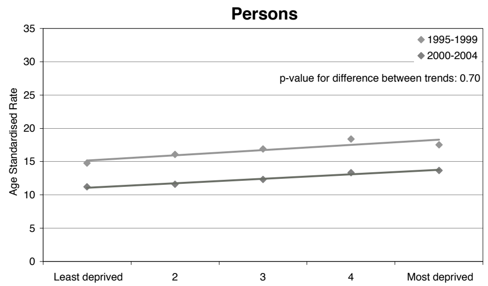
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	9,393	19.7	14.8	14.5 -	15.1	1.0	
2	10,995	22.8	16.1	15.8 -	16.4	1.1	
3	11,663	24.1	16.9	16.6 -	17.2	1.1	
4	11,986	24.4	18.4	18.0 -	18.7	1.2	
Most deprived	10,395	20.8	17.5	17.2 -	17.9	1.2	
Overall	**54,432**	**22.4**	**16.7**	**16.6 -**	**16.9**		
2000-2004							
Least deprived	7,783	15.7	11.2	10.9 -	11.4	1.0	0
2	8,806	17.8	11.6	11.4 -	11.9	1.0	366
3	9,237	18.6	12.3	12.1 -	12.6	1.1	942
4	9,185	18.4	13.3	13.0 -	13.6	1.2	1,581
Most deprived	8,027	16.0	13.7	13.4 -	14.0	1.2	1,549
Overall	**43,038**	**17.3**	**12.4**	**12.2 -**	**12.5**		











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	4.3	-1.0 -	9.6		0.08
2000-2004	4.0	2.1 -	5.8	21%	0.006

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	2.4	0.8 -	4.0	35%	0.02
2000-2004	1.9	1.1 -	2.7	38%	0.004

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	3.0	0.1 -	6.0	20%	0.046
2000-2004	2.7	2.0 -	3.4	24%	0.001

Notes

It is important to note there was a change in the coding rules for registering some types of bladder cancer in 2000. This meant that some tumours previously classified as being invasive were re-classified as being non-invasive, hence accounting for the large drop in incidence observed between the time periods 1995-1999 and 2000-2004

- The increase in ASR in relation to deprivation quintile was statistically significant in 1995-1999 for females (p-value 0.02) but not males (p-value 0.08). It was statistically significant for both sexes in 2000-2004 (p-value 0.006 for males; 0.004 for females)
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for females (p-value 0.41)
- The increase in ASR in relation to deprivation quintile was greater for males compared to females and the difference was statistically significant (p-value 0.001)
- In 2000-2004, there would have been around 900 fewer cases of bladder cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C70-C72: Brain, and other parts of central nervous system

Males

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	2,285	9.8	9.2	8.8 -	9.5	1.0	0
2	2,229	9.5	8.6	8.3 -	9.0	0.9	-135
3	2,087	8.9	8.2	7.9 -	8.6	0.9	-239
4	2,021	8.5	8.2	7.8 -	8.5	0.9	-248
Most deprived	1,822	7.5	7.7	7.4 -	8.1	0.8	-344
Overall	**10,444**	**8.8**	**8.4**	**8.2 -**	**8.6**		
2000-2004							
Least deprived	2,401	9.8	8.9	8.5 -	9.2	1.0	0
2	2,383	9.8	8.6	8.2 -	8.9	1.0	-82
3	2,229	9.2	8.3	7.9 -	8.6	0.9	-161
4	2,055	8.4	8.1	7.7 -	8.4	0.9	-204
Most deprived	1,775	7.2	7.5	7.2 -	7.9	0.8	-318
Overall	**10,843**	**8.9**	**8.3**	**8.1 -**	**8.4**		

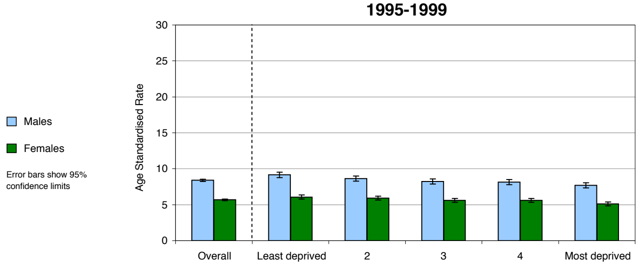
Females

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	1,636	6.7	6.1	5.8 -	6.4	1.0	0
2	1,709	6.9	5.9	5.6 -	6.2	1.0	-41
3	1,679	6.7	5.6	5.3 -	5.9	0.9	-139
4	1,602	6.3	5.6	5.3 -	5.9	0.9	-135
Most deprived	1,402	5.5	5.1	4.9 -	5.4	0.8	-258
Overall	**8,028**	**6.4**	**5.7**	**5.6 -**	**5.8**		
2000-2004							
Least deprived	1,654	6.6	5.6	5.3 -	5.9	1.0	
2	1,736	6.9	5.6	5.4 -	5.9	1.0	No
3	1,654	6.5	5.3	5.1 -	5.6	0.9	Significant
4	1,669	6.5	5.7	5.4 -	5.9	1.0	Difference
Most deprived	1,397	5.5	5.1	4.9 -	5.4	0.9	
Overall	**8,110**	**6.4**	**5.5**	**5.4 -**	**5.6**		

