



Lung cancer in England: An analysis by socioeconomic deprivation and urbanisation

Sharma P Riaz, Marie Horton, Vivian Mak, Jagdip Kang, Henrik Møller



THAMES CANCER REGISTRY

Introduction

Lung cancer is the most common cancer and accounts for 1.3 million deaths per year world wide.^[1] In 2006, around 39,000 people were diagnosed with lung cancer in the UK.^[2] 5-year survival from lung cancer is around 9% for males and 7% for females.^[3]

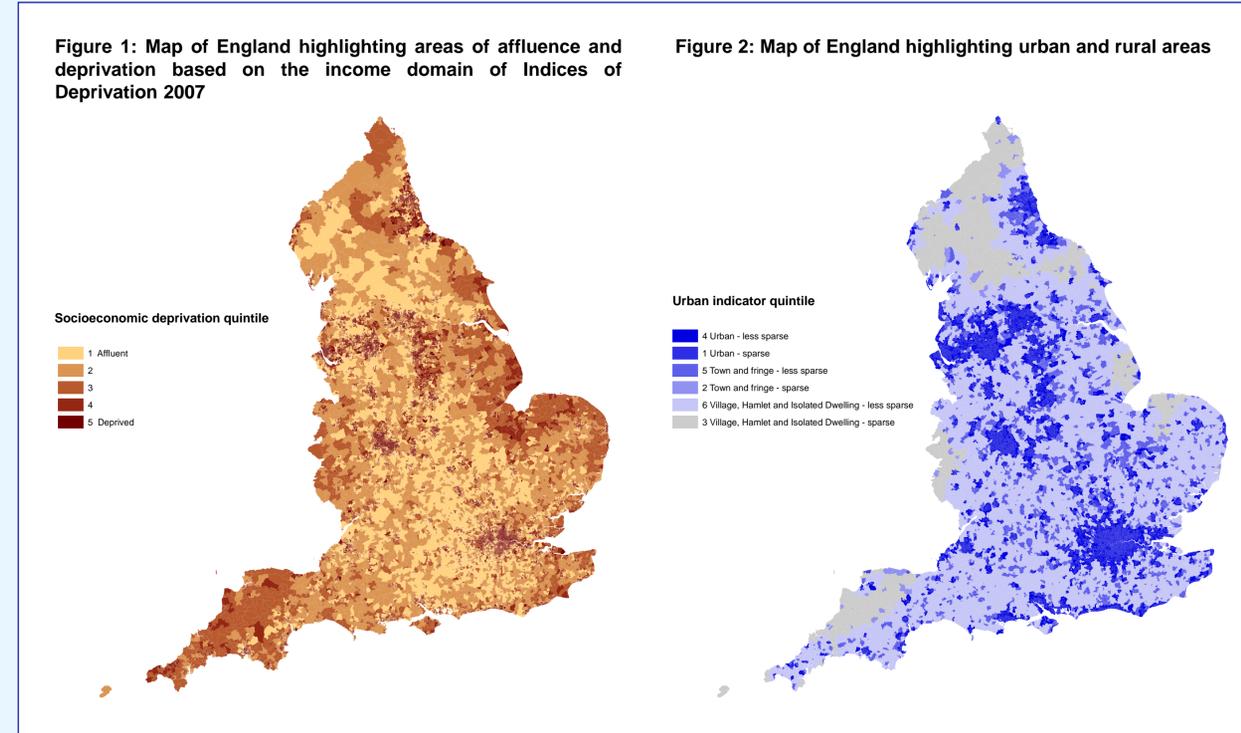
Objective

To investigate the association between socioeconomic deprivation and urbanisation, and lung cancer incidence in England.

Method

We extracted data on 161,822 patients diagnosed with lung cancer (ICD-10 C33-C34) between 2003 and 2007 who were resident in England. From this we excluded 1504 patients who had missing date of diagnosis or date of birth. We assigned each patient to a socioeconomic deprivation quintile and urban/rural indicator at lower super output area level, based on their postcode of residence. Urban areas are characterised by high population densities. We then calculated age-specific rates and age-standardised incidence rates (per 100,000 European standard population) by socioeconomic deprivation, urbanisation and sex.

We presented the results as graphs to enable us to compare the differences in the incidence of lung cancer between urban and rural areas by socioeconomic deprivation and sex.



Results

Figure 1 shows the geographic distribution of socioeconomic deprivation in England with darker areas indicating higher levels of deprivation.

Figure 2 shows the geographic distribution of urbanisation in England with darker areas representing higher levels of urbanisation.

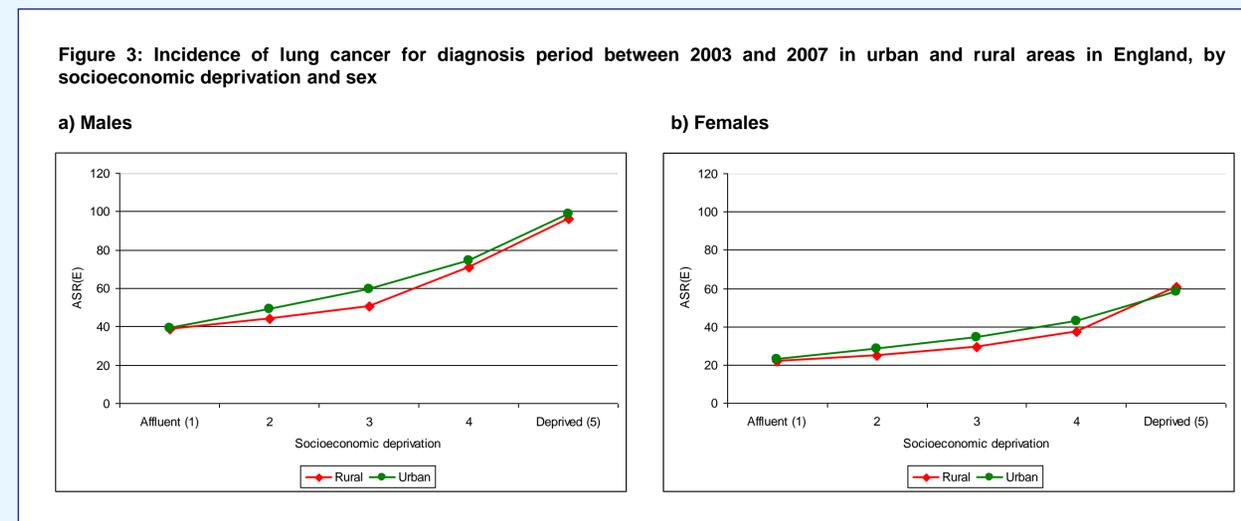


Figure 3 shows the incidence rates of lung cancer by socioeconomic deprivation in the urban and rural areas.

Lung cancer incidence was higher in males than in females. It was also higher in the deprived areas compared to the affluent areas.

The incidence of lung cancer in urban areas was similar to those in the rural areas for both males and females, after considering socioeconomic deprivation.

Conclusion

Previous studies^[4]^[5] have suggested that pollution plays a role in lung cancer. Our results would seem to suggest that air pollution plays a minor role in the risk of developing lung cancer compared to factors associated with socioeconomic deprivation.

Reference

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