

Ethnicity and lung cancer

NCIN Data Briefing

Background

Differences between ethnic groups in the incidence of lung cancer have been shown in England for the broad White, Black, Asian, Chinese and Mixed categories. The area covered by the Thames Cancer Registry (South East England) includes London, which is the most ethnically diverse area in the country. Patterns of lung cancer incidence were examined for White, Indian, Pakistani, Bangladeshi, Black Caribbean, Black African and Chinese men and women.

Results

Between 1998 and 2003 there were 18,060 men and 11,404 women who lived in South East England and were diagnosed with lung cancer in the seven ethnic groups examined. The vast majority of these were White.

The figure below shows the incidence rate ratios for different ethnic groups for (a) males and (b) females. The graphs compare the incidence rate in a particular group against the baseline of White men or women. This baseline is shown as the darker horizontal line at 1.0. Groups with points below the line have incidence rates lower than the White group of the same sex. As differences in age and socioeconomic deprivation between ethnic groups would influence lung cancer incidence rates, these are taken into account to see if there is any variation left that is not explained by these factors.

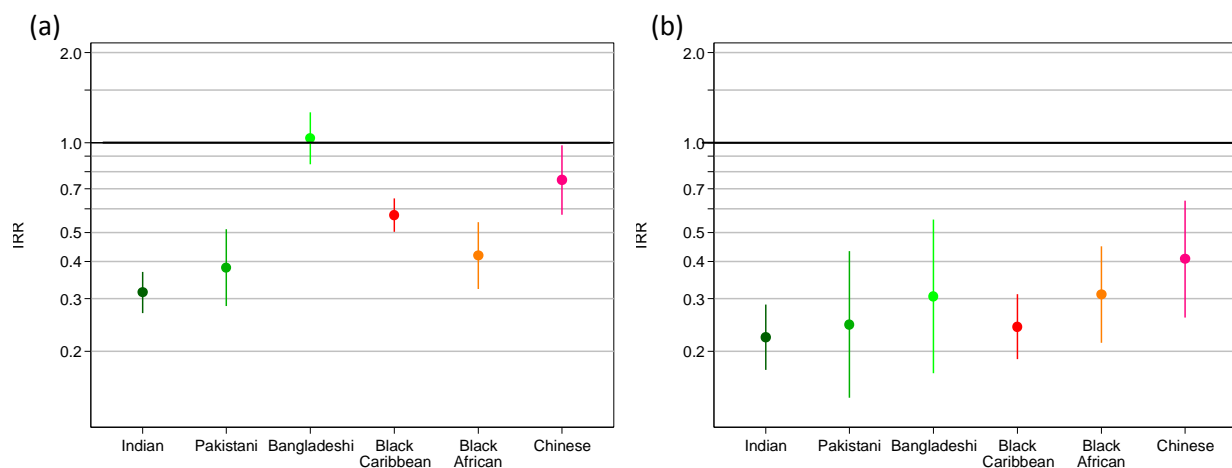


Figure 1: Incidence rate ratios (IRR) and 95% confidence intervals for lung cancer diagnosed 1998-2003, South East England. Adjusted for age and socioeconomic deprivation; White group used as baseline. Results for (a) males and (b) females

Bangladeshi men have a similar rate of lung cancer to White men, while rates for Indian and Pakistani men are much lower. Black Caribbean and Black African men have incidence rates around half that of White men, and Chinese men have a rate ratio of 0.75. Compared with White women, women from the other ethnic groups studied have much lower lung cancer incidence rates. The rate ratios ranged from around 0.20 to 0.40.

KEY MESSAGE:

There are differences in the incidence of lung cancer between ethnic groups.

Lung cancer is most common in White and Bangladeshi men.

Compared with women from other ethnic groups, lung cancer is more common in White women.

Methods

As well as the patients analysed above, there were also 918 lung cancer patients from other ethnic groups, and 16,020 patients with no ethnicity information, diagnosed during the same period in South East England (see Table 1). This large proportion of patients without ethnicity information meant that any incidence rates calculated would be too low, and so incidence rate ratios were used instead. Population data came from the 2001 Census, which was in the middle of the diagnosis period analysed. Smoking status was not available for the individuals in this study.

	Males		Females	
	Number	%	Number	%
White	17,412	61.9	11,211	61.4
Indian	153	0.5	61	0.3
Pakistani	44	0.2	12	0.1
Bangladeshi	97	0.3	11	0.1
Black Caribbean	240	0.9	62	0.3
Black African	59	0.2	28	0.2
Chinese	55	0.2	19	0.1
Other groups	595	2.1	323	1.8
Not known	9,490	33.7	6,530	35.8
Total	28,145	100.0	18,257	100.0

Table 1: Number and percentage of lung cancer patients diagnosed 1998-2003, South East England, by sex and ethnic group

Acknowledgements

This work is taken from the following publication: Ruth H Jack, Elizabeth A Davies, Henrik Møller. Lung cancer incidence and survival in different ethnic groups in South East England. *British Journal of Cancer* 2011;105(7):1049-53

FIND OUT MORE:

[Thames Cancer Registry](#)

Thames Cancer Registry is the lead Cancer Registry for lung cancer and mesothelioma

<http://www.tcr.org.uk>

Other useful resources within the NCIN partnership:

Cancer Research UK CancerStats – Key facts and detailed statistics for health professionals

<http://info.cancerresearchuk.org/cancerstats/>

The National Cancer Intelligence Network is a UK-wide initiative, working to drive improvements in standards of cancer care and clinical outcomes by improving and using the information collected about cancer patients for analysis, publication and research. Sitting within the National Cancer Research Institute (NCRI), the NCIN works closely with cancer services in England, Scotland, Wales and Northern Ireland. In England, the NCIN is part of the National Cancer Programme.