

# 557 POSTER **Venous thromboembolic disease in cancer patients in Europe – an opportunity for improved prevention: the VITAE Thrombosis Study**

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On behalf of the VTE Impact Assessment Group in Europe (VITAE) **Background:** Venous thromboembolism (VTE) is a common and potentially fatal complication of cancer. However, the often silent nature of VTE, difficulty of diagnosis and follow up, and lack of routine post-mortems make its prevalence and associated morbidity and mortality difficult to assess. This may have led to marked underestimates of its true burden. We aimed to determine the prevalence and burden of VTE in cancer patients based on data from the first large-scale study performed at a European level – The VITAE Study.

**Material and methods:** A modified incidence-based epidemiological model was developed to estimate the numbers of VTE events and deaths taking into consideration recurrence and complications. Separate models were constructed for France, UK, Germany, Italy, Sweden and Spain; the total number VTE events were extrapolated for the EU. These comprehensive models were populated with published literature when available and expert observation when necessary. Both community-acquired and hospital-acquired events were derived. The former were based on a large European epidemiological study (EPI-GETBO) and the latter were derived using a hospital episode statistics database in conjunction with a "bottom-up" approach. Adjustment of the data based on published reports of the proportion of total VTE events and deaths that occur in cancer patients gave estimates of the prevalence of events in this patient group.

**Results:** The total annual burden of VTE in the EU exceeds 1.5 million events (see Table). In total, 28% of symptomatic deep-vein thromboses (DVT), 27% of non-fatal pulmonary embolism (PE) and 30% of VTE-related deaths were attributable to the cancer patient population. Of the latter, 10,335 deaths (7%) were patients diagnosed with VTE and treated, 48,915 (34%) had a sudden fatal PE and 84,300 (59%) followed undetected PE. These findings were tested using probabilistic sensitivity analyses.

Table: Annual burden of VTE and associated mortality in the EU

	Overall number of events	Number of events in cancer patients
DVT	641,275	181,449
Non-fatal PE	382,550	103,289
VTE-related deaths	478,500	143,550

**Conclusions:** Our data confirm that VTE is a major public health problem in the EU, and of particular importance in cancer patients. Many VTE events and associated deaths in cancer patients were sudden or followed asymptomatic VTE disease. The use of available effective thromboprophylaxis may have prevented many of these events and deaths. Further research to estimate the impact of increased thromboprophylaxis use in cancer patients is urgently needed.

# 558 POSTER **A systematic review of the natural history of high risk HPV among adult women**

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**Background:** A systematic review of published literature on the natural history of high-risk cervical human papillomavirus (HR HPV) infections in adult women aged 25–55 years was conducted to increase our understanding of the potential role of HPV prophylactic vaccination in this population.

**Materials and methods:** We searched the PubMed database for studies on HR HPV incidence, persistence and clinical progression to high-grade cervical intraepithelial neoplasia (CIN). Criteria for study inclusion included: use of sensitive PCR or Hybrid Capture for HPV DNA detection, average participant age of between 25 and 55 years, normal baseline cytology, and presentation of results for high-risk HPV types only.

**Results:** A total of 29 studies were identified, from which we present preliminary results from 14. Based on studies from Brazil and Columbia (Munoz et al., 2004; Franco et al., 1999), the annual incidence of HR HPV

was approximately 5–10% after the age of 35 years. Persistence of HR HPV one year after baseline was consistently <50% in 6 geographically diverse studies with varying study designs (weighted average of 44.9% persistence from studies which presented data at one year). The negative predictive value of an HR HPV test for subsequent CIN grade 3 (CIN3) was over 99.5% in four separate studies with duration up to 10 years. The corresponding positive predictive values from these studies was 3–10%. Two studies indicated that only recent sexual behaviour was a risk factor for incident HR HPV infection. HPV viral type (HPV16 and related types versus other high risk HPV types) and viral load were associated with increased risk of HPV persistence. There are limited data from two prospective studies indicating an association between cigarette smoking and increased risk of developing CIN3 or cervical cancer among HR HPV positive women at baseline. Overall, there is a general lack of data on HR HPV incidence and persistence among adult women as well as on HR HPV incidence in developed countries where the risk of cervical cancer is low.

**Conclusions:** The incidence of HR HPV appears to be relatively high (5–10%) among adult women, with approximately 45% of these infections persisting more than one year. The association of age and non-viral co-factors with HPV persistence and progression is currently unclear and therefore merits further investigation.

# 559 POSTER **Recreational physical activity, relative body weight and risk of bladder cancer in Canadian men and women: a case-control study**

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**Background:** Bladder cancer is the second most frequently diagnosed neoplasm of the urinary tract. The effects of physical activity and body weight on risk of bladder cancer have not been well studied. Physical activity and/or body weight may exert their effects on bladder cancer risk through hormonal, immune, or other unknown causal pathways. This population-based case-control study investigated the association between recreational physical activity, body mass index (BMI), and risk of bladder cancer in men and women separately.

**Material and methods:** Bladder cancer cases and controls recruited between 1994 and 1997 in seven Canadian Provinces provided self-reported data on anthropometrical, socio-demographic, life-style, occupational history, and reproductive characteristics.

**Results:** The analyzed samples were 2,312 men (670 cases and 1,642 controls) and 1,824 women (359 cases and 1,465 controls). In men and women, the estimates of adjusted odds ratio (OR) (highest vs. lowest quartile) and 95% confidence intervals (95%CI) for physical activity were 1.24 (95%CI: 0.93–1.66) and 0.76 (95%CI: 0.52–1.21), respectively. The corresponding estimates of OR for BMI were 1.29 (95% CI: 0.96–1.72) and 1.07 (95%CI: 0.74–1.55), respectively. Parous women were at reduced risk of bladder cancer compared to nulliparous women (OR = 0.56, 95%CI: 0.39–0.80). Both in men and women, certain occupations and cigarette smoking were associated with increased risk of bladder cancer. In men, but not in women, coffee consumption was associated with a slightly increased risk of bladder cancer ( $\geq 1$  cup per day vs.  $< 1$  cup per day or never: OR = 1.30, 95%CI: 1.00–1.68).

**Conclusions:** There was not enough evidence in this study to conclude that recreational physical activity and BMI were related to risk of bladder cancer.

# 560 POSTER **Acute and chronic leukemia incidence in Kyrgyzstan**

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**Background:** To study age, sex, geographic, site specific and ethnic leukaemia incidence in Kyrgyzstan.

**Material and methods:** Calculated the incidence of acute and chronic leukaemia between 2000 and 2004 in all population. There were 135 males and 166 females (total 301) registered with new diagnoses of leukaemia. Male-female proportion = 0.81. In present study collected data from forms submitted along with cytological findings, and deaths certificates. Estimated population relative risk for main types of leukaemia's in urban and rural areas. Detailed population figures from census are available from Kyrgyz National Center of Statistics. Official estimates are available for inter-census years. There are based on the census and date on natural population change. The population figures and leukaemia incidence rates for this report were provided in for age groups (15–19, 20–24, ... 85+), ethnic