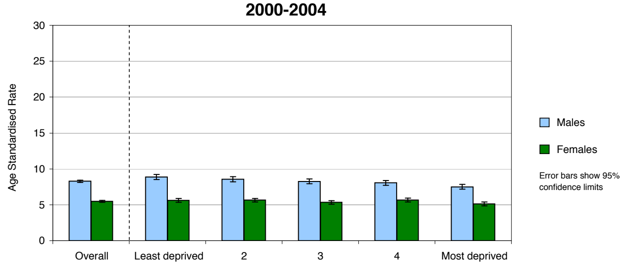
Persons

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	3,921	8.2	7.5	7.3 -	7.8	1.0	0
2	3,938	8.2	7.2	7.0 -	7.4	1.0	-176
3	3,766	7.8	6.9	6.6 -	7.1	0.9	-378
4	3,623	7.4	6.8	6.6 -	7.0	0.9	-383
Most deprived	3,224	6.4	6.3	6.1 -	6.6	0.8	-602
Overall	**18,472**	**7.6**	**7.0**	**6.9 -**	**7.1**		
2000-2004							
Least deprived	4,055	8.2	7.2	6.9 -	7.4	1.0	
2	4,119	8.3	7.0	6.8 -	7.2	1.0	
3	3,883	7.8	6.7	6.5 -	6.9	0.9	
4	3,724	7.5	6.8	6.6 -	7.0	0.9	
Most deprived	3,172	6.3	6.3	6.0 -	6.5	0.9	
Overall	**18,953**	**7.6**	**6.8**	**6.7 -**	**6.9**		

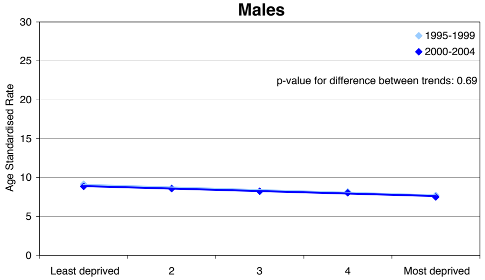
1995-1999



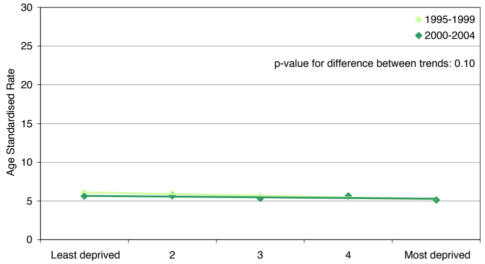
2000-2004



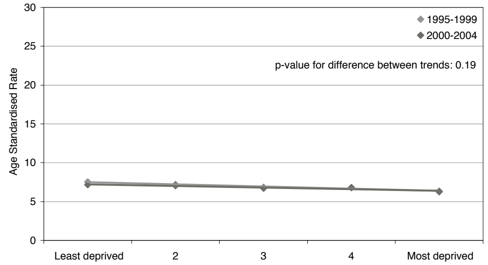
Males



Females



Persons



Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	-1.4	-1.9 -	-0.8	-15%	0.004
2000-2004	-1.3	-1.7 -	-0.9	-14%	0.002

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	-0.9	-1.3 -	-0.4	-14%	0.008
2000-2004	-0.4	-1.2 -	0.5		0.26

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	-1.1	-1.5 -	-0.7	-15%	0.003
2000-2004	-0.8	-1.4 -	-0.2	-11%	0.02

Notes

- The increase in ASR in relation to deprivation quintile was statistically significant in 1995-1999 for both sexes (p-value 0.004 for males; 0.008 for females) but was only statistically significant for males in 2000-2004 (p-value 0.002 for males; 0.26 for females)
- There was no statistically significant difference between the trends for the time periods 1995-1999 and 2000-2004 in the relation of ASR to deprivation quintile for males (p-value 0.69)
- In 2000-2004, there would have been around 150 more cases of brain cancer each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

NCIN national cancer intelligence network
Using information to improve quality & choice

C81: Hodgkin disease

Males

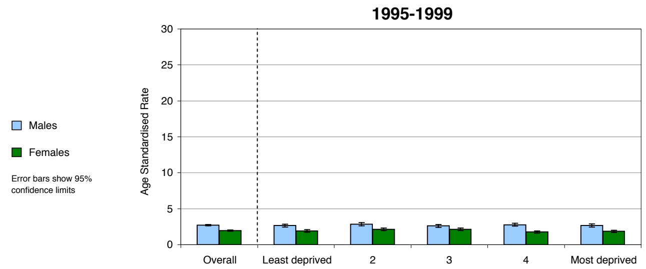
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	629	2.7	2.7	2.5 -	2.9	1.0	
2	684	2.9	2.8	2.6 -	3.1	1.1	No
3	643	2.7	2.6	2.4 -	2.8	1.0	Significant
4	682	2.9	2.8	2.6 -	3.0	1.0	Difference
Most deprived	650	2.7	2.7	2.5 -	2.9	1.0	
Overall	3,288	2.8	2.7	2.6 -	2.8		
2000-2004							
Least deprived	691	2.8	2.8	2.6 -	3.0	1.0	
2	737	3.0	3.0	2.7 -	3.2	1.1	No
3	693	2.9	2.8	2.6 -	3.0	1.0	Significant
4	734	3.0	2.9	2.7 -	3.1	1.1	Difference
Most deprived	710	2.9	2.9	2.7 -	3.1	1.0	
Overall	3,565	2.9	2.9	2.8 -	2.9		

