



# Variation in cancer incidence by ethnicity across London in 2015

Bethany Wickramasinghe<sup>1,2</sup>, Lucy Young<sup>1,2</sup>, Judith Shankleman<sup>2</sup>, Ruth Jack<sup>1</sup>

<sup>1</sup> Transforming Cancer Services Team for London, NHS <sup>2</sup> National Cancer Registration and Analysis Service, Public Health England

## BACKGROUND

Research in England identifies national level cancer incidence inequalities related to ethnicity<sup>1</sup>. This is yet to be demonstrated at local level where service provision can be more directly influenced.

Given the diversity of its population, we examined variation in cancer incidence by ethnicity across London, aiming to support service development to improve cancer prevention and early diagnosis.

## METHODS

- Data on invasive cancer diagnoses in London in 2015 were identified from PHE's cancer registration dataset and stratified by age at diagnosis, sex, ethnic group, and Sustainability and Transformation Partnership (STP) of residence
- Cancer incidence numbers were derived from the number of registered cancer cases
- Sex-specific age-standardised incidence rates were computed for 25 tumour groups by ethnicity for London and its STPs.
  - Cancer incidence numbers were standardised against 2011 Census figures. It is important to note the variation in classification of ethnic identification (see Figure 1)
  - Population data (2011 Census) may not be completely representative of the cancer registration dataset from 2015, and ethnic groups may have been affected disproportionately
- Computation of Incidence-Rate-Ratios (IRRs) demonstrated the likelihood of non-white ethnic groups developing cancer relative to the White population.

	2011 Census	PHE's Cancer Registration Dataset
White	-	White
	British	British, Mixed British
	Irish	Irish
	Gypsy or Irish Traveller	-
Mixed	Other White	Any other White background
	White and Black Caribbean	White and Black Caribbean
	White and Black African	White and Black African
	White and Asian	White and Asian
	Other Mixed	Any other mixed background
Asian	-	Other Mixed, Mixed Unspecified
	Indian	Indian or British Indian
	Pakistani	Pakistani or British Pakistani
	Bangladeshi	Bangladeshi or British Bangladeshi
Chinese	Other Asian	Any other Asian background
	Chinese	Chinese
Black	African	African
	Caribbean	Caribbean
	Other Black	Any other Black background
Other*	Arab	-
	Any other ethnic group	Any other ethnic group
	-	Other

\*Excluded from further analysis as these observations are likely to be influenced by recording issues

Figure 1: Ethnicity definitions used in the 2011 Census and PHE's cancer registration dataset

## RESULTS

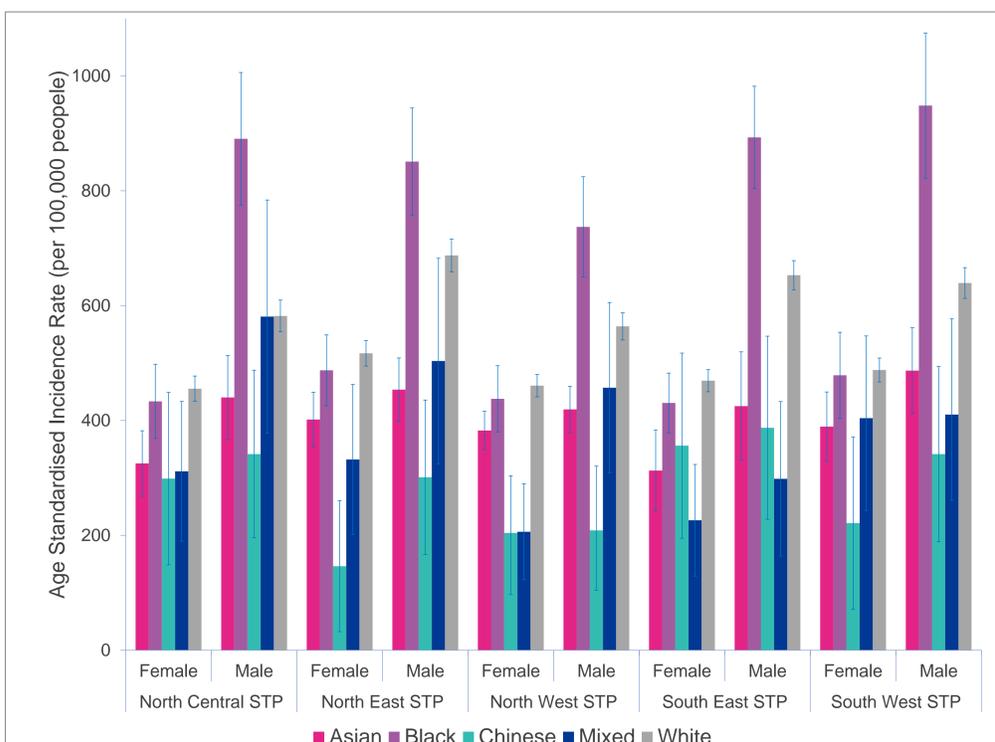


Figure 3: Sex-specific age-standardised incidence rates of Total (all) cancers in London, 2015

Relative to the White population, the likelihood of developing cancer in London in 2015 was lower in Asian, Chinese, Mixed men and women, and Black women; but greater in Black men (see Figure 3). These results were driven by the tumour-specific findings in Figure 4.

