

Variation in incidence of primary liver cancer between ethnic groups, 2001-2007

NCIN Data Briefing

Background

Previous work has shown that the incidence of primary liver cancer is relatively high in Asian and Black ethnic groups compared with the White group. Using ethnicity information from Hospital Episode Statistics more specific ethnic groups (White, Indian, Pakistani, Bangladeshi, Black Caribbean, Black African and Chinese) were analysed.

Results

Ethnicity information was available for 13,139 (75%) of 17,458 primary liver cancer patients diagnosed in England between 2001 and 2007. The numbers of male and female patients in different ethnic groups are shown in Table 1.

The figures below show the incidence rate ratios for different ethnic groups for males (Figure 1) and females (Figure 2). The graphs compare the incidence rate in a particular ethnic group against the White baseline. This baseline is shown as the darker horizontal line at 1.0. Groups with points above this line have higher incidence rates than the White group of the same sex.

Chinese men have an incidence rate around four times higher than White men. This was followed by Black African, Bangladeshi and Pakistani men, each with statistically significant high incidence rate ratios of around 3.0. Black Caribbean men had an incidence rate closer to that of the White men (Figure 1).

Compared with White women, Pakistani and Bangladeshi women had the highest incidence rate ratio at about 3.0. As similarly observed in males, Black Caribbean women had an incidence rate closer to that of White women with a rate ratio of 1.3 (Figure 2).

KEY MESSAGE:

Most of the ethnic groups investigated have a higher incidence of primary liver cancer than the White group for both men and women.

The differences could be due to varying prevalence of known risk factors such as chronic hepatitis B and C infection.

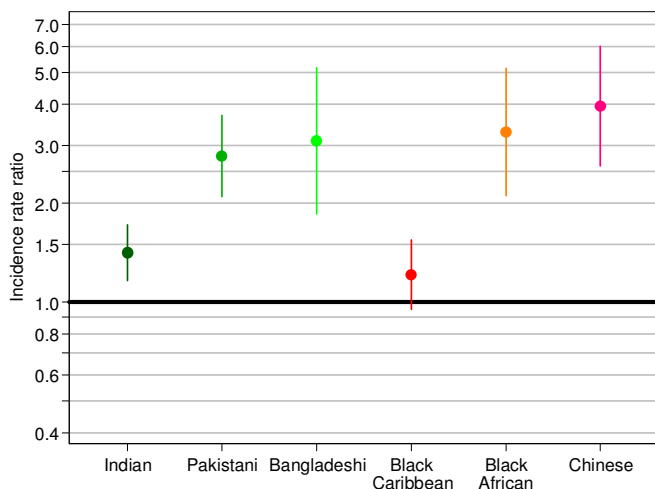


Figure 1 Incidence rate ratios for primary liver cancer by ethnic group, England, males, 2001- 2007

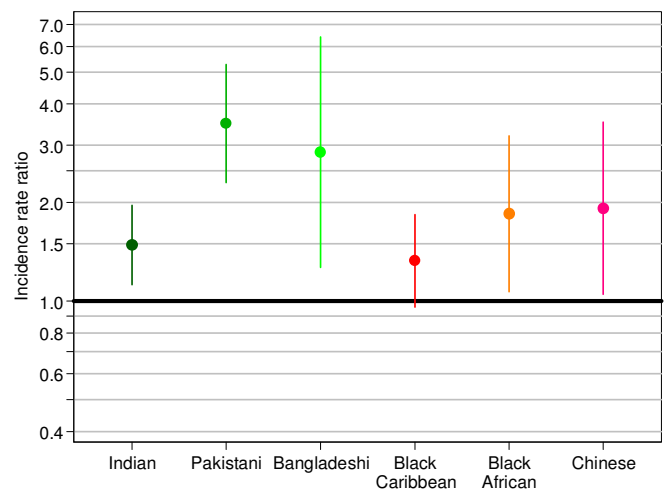


Figure 2 Incidence rate ratios for primary liver cancer by ethnic group, England, females, 2001- 2007

Methods

Data on patients with primary liver cancer (ICD-10 C22) resident in England diagnosed between 2001 and 2007 were extracted from the National Cancer Data Repository. Self-assigned ethnicity information was obtained from the Hospital Episode Statistics dataset and the following seven ethnic groups were analysed: White, Indian, Pakistani, Bangladeshi, Black Caribbean, Black African and Chinese (Table 1).

Age-standardised incidence rate ratios were calculated for both males and females using the White ethnic group as the baselines. Population data were retrieved from the 2001 Census and 2002-2007 estimates from the Office for National Statistics.

Table 1 Number and percentage of patients diagnosed with primary liver cancer (ICD-10 C22), by sex and ethnic group, England, 2001-2007

| Ethnic group | Male | | Female | |
|-----------------|--------|-------|--------|-------|
| | Number | % | Number | % |
| White | 7,267 | 67.2 | 4,606 | 69.3 |
| Indian | 149 | 1.4 | 74 | 1.1 |
| Pakistani | 136 | 1.3 | 74 | 1.1 |
| Bangladeshi | 54 | 0.5 | 20 | 0.3 |
| Black Caribbean | 90 | 0.8 | 51 | 0.8 |
| Black African | 104 | 1.0 | 29 | 0.4 |
| Chinese | 83 | 0.8 | 23 | 0.3 |
| Other | 275 | 2.5 | 104 | 1.6 |
| Not known | 2,649 | 24.5 | 1,670 | 25.1 |
| Total | 10,807 | 100.0 | 6,651 | 100.0 |

Final note

This study has found large variation in the incidence of primary liver cancer between ethnic groups. This is possibly due to high prevalence of established risk factors such as chronic hepatitis B and C infection in some ethnic groups.

Acknowledgments

This work is taken from the following publication: Jack RH, Konfortion J, Coupland VH, Kocher HM, Berry DP, Allum W, Linklater KM, Møller H. Primary liver cancer incidence and survival in ethnic groups in England, 2001-2007. *Cancer Epidemiology* (in press)

FIND OUT MORE:

[Thames Cancer Registry](#)

Thames Cancer Registry is the lead cancer registry for upper gastrointestinal cancers

<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.