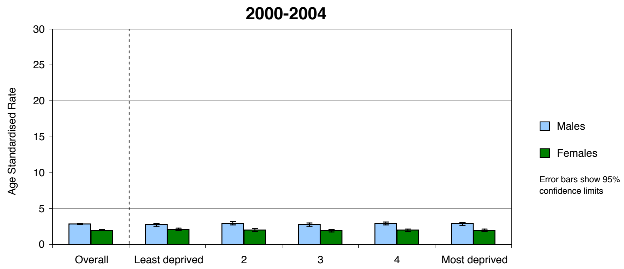
Females

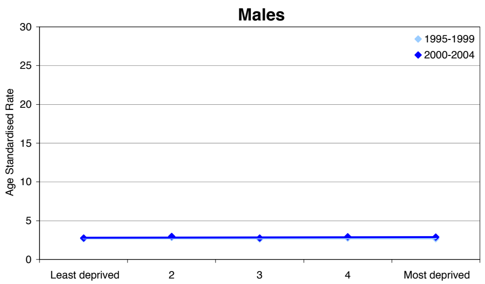
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	460	1.9	1.9	1.7 -	2.1	1.0	
2	537	2.2	2.1	2.0 -	2.3	1.1	No
3	550	2.2	2.1	2.0 -	2.3	1.1	Significant
4	475	1.9	1.8	1.6 -	1.9	0.9	Difference
Most deprived	494	1.9	1.9	1.7 -	2.0	1.0	
Overall	2,516	2.0	2.0	1.9 -	2.0		
2000-2004							
Least deprived	529	2.1	2.1	1.9 -	2.3	1.0	
2	519	2.1	2.0	1.8 -	2.2	0.9	No
3	501	2.0	1.9	1.7 -	2.1	0.9	Significant
4	525	2.1	2.0	1.8 -	2.2	0.9	Difference
Most deprived	511	2.0	2.0	1.8 -	2.1	0.9	
Overall	2,585	2.0	2.0	1.9 -	2.1		

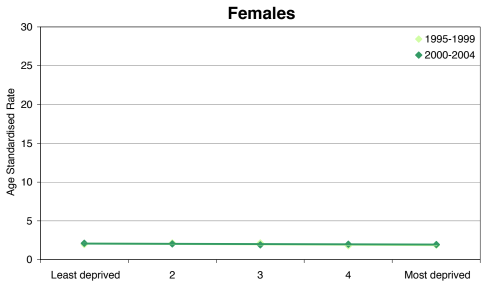
Persons

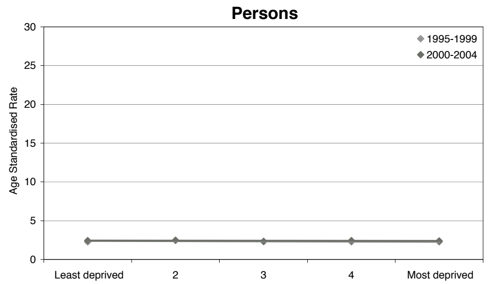
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	1,089	2.3	2.3	2.1 -	2.4	1.0	
2	1,221	2.5	2.5	2.3 -	2.6	1.1	No
3	1,193	2.5	2.4	2.2 -	2.5	1.0	Significant
4	1,157	2.4	2.3	2.1 -	2.4	1.0	Difference
Most deprived	1,144	2.3	2.3	2.1 -	2.4	1.0	
Overall	5,804	2.4	2.3	2.3 -	2.4		
2000-2004							
Least deprived	1,220	2.5	2.4	2.3 -	2.6	1.0	
2	1,256	2.5	2.5	2.3 -	2.6	1.0	No
3	1,194	2.4	2.3	2.2 -	2.5	1.0	Significant
4	1,259	2.5	2.4	2.3 -	2.6	1.0	Difference
Most deprived	1,221	2.4	2.4	2.3 -	2.5	1.0	
Overall	6,150	2.5	2.4	2.3 -	2.5		











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	0.0	-0.4 -	0.4		0.93
2000-2004	0.1	-0.3 -	0.5		0.55

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	-0.2	-0.9 -	0.5		0.45
2000-2004	-0.1	-0.4 -	0.1		0.20

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	-0.1	-0.5 -	0.3		0.47
2000-2004	0.0	-0.3 -	0.2		0.74

Notes

• There was no statistically significant change in ASR in relation to deprivation quintile for either sex in both 1995-1999 (p-value 0.93 for males; 0.45 for females) and 2000-2004 (p-value 0.55 for males; 0.2 for females)

