

Variation in incidence of oesophageal cancer subgroups between ethnic groups in England

NCIN Data Briefing

Background

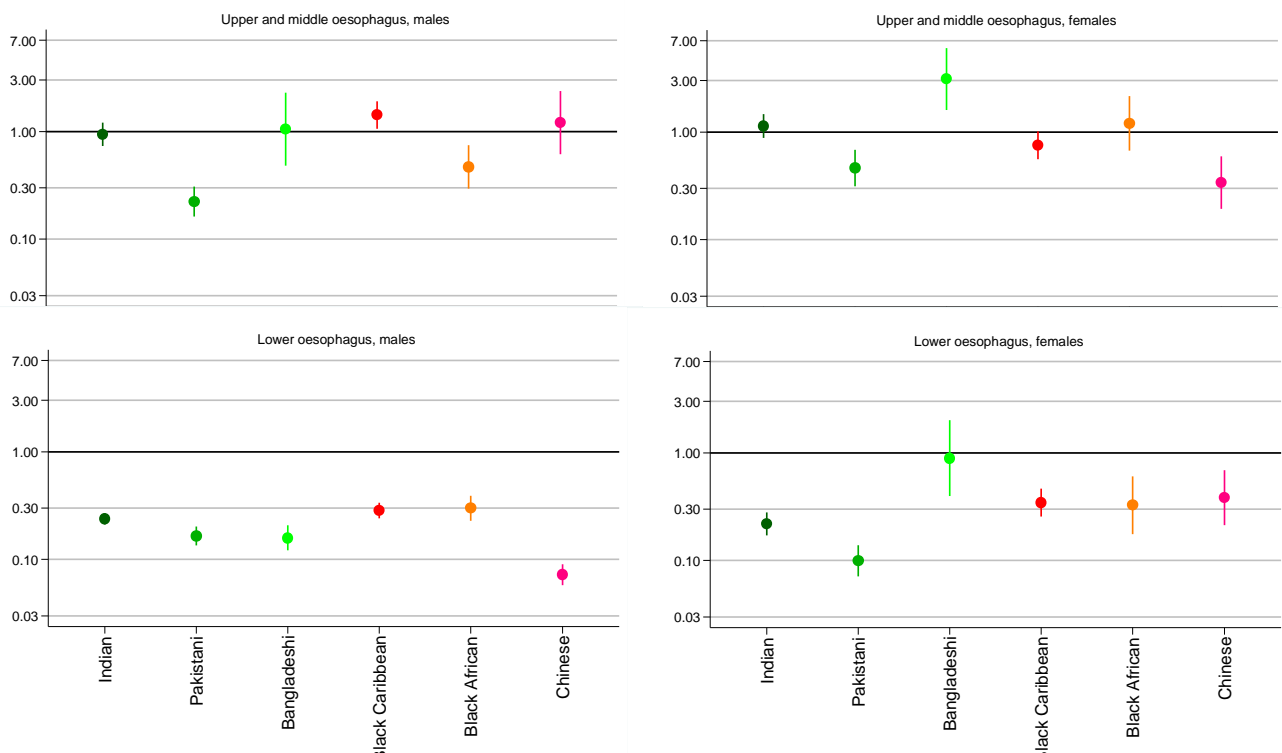
Variation in the incidence of oesophageal cancer between ethnic groups has been shown in previous work. This study aims to assess the variation in incidence between squamous cell carcinoma (associated with the upper and middle oesophagus) and oesophageal adenocarcinoma (associated with the lower oesophagus) between ethnic groups in England. These are two distinct subgroups which are associated with different risk factors.

Results

Two main subgroups of oesophageal cancer were defined: upper and middle oesophagus, and lower oesophagus. Ethnicity information was available for 86.1% and 86.3% of patients diagnosed in England between 2001 and 2007, respectively (Table 1).

Figure 1 shows the incidence rate ratios for different ethnic groups for males and females in each oesophageal cancer subgroup. 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. Ethnic groups with points below the line have incidence rates lower than the White group of the same sex.

In general, White men and women had the highest incidence of lower oesophageal cancer, although Bangladeshi women had an incidence rate closer to that of the White women. Pakistani men had a lower incidence and Bangladeshi women had a higher incidence of upper and middle oesophageal cancer compared White groups of the same sex.



KEY MESSAGE:

The incidence of upper and middle oesophageal and lower oesophageal cancer varies between ethnic groups.

This variation may reflect differences in the exposure to risk factors between ethnic groups.

Collecting information on risk factors for different ethnic groups would be important when exploring this further.

Figure 1: Age-standardised incidence rate ratios (IRR) for men and women diagnosed with upper and middle, and lower oesophageal cancer in England between 2001 and 2007 by ethnic group. White men and women used as baselines.

Methods

Data on 12,872 patients diagnosed with upper and middle oesophageal cancer and 26,299 patients with lower oesophageal cancer in England between 2001 and 2007 were extracted from the National Cancer Data Repository (Table 1). Self-assigned ethnicity was extracted from the Hospital Episode Statistics dataset. Therefore, male and female age-standardised incidence rate ratios (IRRs) were calculated for each ethnic group and subgroup of oesophageal cancer, using White males and White females as the baselines.

Table 1: Number and percentage of males and females in each ethnic group for patients diagnosed with upper and middle, and lower oesophageal cancer in England between 2001 and 2007.

	Upper and middle oesophagus				Lower oesophagus			
	Males		Females		Males		Females	
	Number	%	Number	%	Number	%	Number	%
White	4,875	82.8	5,729	82.1	16,797	85.5	5,535	83.3
Indian	64	1.1	71	1.0	57	0.3	13	0.2
Pakistani	8	0.1	12	0.2	16	0.1	3	<0.1
Bangladeshi	12	0.2	26	0.4	7	<0.1	6	0.1
Black Caribbean	71	1.2	36	0.5	42	0.2	15	0.2
Black African	11	0.2	15	0.2	18	0.1	4	0.1
Chinese	14	0.2	4	0.1	4	<0.1	4	0.1
Mixed	10	0.2	10	0.1	25	0.1	5	0.1
Other	60	1.0	57	0.8	110	0.6	42	0.6
Not known	765	13.0	1,022	14.6	2,576	13.1	1,020	15.3
	5,890	100.0	6,982	100.0	19,652	100.0	6,647	100.0

Final note

The incidence of oesophageal cancer varies between ethnic groups and the patterns seen are different in upper and middle oesophageal and lower oesophageal cancer subgroups. Upper and middle oesophageal cancer has been associated with tobacco smoking, chewing betel quid and tobacco, and alcohol consumption, whilst lower oesophageal cancer has been associated with *Helicobacter pylori* infection, obesity, gastro-oesophageal reflux disease, and Barrett's oesophagus. Differences in exposure to these risk factors between ethnic groups may partly explain the observed differences in variation in incidence. Collecting information on these risk factors for different ethnic groups would be important when exploring these associations further.

Acknowledgments

This work is taken from the following publication: Coupland VH, Lagergren J, Konfortion J, Allum W, Mendall MA, Hardwick RH, Linklater KM, Møller H, Jack RH. Ethnicity in relation to incidence of oesophageal and gastric cancer in England. British Journal of Cancer (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.