

# Variation in incidence of oesophageal and gastric cancers between ethnic groups

## NCIN Data Briefing

### Background

Variation in the incidence of oesophageal and gastric cancer has been reported between broad ethnic groups (South Asian and Black) within England. This study aims to assess the variation in incidence of these cancers between specific ethnic groups (Indian, Pakistani, Bangladeshi, Black Caribbean, Black African and Chinese) in England.

### Results

Ethnicity information was available for 76,130 (83%) of 92,205 oesophageal and gastric cancer patients diagnosed in England between 2001 and 2007.

Figure 1 shows the incidence rate ratios for different ethnic groups for males and females with oesophageal and gastric cancer. 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. White men and Bangladeshi women had the highest incidence of oesophageal cancer.

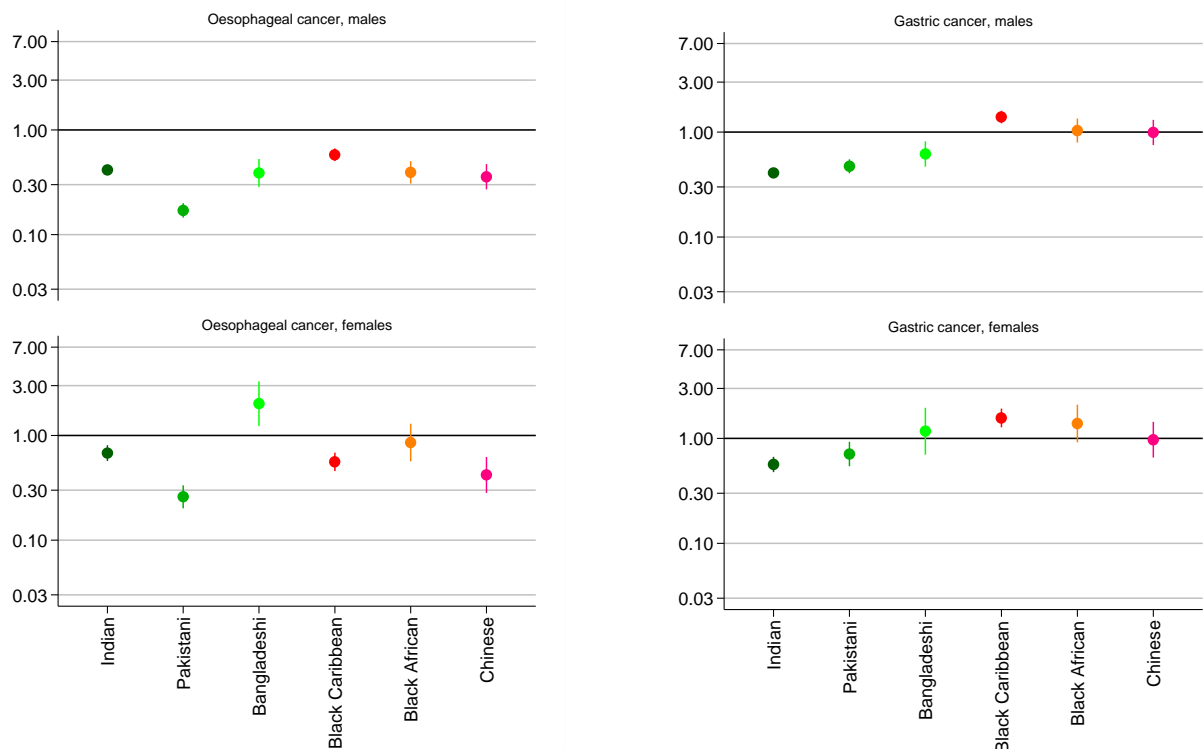
Compared with White men and women, Pakistani men and women had the lowest incidence. For gastric cancer, Black Caribbean men and women had the highest incidence and Indian men and women had the lowest incidence compared with their White counterparts.

#### KEY MESSAGE:

*There are differences in the incidence of oesophageal and gastric cancer between specific ethnic groups in England.*

*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 oesophageal and gastric cancer in England between 2001 and 2007 by ethnic group. White men and women used as baselines.**

## Methods

Data on 44,307 patients diagnosed with oesophageal cancer (ICD10 C15) and 47,898 patients diagnosed with gastric cancer (ICD10 C16) in England between 2001 and 2007 were extracted from the National Cancer Data Repository (Table 1). Ethnicity was classified using self-assigned ethnicity from the Hospital Episode Statistics dataset. Male and female age-standardised incidence rate ratios (IRRs) were calculated for each ethnic group, 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 oesophageal cancer or gastric cancer in England between 2001 and 2007.**

	Oesophageal cancer				Gastric cancer			
	Males		Females		Males		Females	
	Number	%	Number	%	Number	%	Number	%
White	23,603	83.1	12,683	79.8	24,509	79.4	12,687	74.5
Indian	138	0.5	91	0.6	141	0.5	81	0.5
Pakistani	25	0.1	15	0.1	81	0.3	43	0.3
Bangladeshi	22	0.1	34	0.2	37	0.1	21	0.1
Black Caribbean	132	0.5	56	0.4	332	1.1	153	0.9
Black African	33	0.1	22	0.1	76	0.2	44	0.3
Chinese	22	0.1	10	0.1	60	0.2	29	0.2
Mixed	37	0.1	17	0.1	73	0.2	35	0.2
Other	193	0.7	115	0.7	313	1.0	167	1.0
Not known	4,214	14.8	2,845	17.9	5,257	17.0	3,759	22.1
	28,419	100.0	15,888	100.0	30,879	100.0	17,019	100.0

## Final note

There were differences in the incidence of oesophageal and gastric cancer between specific ethnic groups in England. An earlier report found a lower incidence of oesophageal cancer in South Asian women while our study found that compared with White women, Indian and Pakistani women had a lower incidence and Bangladeshi women had a higher incidence of this cancer. Differences in the prevalence of risk factors including smoking tobacco, alcohol consumption, *Helicobacter pylori* infection, obesity, gastro-oesophageal reflux disease, and Barrett's oesophagus between ethnic groups may partly explain some of the variation in the incidence of these cancers. However, different risk factors are associated with tumours in different locations of the oesophagus and stomach. For more detail please see our paper below or the accompanying data briefing on subgroups of oesophageal cancer. Collecting information on these risk factors for different ethnic groups would be important when exploring this 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.