Cancer incidence by deprivation quintile, England, 1995 - 2004

C82-C85 & C96: Non-Hodgkin lymphoma

Males

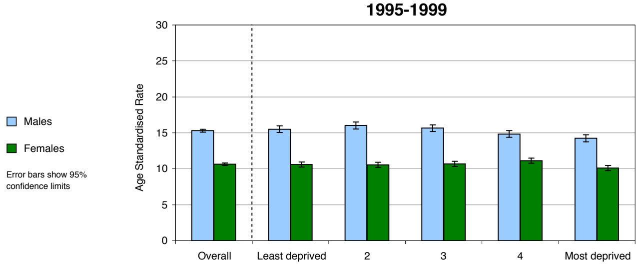
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	3,998	17.1	15.5	15.0 - 16.0	1.0	
2	4,315	18.4	16.0	15.6 - 16.5	1.0	No
3	4,208	17.9	15.7	15.2 - 16.1	1.0	Significant
4	3,800	15.9	14.8	14.4 - 15.3	1.0	Difference
Most deprived	3,405	14.0	14.2	13.8 - 14.7	0.9	
Overall	19,726	16.6	15.3	15.1 - 15.5		
2000-2004						
Least deprived	4,612	18.8	16.1	15.6 - 16.5	1.0	0
2	4,722	19.4	15.9	15.4 - 16.3	1.0	-60
3	4,575	18.8	15.8	15.4 - 16.3	1.0	-69
4	4,179	17.1	15.7	15.3 - 16.2	1.0	-91
Most deprived	3,616	14.7	15.2	14.7 - 15.7	0.9	-202
Overall	21,704	17.8	15.8	15.6 - 16.0		

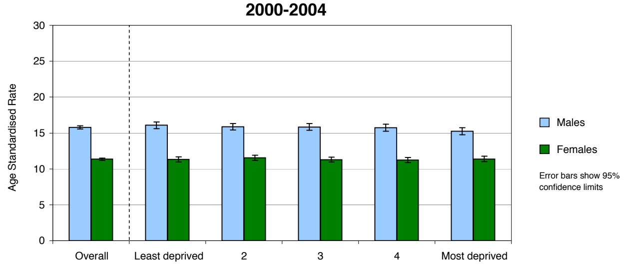
Females

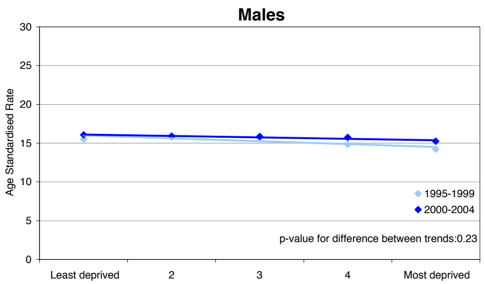
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	3,308	13.6	10.6	10.2 - 11.0	1.0	
2	3,573	14.5	10.5	10.2 - 10.9	1.0	No
3	3,698	14.8	10.7	10.3 - 11.0	1.0	Significant
4	3,688	14.6	11.1	10.8 - 11.5	1.1	Difference
Most deprived	3,063	11.9	10.1	9.8 - 10.5	1.0	
Overall	17,330	13.9	10.6	10.5 - 10.8		
2000-2004						
Least deprived	3,790	15.1	11.3	11.0 - 11.7	1.0	
2	4,140	16.4	11.5	11.2 - 11.9	1.0	No
3	4,091	16.1	11.3	11.0 - 11.6	1.0	Significant
4	3,843	15.0	11.2	10.9 - 11.6	1.0	Difference
Most deprived	3,357	13.1	11.4	11.0 - 11.8	1.0	
Overall	19,221	15.2	11.4	11.2 - 11.5		

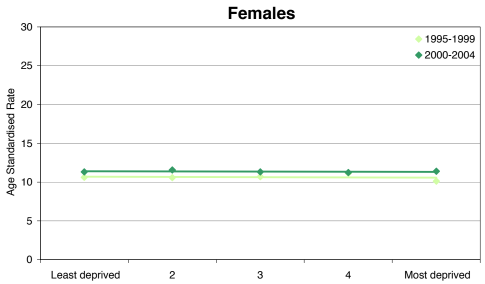
Persons

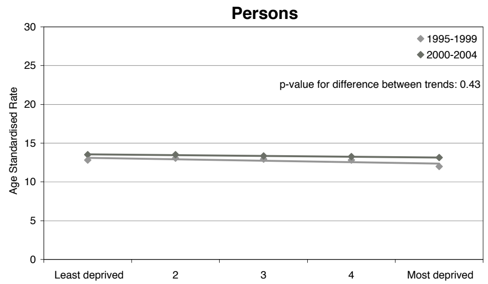
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	7,306	15.3	12.8	12.5 - 13.1	1.0	
2	7,888	16.4	13.1	12.8 - 13.4	1.0	No
3	7,906	16.3	13.0	12.7 - 13.2	1.0	Significant
4	7,488	15.2	12.8	12.5 - 13.1	1.0	Difference
Most deprived	6,468	12.9	12.0	11.7 - 12.3	0.9	
Overall	37,056	15.2	12.8	12.6 - 12.9		
2000-2004						
Least deprived	8,402	17.0	13.5	13.2 - 13.8	1.0	
2	8,862	17.9	13.5	13.2 - 13.8	1.0	
3	8,666	17.4	13.4	13.1 - 13.6	1.0	
4	8,022	16.1	13.3	13.0 - 13.6	1.0	
Most deprived	6,973	13.9	13.1	12.8 - 13.4	1.0	
Overall	40,925	16.4	13.4	13.3 - 13.5		











