Monday 6 September 2010
Parallel Session A

Cancer and geography

001 IS THERE A US PROSTATE CANCER BELT?
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Background and objective Several chronic diseases display geographic patterns of increased incidence or mortality in the southern US. State- and county-level maps described increased prostate cancer mortality in a band of states spanning from Washington, DC, to Louisiana. A recent report has documented that birth in the so-called Stroke Belt (SB) region in the southern US predicts mortality from stroke independently of residence in a SB state in adulthood, when stroke onset is most common. Several studies have suggested that early-life risk factors may influence prostate cancer incidence and mortality, but no known prior research has examined whether place of birth within the US predicts prostate cancer related outcomes. The objective of this study is to assess the association between birth in the SB and subsequent mortality from prostate cancer.

Methods Prostate cancer specific mortality (underlying cause of death only) rates in the year 2000 for African-Americans and whites born in the continental US and aged 65–95 were calculated by linking national mortality records with population data in strata defined by birth state, state of residence at the census, race, sex, and age. Birth in a SB state (North Carolina, South Carolina, Georgia, Tennessee, Arkansas, Mississippi, or Alabama) was cross-classified against SB residence in 2000 Census.

Results Adjusting for SB residence in 2000, odds of prostate cancer mortality were significantly elevated by 19% (OR 95% CI 1.11 to 1.27) for African-Americans born in the SB compared to those who were not born in the SB. Those who lived in the SB in 2000 experienced 9% (OR 95% CI 1.01 to 1.18) increased odds of prostate cancer compared to those who did not reside in the SB in 2000, adjusting for birth in the SB. These associations were not observed among whites.

Conclusions These findings suggest important roles for geographically patterned childhood exposures—for example, differences in social or environmental conditions, or behavioural norms in diet, physical activity and smoking. Because of segregation patterns in the American South, it is possible that African American men born in the South are more subject to these types of exposures than white men born in the South. Alternatively, the differences in associations between whites and blacks may be an artefact of differential migration patterns. Future research should assess the additional influence of socio-economic status, cancer incidence, stage at diagnosis and survival time after diagnosis.

002 UPTAKE OF BREAST SCREENING: WHERE YOU LIVE ALSO MATTERS
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Objective To determine if area of residence is an independent factor influencing uptake of breast screening.

Design Record linkage study combining anonymised data from the National Breast Screening System and the Northern Ireland Longi-