Introduction
Previous studies have shown higher breast cancer incidence and mortality among Japanese Brazilians than Japanese. To clarify the difference in hormone levels among populations, we compared postmenopausal endogenous sex hormone levels among Japanese living in Japan, Japanese Brazilians living in São Paulo, and non-Japanese Brazilians living in São Paulo.

Methods
A cross-sectional study was conducted using a control group of case-control studies in Nagano, Japan and São Paulo, Brazil. Subjects were postmenopausal women aged over 55 years old who provided blood samples. We measured oestradiol, oestrone, androstenedione, dehydroepiandrostosterone sulphate (DHEAS), testosterone, and free testosterone by radioimmunoassay, bioavailable oestradiol by the ammonium sulphate precipitation method, and sex-hormone binding globulin (SHBG) by immunoradiometric assay. A total of 363 women were included for the present analyses: 185 Japanese, 44 Japanese Brazilians and 134 non-Japanese Brazilians.

Results
Japanese Brazilians had significantly higher levels of oestradiol, bioavailable oestradiol, oestrone, testosterone, and free testosterone, and lower SHBG levels than Japanese. Japanese Brazilians also had significantly higher levels of bioavailable oestra
diol, oestrone, and DHEAS, and lower levels of SHBG and androstenedione than non-Japanese Brazilians. Levels of oestradiol, testosterone, and free testosterone, however, did not differ between Japanese Brazilians and non-Japanese Brazilians. These differences were observed even after adjustment for known breast cancer risk factors.

Conclusions
We found higher levels of oestrogens and androgens in Japanese Brazilians than in Japanese, and similar to or higher levels than in non-Japanese Brazilians. Our findings may help explain the increase in incidence and mortality of breast cancer among Japanese Brazilians.

Conclusions
Patients with lung cancer have an increase in reporting of symptoms to the GP which occurs about 9 months before they are diagnosed. Future work will aim to develop these results into a predictive score to allow earlier diagnosis of lung cancer.

P1-448 USIING A SOCIAL MARKETING TOOL TO IDENTIFY SECTORS OF THE UK WHERE LUNG CANCER INCIDENCE IS HIGHEST

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Introduction
To target lung cancer awareness campaigns and increase earlier ascertainment of disease, there is a need to identify the sectors of society most at risk of developing lung cancer. Using Experian’s Mosaic social marketing tool (a consumer classification of all UK households and postcodes into 61 groups and 11 types), we aimed to identify the UK populations with the highest incidence of lung cancer.

Methods
All incident cases of lung cancer from 2000 to 2009 in a UK computerised primary care database were identified. Lung cancer incidence rates were stratified by 3-yearly calendar periods, age, sex, socioeconomic status, UK health authority and Mosaic groups and types.

Results
A total of 12 153 incident cases of lung cancer were identified. Overall incidence of lung cancer was 41.4 per 100 000 person-years and this increased with increasing deprivation. The highest incidence of lung cancer was in the North-West of England and the lowest was in London. The Mosaic types with the highest incidence of lung cancer were F39 (dignified dependency), I48 (old people in flats) and I50 (cared-for pensioners).

Conclusions
Using Experian Mosaic’s social marketing tool, we have identified wide variations in the incidence of lung cancer, larger than variations by socioeconomic status alone. We have also been able to determine the sectors of UK society and therefore postcodes and neighbourhoods with the highest incidence rates of lung cancer. Application of this knowledge will enable accurate targeting of media campaigns on lung cancer and also aid earlier ascertainment of lung cancer cases.
(11.4%) subjects with 4 being exposed to higher dust levels. There is a statistically significant relationship with duration of work, type of work and the level of dust exposure with the clinical features ($p<0.001$).

**Conclusion** There is a decline in the lung function which is related to the duration of work and amount of dust exposure. It mainly shows a restrictive pattern of impairment.

**IMPROVEMENTS IN SOCIAL COHESION: DO THEY MATTER FOR PHYSICAL ACTIVITY**

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**Introduction** Much research exists on the relationship between environmental factors and physical activity (PA). However, few studies have investigated the role of social cohesion in neighbourhoods. The aim of this study was to assess the extent to which social cohesion and changes over time in the levels of social cohesion were associated with PA.

**Methods** We used data from the survey WoonOnderzoek Nederland 2006 and 2009, using two samples of 57,092 Dutch adults. Using multi-level Hurdle Negative Binomial models, we assessed if the odds for being physically inactive and the mean hours of PA among the people who are physically active were related to levels of social cohesion at neighbourhood level, and changes in social cohesion between 2006 and 2009. Next, we examined if these associations varied according to sex, age, and economic activity.

**Results** In areas with higher levels of social cohesion compared to areas with less social cohesion, more people were physically active. In addition, generally social cohesion was not associated with the amount of PA. Improvements in social cohesion between 2006 and 2009 were not associated with the odds of being inactive in the general population and with the amount of PA among the people being physically active.

**Conclusion** Social cohesion is related to physical (in)activity. However, improvements in social cohesion were not strongly related to physical (in)activity. This raises question on the causality of the relationships that are observed in cross-sectional analyses. Enhancing social cohesion in neighbourhoods may have limited influence on population levels of physical activity.

**BREASTFEEDING PRACTICES IN INDIA: A SURVIVAL ANALYSIS**

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**Introduction** The single most cost effective intervention to reduce infant mortality in developing countries would be by promoting exclusive breastfeeding. Breastfeeding should be initiated immediately after child birth and should be continued exclusively up to a maximum of 6 months. In India where a majority of the population has a low income and poor education, the need for breastfeeding represents the effective way of giving child a fair chance of survival and good health. The objective of the present study was to describe the association between exclusive breastfeeding and socio-economic demographic & cultural variables.

**Methods** The data for the study was taken from nationwide District Level Health Survey-3 (DLHS-3) conducted in 2007–2008. The statistical tests used were Kaplan-Meier survival curves & Cox proportional hazard model.

**Results** The mean duration of exclusive breastfeeding in India was found 3.31 months (95% CI 3.08 to 3.15) while it was found almost 4.15 months (4.05 to 4.28) in low infant mortality states in southern India compared to 1.5 months (1.45 to 1.54) in high infant mortality states in northern India. The analysis showed that no maternal education (p<0.001), being an unemployed mother (p<0.001), and Muslims (p<0.001) were important associations of early cessation of exclusive breastfeeding.

**Conclusion** The study showed that survival status of the child had a significant impact on the duration of exclusive breastfeeding. Also it was found that the time of initiation of breastfeeding after birth was an important determinant for total duration of exclusive breastfeeding.

**TRENDS OF VASCULAR SURGERY IN SCOTLAND 1991–2007**

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**Objective** To understand trends of vascular interventions and changes in provision of vascular surgery.

**Design** A retrospective, descriptive, population-based study using hospital discharge data.

**Setting** Scotland 1991–2007.

**Chief outcome measures** Time trends in patient demographics and age and sex-specific population rates of these procedures.

**Results** In Scotland, between 1991 and 2007, a total of 153,117 vascular procedures of interest were performed. The proportion of men who underwent these procedures was higher than the proportion of women. The mean age of individuals who underwent amputation and lumbar sympathectomy decreased significantly over the period under review ($p<0.001$). In contrast, the mean age of individuals who underwent diagnostic endovascular procedures and therapeutic endovascular procedures increased significantly ($p<0.001$). However, the mean age of individuals who underwent