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	-1.5	-3.4 - 0.4		0.08
2000-2004	-0.8	-1.4 - -0.2	-5%	0.03

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	-0.1	-1.8 - 1.5		0.80
2000-2004	-0.1	-0.6 - 0.5		0.73

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	-0.8	-2.1 - 0.6		0.18
2000-2004	-0.4	-0.6 - -0.2	-3%	0.008

Notes

- There was no statistically significant change in ASR in relation to deprivation quintile for either sex in 1995-1999 (p-value 0.08 for males; 0.80 for females)
- The decrease in ASR in relation to deprivation quintile was statistically significant for males in 2000-2004 (p-value 0.03) but was not statistically significant for females (p-value 0.73)
- In 2000-2004, there would have been around 85 more cases of NHL each year if the ASR of each of the deprivation quintiles had been the same as the ASR for the corresponding least deprived quintile

Cancer incidence by deprivation quintile, England, 1995 - 2004

C88-C90: Myeloma

Males

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	1,623	7.0	6.0	5.8 - 6.3	1.0	
2	1,886	8.0	6.6	6.3 - 6.9	1.1	No
3	1,795	7.6	6.3	6.0 - 6.6	1.0	Significant
4	1,686	7.1	6.2	5.9 - 6.5	1.0	Difference
Most deprived	1,423	5.8	5.8	5.5 - 6.1	1.0	
Overall	**8,413**	**7.1**	**6.2**	**6.1 - 6.4**		
2000-2004						
Least deprived	1,899	7.8	6.4	6.1 - 6.7	1.0	0
2	2,045	8.4	6.5	6.2 - 6.8	1.0	29
3	1,958	8.1	6.4	6.1 - 6.7	1.0	-5
4	1,749	7.2	6.2	5.9 - 6.5	1.0	-48
Most deprived	1,467	6.0	6.1	5.8 - 6.4	0.9	-83
Overall	**9,118**	**7.5**	**6.3**	**6.2 - 6.5**		

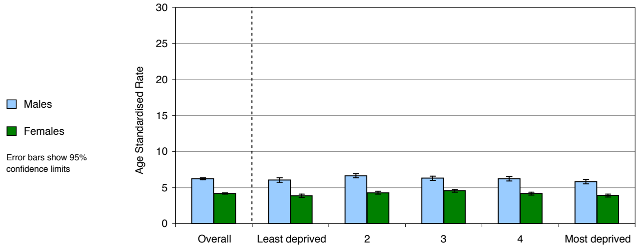
Females

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	1,349	5.6	3.9	3.7 - 4.1	1.0	
2	1,634	6.6	4.3	4.1 - 4.5	1.1	No
3	1,795	7.2	4.6	4.4 - 4.8	1.2	Significant
4	1,564	6.2	4.2	4.0 - 4.4	1.1	Difference
Most deprived	1,319	5.1	3.9	3.7 - 4.1	1.0	
Overall	**7,661**	**6.1**	**4.2**	**4.1 - 4.3**		
2000-2004						
Least deprived	1,445	5.8	3.9	3.7 - 4.1	1.0	
2	1,741	6.9	4.3	4.1 - 4.5	1.1	No
3	1,680	6.6	4.0	3.8 - 4.2	1.0	Significant
4	1,542	6.0	4.1	3.9 - 4.3	1.0	Difference
Most deprived	1,329	5.2	4.1	3.9 - 4.3	1.1	
Overall	**7,737**	**6.1**	**4.1**	**4.0 - 4.2**		

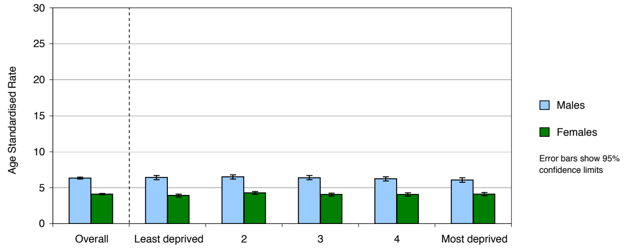
Persons

Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	ASR Ratio	Excess Cases
1995-1999						
Least deprived	2,972	6.2	4.8	4.7 - 5.0	1.0	
2	3,520	7.3	5.3	5.1 - 5.5	1.1	No
3	3,590	7.4	5.3	5.1 - 5.5	1.1	Significant
4	3,250	6.6	5.0	4.9 - 5.2	1.0	Difference
Most deprived	2,742	5.5	4.7	4.5 - 4.9	1.0	
Overall	**16,074**	**6.6**	**5.1**	**5.0 - 5.1**		
2000-2004						
Least deprived	3,344	6.8	5.0	4.9 - 5.2	1.0	
2	3,786	7.6	5.2	5.1 - 5.4	1.0	No
3	3,638	7.3	5.1	4.9 - 5.2	1.0	Significant
4	3,291	6.6	5.0	4.8 - 5.2	1.0	Difference
Most deprived	2,796	5.6	5.0	4.8 - 5.2	1.0	
Overall	**16,855**	**6.8**	**5.1**	**5.0 - 5.1**		