## CONCLUSION

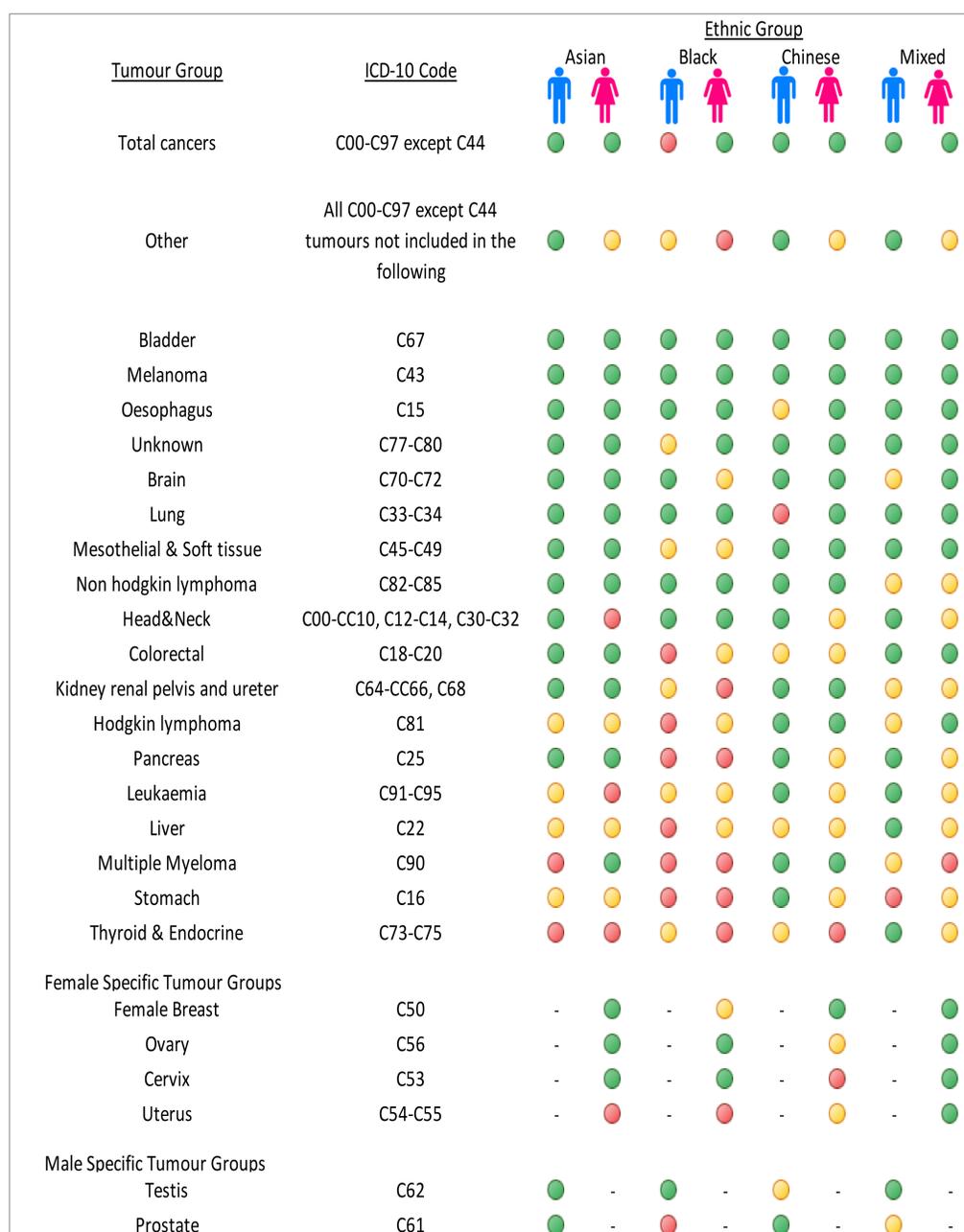
These granular results are the first of their kind and provide an in-depth understanding of cancer in different ethnic groups throughout London. This will enable local providers to better plan services and identify unmet need by raising awareness and enhanced profiling.

## ACKNOWLEDGEMENT

This work uses data provided by patients and collected by the NHS as part of their care and support

## REFERENCE

[1] NCIN. (2009). Cancer incidence and survival by major ethnic group, England, 2002–2006. National Cancer Intelligence Network.



Green = a reduced likelihood of developing cancer compared to the White population  
 Yellow = the same likelihood of developing cancer compared to the White population  
 Red = an increased likelihood of developing cancer compared to the White population

Figure 4: The likelihood of non-white ethnic groups developing certain cancers compared with the White population in London 2015