

## SP1-74 THE PREVALENCE OF IRON DEFICIENCY ANAEMIA AND A COMPARISON OF THE INTAKE OF IRON AMONG PREGNANT WOMEN WITH THE DIETARY REFERENCE INTAKES FOR JAPANESE

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**Introduction** In order to determine the prevalence of anaemia and to explore the associations between iron status and intake in the process of pregnancy, we compared the dietary and total intake of iron with the Dietary Reference Intakes (DRIs) for Japanese in a population of pregnant women in the suburbs.

**Methods** A total of 109 pregnant women participated in the survey and were measured for blood haemoglobin (Hb). For 42 (mean age  $\pm$ SD: 30.2 $\pm$ 4.5) clinically normal pregnant women (Hb concentration >11 g/dl) in the first trimester of pregnancy, we used the dietary record methods for two consecutive weekdays and a weekend day with a handy camera, to examine dietary intake of iron in the second trimester. Dietary intake analysis was performed using Healthy Maker Pro 501 software, Mushroom-soft. Statistical analysis was performed with SPSS for Windows, Version 11.5. Blood haemoglobin, haematocrit, serum iron, and ferritin were measured at the third trimester.

**Results** At the first trimester, anaemia was diagnosed in 48.6% of the subjects (Hb <11.0 g/dl). At the second trimester, iron intake was lower than the estimated average requirement of DRIs (16.5 mg/day) in 93% of the subjects. The level of latent iron deficiency anaemia (Ferritin <12 ng/dl) was 88.1% and the anaemia (Hb <11.0 g/dl) was 52.4% at the third trimester.

**Conclusion** The results of our study support that the iron deficiency anaemia is a physiological adaptation for prevention of thrombosis during pregnancy.

## SP1-75 MULTIPLE IMPUTATION AND SURVIVAL ANALYSIS: AN EXAMPLE USING CANCER REGISTRY DATA

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**Introduction** Stage of disease at presentation of cancer is not routinely recorded in medical records, resulting in large amounts of missing data. We investigated survival trends by ethnicity among 0–29 year olds with cancer while using multiple imputation (MI) to impute missing values of stage.

**Method** Subjects (n=3534) diagnosed with cancer in Yorkshire (1990–2005) were analysed. Individual imputation models were used to assign stage of disease to four main diagnostic groups; leukaemia, lymphoma, central nervous system (CNS) and other solid tumours. Linear regression was used to impute white blood cell count (WCC) for leukaemia as a proxy for stage and ordinal logistic regression was used to impute for the remaining diagnostic groups. The survival analysis was performed using Cox regression.

**Results** Missing stage data occurred in 66% of cases for lymphoma, 28% for CNS tumours, and 69% for other solid tumours. WCC was missing for 57% of leukaemia cases. Results of the final analysis showed an increased risk of death for south Asians compared to non-south Asians with leukaemia (HR 1.61; 95% CI 1.01 to 2.55) and lymphoma (HR 2.05; 95% CI 1.09 to 3.87), and a decreased risk for south Asians with other solid tumours (HR 0.50; 95% CI 0.28 to 0.89). There was no significant difference by ethnic group for those with CNS tumours (HR 1.51; 95% CI 0.82 to 2.78).

**Conclusion** Although stage was missing in two-thirds of cases overall, MI was used to minimise bias and enhance the precision of analyses. This technique therefore offers considerable advantages over other approaches such as complete case analysis or coding missing data as a separate category.

## SP1-76 DIFFERENCES IN CARDIOVASCULAR RISK FACTORS BY MUNICIPALITY POPULATION SIZE: NATIONAL HEALTH AND NUTRITION SURVEY, JAPAN

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**Introduction** The National Health and Nutrition Survey (NHNS) has been conducted for more than 60 years in Japan. A total of 300 survey districts are randomly selected from all over Japan, and they can be categorised by population size of municipalities to which they belong. This study aimed to compare cardiovascular risk factors by population size using the NHNS data.

**Methods** Subjects were 3311 men and 3843 women aged 30 years and over of the NHNS in 2006. Survey districts were categorised into three groups by municipality population size: 150 000 and over (large), 50 000–149 999 (medium), and <50 000 (small). As for cardiovascular risk factors, we used body mass index, waist circumference, systolic and diastolic blood pressure, total cholesterol, HDL cholesterol, HbA1c and current smoking. Age was adjusted using multilevel regression model where individuals at level 1 were nested within survey districts at level 2. Models were fitted by MLwiN 2.02.

**Results** Compared with survey districts in large municipalities, HbA1c was lower in survey districts in medium municipalities and total and HDL-cholesterol were lower and the percentage of current smokers was higher in survey districts in small municipalities in men, and the percentage of current smokers was lower in survey districts in medium municipalities in women. These differences were statistically significant, but their magnitudes were rather small.

**Conclusion** No remarkable differences in cardiovascular risk factors were observed by municipality population size in Japan, but their trends should be monitored continually.

## SP1-77 STRATEGY FOR THE CARE OF THE ELDERLY WITH LIMITED FUNCTIONAL CAPACITY IN A DEVELOPING COUNTRY

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**Background** The “Aconchego” Day Center (ADC) aims to care for elderly individuals with limited functional capacity, an unprecedented strategy in a medium-sized city in the State of São Paulo (Brazil). It was created 10 years ago, due to the high degree of emotional burden of elderly caregivers and lack of community care resources for the elderly or support for the families. The ADC is a non-