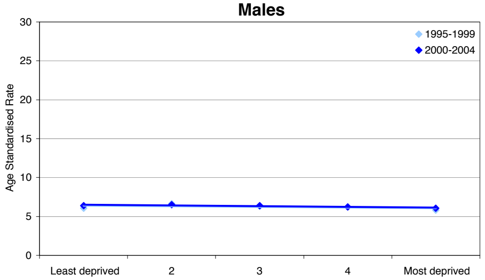
1995-1999



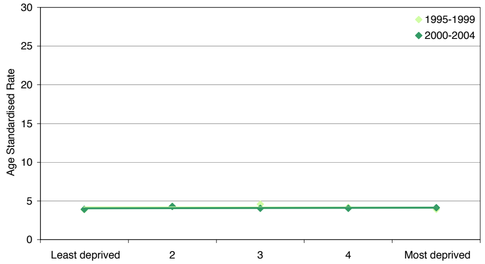
2000-2004



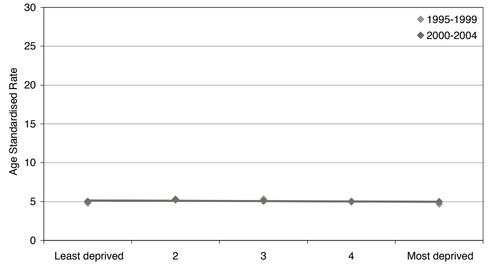
Males



Females



Persons



Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	-0.4	-1.6 - 0.9		0.44
2000-2004	-0.4	-0.8 - 0.0	-6%	0.05

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	0.0	-1.4 - 1.3		0.94
2000-2004	0.1	-0.5 - 0.6		0.70

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval	Modelled % Change	P-value for Trend
1995-1999	-0.2	-1.4 - 1.0		0.61
2000-2004	-0.2	-0.6 - 0.2		0.30

Notes

- There was no statistically significant change in ASR in relation to deprivation quintile for either sex in 1995-1999 (p-value 0.44 for males; 0.94 for females)
- The decrease in ASR in relation to deprivation quintile was statistically significant for males in 2000-2004 (p-value 0.05) but not for females (p-value 0.7)

Cancer incidence by deprivation quintile, England, 1995 - 2004

C91-C95: Leukaemia

Males

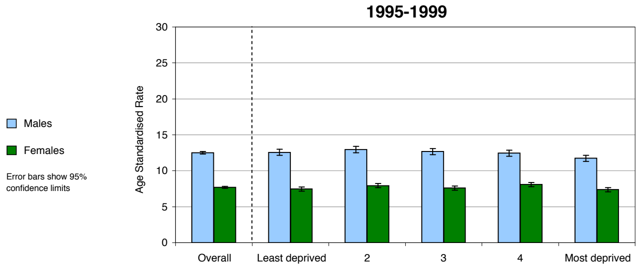
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval	Excess Cases	ASR Ratio	Excess Cases
1995-1999							
Least deprived	3,227	13.8	12.6	12.1 -	13.0	1.0	
2	3,522	15.0	13.0	12.5 -	13.4	1.0	No
3	3,441	14.6	12.7	12.3 -	13.1	1.0	Significant
4	3,272	13.7	12.5	12.0 -	12.9	1.0	Difference
Most deprived	2,891	11.9	11.7	11.3 -	12.2	0.9	
Overall	16,353	13.8	12.5	12.3 -	12.7		
2000-2004							
Least deprived	3,524	14.4	12.4	12.0 -	12.8	1.0	
2	3,650	15.0	12.3	11.9 -	12.7	1.0	No
3	3,551	14.6	12.1	11.7 -	12.5	1.0	Significant
4	3,399	13.9	12.5	12.1 -	12.9	1.0	Difference
Most deprived	3,012	12.3	12.4	11.9 -	12.8	1.0	
Overall	17,136	14.0	12.4	12.2 -	12.5		

