This study quantifies the risk of hospitalisation relating to over-weight and obesity.

Methods 241 949 45 and Up Study participants with linked hospital admissions and death data were followed from recruitment (February 2006 onwards) through to June 2009. Self-reported height and weight were used to classify patients into BMI categories, using cut-points of 15, 18.5, 20, 22.5, 25, 27.5, 30 and 35 kg/m^2. Rates of incident hospitalisation by BMI were compared using Cox regression, adjusting for a range of confounders.

Results Preliminary results on the first 103 040 participants show incident hospitalisation rates to be 299 (95% CI 294 to 304) per 1000 person years for males and 248 (95% CI 243 to 252) for females. Compared with those of healthy-weight (BMI 20—22.5 kg/m^2), rates in those with severe obesity (BMI 35—50 kg/m^2) were higher among males (HR: 1.36, 95% CI 1.21 to 1.54) and females (HR: 1.52; 95% CI 1.38 to 1.67). There were clear gradients as weight increased from healthy to higher BMI, more so among females than males, and in people aged 45—64 compared to those aged 65—84, with no evidence of increasing risk of hospitalisation with increasing BMI in those aged over 85.

Conclusions Given the excess risk of hospitalisation among over-weight and obese individuals, the burden to the health system attributable to overweight and obesity is likely to be substantial, particularly among middle-age adults. High BMI was not significantly related to hospitalisation in the elderly.

P2-146 | **EPIDEMIOLOGICAL AND CLINICAL CHARACTERISTICS OF BEHÇET'S DISEASE IN JAPAN, BY YEARS AFTER DISEASE ONSET, USING A CLINICAL DATABASE ON PATIENTS RECEIVING FINANCIAL AID FOR TREATMENT**

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Objective Behçet's disease is an autoimmune disease with multi-system vasculitis. The objective of this study was to explore the natural history of Behçet's disease after onset, using a clinical database on patients receiving financial aid for treatment.

Methods In the fiscal year 2005, 16 627 patients with Behçet's disease were registered to receive public financial aid from the Ministry of Health, Labour and Welfare (MHLW) in Japan. The MHLW has an on-line registration system of intractable diseases including Behçet's disease. We obtained the 2005 clinical database, which contained 9416 patients with Behçet's disease. We confirmed the distribution of years from disease onset, and calculated duration from onset to the first doctor's visit. We analysed changes in disease severity, and prevalence of the types of Behçet's disease, according to years after disease onset.

Results The proportion of years from disease onset of less than 1 year was 9%, 2—5 years was 15%, 6—15 years was 30%, and more than 16 years was 46%. The average duration from onset to the first doctor's visit was about 2.5—3 years. Prevalence of the complete type of Behçet's disease increased with the years after disease onset. Regarding disease severity, the proportion of severe cases increased with the years from disease onset.

Conclusion Using a clinical database with Behçet's disease, we characterised the clinical/epidemiological features of Behçet's disease according to years after disease onset.

P2-147 | **CANCER MORTALITY AND INCIDENCE RISK ACCORDING TO SOCIOECONOMIC STATUS, A PROSPECTIVE STUDY IN KOREA**

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Introduction The aim of this study was to evaluate the risk of socioeconomic status (SES) and smoking on cancer mortality and incidence in a large cohort of health examinee.

Methods We evaluated data on 512 713 Korean people who had undergone the biannual health examination, organised by National Health Insurance Corporation, aged over 20 at baseline examination. Subjects were classified into four groups according to their amount of health insurance bill, which imposed in proportion to salary or income. All subjects were followed up from baseline examination (2000—2001) until 31 December 2009 using population-based cancer registry and death certification database. A total of 9166 cancer death cases and 27 792 cancer incident cases were identified during follow-up period. Cox proportional hazards model was used to estimate hazard risk (HR) after adjusted age, sex, and smoking status.

Results SES had inverse associations with cancer mortality. The estimated HRs (95% CI) were 0.968 (0.916 to 1.023), 0.939 (0.877 to 0.985), and 0.790 (0.746 to 0.837) in 2nd—4th Quartile, respectively. Smoking habits showed higher risk of cancer death (HR: 1.319, 95% CI 1.259 to 1.382) than lower SES, and also showed significant association with cancer incidence (HR: 1.136, 95% CI 1.101 to 1.172). The association between SES and cancer incidence showed positive trend as opposed to cancer mortality. The highest SES group were at greatest risk of cancer incidence (HR: 1.136, 95% CI 1.096 to 1.176), and 2nd Q and 3rd Q group were also showed significant higher risk.

Conclusion Impact of SES on the risk of cancer mortality and incidence were showed reversely.

P2-148 | **EARLY LIFE INFECTIONS AND PUBERTAL ONSET: EVIDENCE FROM HONG KONG'S "CHILDREN OF 1997" BIRTH COHORT**

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Introduction With economic development, puberty occurs at younger ages, and may contribute to cardiovascular diseases and hormone-related cancers. Factors determining pubertal timing are poorly understood. The growth axis active during puberty is also active in the first 6 months of life and interacts with the immune system.

Methods The authors examined whether prior infections, proxied by number of hospital episodes for infections at different ages, were associated with age at pubertal onset (Tanner stage II) using interval-censored regression in a population-representative Chinese birth cohort "Children of 1997" (n=7527). Mediation by growth was also examined.