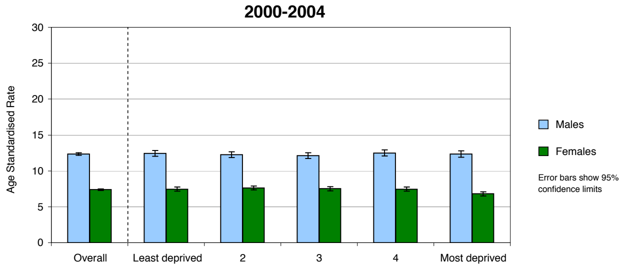
Females

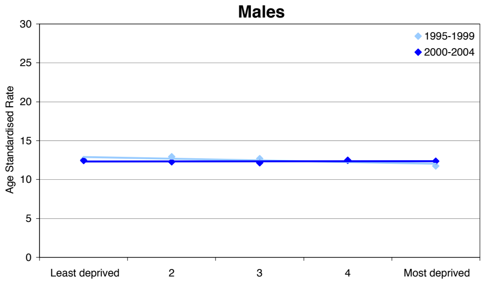
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	2,369	9.8	7.5	7.2 -	7.8	1.0	
2	2,770	11.2	7.9	7.6 -	8.2	1.1	No
3	2,765	11.1	7.6	7.3 -	7.9	1.0	Significant
4	2,843	11.3	8.1	7.8 -	8.4	1.1	Difference
Most deprived	2,357	9.2	7.4	7.1 -	7.7	1.0	
Overall	13,104	10.5	7.7	7.6 -	7.8		
2000-2004							
Least deprived	2,507	10.0	7.4	7.2 -	7.7	1.0	
2	2,752	10.9	7.6	7.3 -	7.9	1.0	No
3	2,767	10.9	7.5	7.2 -	7.8	1.0	Significant
4	2,651	10.4	7.5	7.2 -	7.7	1.0	Difference
Most deprived	2,114	8.3	6.8	6.5 -	7.1	0.9	
Overall	12,791	10.1	7.4	7.3 -	7.5		

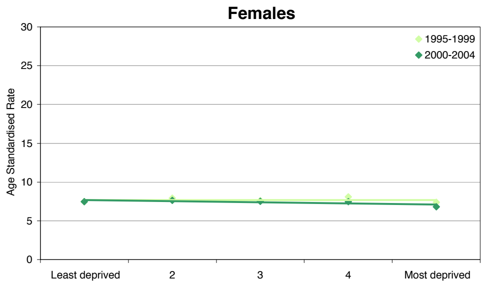
Persons

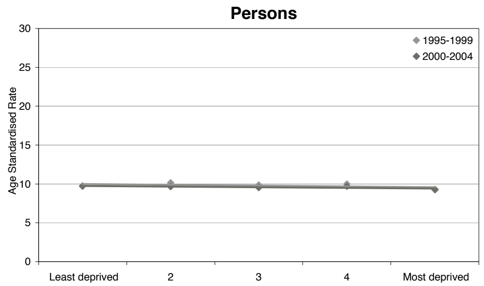
Deprivation Quintile	Number of cases	Crude Rate	ASR	95% Confidence Interval		ASR Ratio	Excess Cases
1995-1999							
Least deprived	5,596	11.8	9.7	9.4 -	10.0	1.0	
2	6,292	13.1	10.1	9.9 -	10.4	1.0	No
3	6,206	12.8	9.8	9.6 -	10.1	1.0	Significant
4	6,115	12.5	10.0	9.7 -	10.2	1.0	Difference
Most deprived	5,248	10.5	9.3	9.0 -	9.5	1.0	
Overall	29,457	12.1	9.8	9.7 -	9.9		
2000-2004							
Least deprived	6,031	12.2	9.7	9.5 -	10.0	1.0	
2	6,402	12.9	9.7	9.4 -	9.9	1.0	No
3	6,318	12.7	9.5	9.3 -	9.8	1.0	Significant
4	6,050	12.1	9.7	9.4 -	9.9	1.0	Difference
Most deprived	5,126	10.2	9.3	9.0 -	9.5	1.0	
Overall	29,927	12.0	9.6	9.5 -	9.7		











Males

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	-0.9	-2.2 -	0.5		0.14
2000-2004	0.0	-0.6 -	0.7		0.84

Females

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	0.0	-1.4 -	1.4		0.99
2000-2004	-0.6	-1.6 -	0.5		0.17

Persons

Cohort	Est. Deprivation Gap (Difference in ASR)	95% Confidence Interval		Modelled % Change	P-value for Trend
1995-1999	-0.4	-1.7 -	0.9		0.40
2000-2004	-0.4	-0.9 -	0.2		0.13

Notes

- There was no statistically significant change in ASR in relation to deprivation quintile for either sex in both 1995-1999 (p-value 0.14 for males; 1.00 for females) and 2000-2004 (p-value 0.84 for males; 0.17 for females)

NCIN core objectives

Using information to improve quality and choice for cancer patients

- Promoting efficient and effective data collection throughout the cancer journey
- Providing a common national repository for cancer datasets
- Producing expert analyses, based on robust methodologies, to monitor patterns of cancer care
- Exploiting information to drive improvements in standards of cancer care and clinical outcomes
- Enabling use of cancer information to support audit and research programmes

Notes

There are differences in the coding of some cancers between this report and previous NCIN reports.

- Head and neck cancer has been used to describe the grouping of ICD10 codes C00-C14 & C30-C32 replacing the previous grouping C00-C14: Lip, oral cavity and pharynx
- C54: Corpus Uteri is now used, replacing C54-C55: Uterus.
- C64-C66 & C68: Kidney and other and unspecified urinary organs is used instead of C64: Kidney, except renal pelvis
- C70-C72: Brain and other parts of the central nervous system no longer contains C69: Eye
- C82-C85 & C96: Non-Hodgkin lymphoma now includes C96.

New sites previously unreported in NCIN publications include:

- C22: Liver
- C45: Mesothelioma
- C88-C90 Myeloma

Methodology

Anonymised data for all registrations of malignant neoplasms excluding non melanoma skin cancer were obtained for patients diagnosed between 1995 and 2004 from the English cancer registries and ONS. Records were excluded when there was no age and where ICD coding was incomplete or missing.

Deprivation scores are available for each lower super output area (LSOA) in England. The Income Score from the Index of Multiple Deprivation 2007 (IMD2007)[1] was used here. Each LSOA was ranked by deprivation score such that each quintile contained 20% of the population. , The postcode of residence of each patient was used to assign the relevant deprivation quintile through the LSOA. Populations for both of the five year cohorts were created using the sum of the populations for each quintile for each year.

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[1] http://www.communities.gov.uk/communities/neighbourhoodrenewal/deprivation/deprivation07/

Glossary

Deprivation Quintile

This publication used the Income Score from IMD2007 to assign each LSOA in England a deprivation quintile. The quintiles were re-ordered such that deprivation was presented from the least deprived (1) to the most deprived (5).

Number of Cases

The number of new registrations of cancer diagnosed within the specified five year cohort.

Crude Rate

The crude rate was calculated by dividing the number of cases by the population at risk for each deprivation quintile, as well as overall. In this case using the sum of cases over each five year period divided by the sum of the population over the corresponding five year period to give an average annual crude rate. This rate does not take into account the age structure of the different populations and therefore does not adjust for the confounding effect this may have.

Age Standardised Rate (ASR)

Age standardised rates are used to eliminate the variation in the age structures of populations and as such enable comparisons between different areas or over time to be made. They are obtained by using a weighted average of age specific rates, i.e. the crude rates within each 5-year age group. Direct age standardisation has been used here, applied to the European Standard Population. The ASRs are the figures which should be used when making comparisons between the different time periods.

95% Confidence Interval (95% C.I.)

For the age standardised rates and the modelled estimated deprivation gap, a 95% confidence interval is given. Confidence intervals are used as a measure of uncertainty in the estimated rates. The upper and lower limits of the interval show how big a contribution chance may have made to a particular statistic. The 95% confidence intervals quoted give the range in which the rate in question would fall 19 times out of 20, were it possible to repeat the analysis.

ASR Ratio

The ASR ratio was calculated by dividing the ASR of each deprivation quintile with the corresponding ASR of the least deprived quintile. The resulting ratio indicates the increase or decrease in ASR compared to the least deprived quintile.

Excess Cases

For males and females, the number of excess cases for each quintile was calculated by dividing the number of cases by the ASR Ratio and subtracting this result from the number of cases. This gives a crude estimate as to how many extra or fewer cases there would have been had that quintile had the same ASR as the least deprived quintile. These figures are not shown in the situation when the corresponding regression analysis showed a non statistically significant trend across the quintiles.

For persons, the number of excess cases was calculated as the sum of the excess cases for males and females. Again these results are not shown if the test for trend across the quintiles was not significant for either males or females.

Estimated Deprivation Gap (Difference in ASR)

Weighted ordinary least squares linear regression was used to model the trend across ASRs for the deprivation quintiles. The estimated deprivation gap and corresponding confidence intervals were then derived using the modelled ASR for the most deprived quintile minus the modelled ASR for the least deprived quintile. The weight used for the linear regression was the corresponding variance for each quintile. This weighting was used to take into account any differences between the quintiles.

Modelled % Change (between most and least deprived quintiles)

This is the estimated deprivation gap as a percentage of the modelled ASR for the least deprived quintile. Where the regression analysis did not produce a statistically significant trend across the quintiles, the modelled percentage change was not calculated.

P-value for Trend

The p-value given in the table is the resulting p-value from the weighted ordinary least squares linear regression.

P-value for difference between trends (on graph)

As a way of examining whether or not the trends have changed significantly over time, a z-test was performed using the regression coefficients and their corresponding standard errors from the linear regression analyses for each time period. The p-value shown on the trends graph is from the z-test for the trends over the two time periods.

For further reading please see: L Shack, C Jordan, C Thomson et al; Variation in incidence of breast, lung and cervical cancer and malignant melanoma of skin by socioeconomic group in England. BMC Cancer 2008 Sep 26; 8:271.

NCRI
National Cancer Research Institute

ukacr
United Kingdom Association of Cancer Registries

OCIU
OXFORD CANCER INTELLIGENCE UNIT

NWCIS
North West Cancer Intelligence Service

West Midlands Cancer Intelligence Unit

ecric
Fighting cancer with information

KING'S College LONDON

Trent NHS
Cancer Registry

CANCER RESEARCH UK

NHS
Northern and Yorkshire
Cancer Registry and Information Service

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