chemotherapy, surgery, radiotherapy, or with metastatic cancer constituting a 'high risk' group. All others were considered 'average risk'.
Results: 16 studies, published in 20 papers, were identified for inclusion. The data from the included studies consistently reported annual VTE incidence rates of between 2−10%, depending on the populations studied. The highest incidence cancer types for average risk patients were bone (75.47/1000; 95% CI: 33.91, 167.99) and brain malignancy (64.27/1000; 95% CI: 45.92, 89.95), and for high risk patients were pancreatic cancer (100.74/1000; 95% CI: 66.95, 151.60) and brain malignancy (96.93/1000; 95% CI: 36.28, 258.96).
Conclusions: Venous thromboembolism is common among cancer patients, and there is considerable variation in risk by cancer type and in those with additional risk factors for VTE. Venous thromboembolism is a devastating complication which, with adequate treatment, may be prevented from occurring to a reasonable degree. This review highlights patient groups at particular risk who may well benefit from targeted strategies to deliver antithrombotic interventions.

64 Subtype-specific risk of testicular germ-cell tumours among immigrants and their descendants in Sweden, 1960–2007

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Background: Testicular cancer is the most common cancer among young male adults in many populations and there has been an unexplained dramatic increase in its occurrence in several populations over the past decades. To elucidate the importance of genetic and environmental factors in testicular cancer etiology and to gain insight into the potential timing of exposures; we compared histo-pathological subtype-specific risk of testicular cancer among migrants and their descendants to that of Swedish-born men.
Material and Methods: A nation-wide cohort of 3.6 million men aged 15−54 years was followed between 1960 and 2007 through the linkage between Swedish National Registers including Total Population Register, Cancer Register, Cause of Death, and Multi-Generation Register. Incidence rate ratio (IRR) adjusted for age and calendar period of follow-up with 95% confidence intervals (CIs) was estimated using Poisson regression models.
Results: 5,801 cases of testicular cancer occurred during 80 million person-years of follow-up. First-generation immigrants had a lower risk compared with Swedish-born men (IRR = 0. 66; 95% CI = 0.60–0.72). The risk among first-generation immigrants varied remarkably by birthplace, reflecting the risk in their countries of birth. The risk of testicular seminomas was statistically significantly modified by age at immigration and duration of residence among immigrants born in high-risk areas ($P_{homogeneity}$ = 0.004 and 0.05, respectively). We observed a statistically significantly convergence of risk among second-generation immigrants toward the risk in Sweden (RR = 1.02; 95% CI = 0.93–1.12). This convergence was regardless of the risk level (high or low) in the parental country of birth. The risk among second-generation immigrants was not affected by duration of stay of their mothers in Sweden before pregnancy.
Conclusions: Our study provides evidence that interaction between exposures in uterus and after birth might be important in the development of testicular cancer.

65 A noble melanoma discrimination index based on hyperspectral data

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Backgrounds: It is well known that noninvasive and untouchable diagnosis of malignant melanoma at an early-stage is very important to reduce melanoma-related mortality rate. Therefore a lot of automated melanoma screening systems have been studied. Objective of this study is to develop a melanoma discrimination index based on hyperspcetral data (HSD), which consist of both spatial and spectral information.
Material and Methods: 157 HSD (52 HSD from 5 melanoma patients, 95 HSD from 11 seborrheic keratosis (SK) patients and 10 HSD from 4 volunteers with nevus: The patients and volunteers were all Japanese) were measured using a newly designed hyperspectral imager. A spectrum of each pixel was considered as a multi-dimensional vector, and a spectral angle between the vector and a reference vector was calculated. Here the reference vector was defined by an average spectrum of typical normal skin. An entropy index was calculated every HSD using the probability of finding a spectral angle and regarded as a melanoma discrimination index. Statistical tests were performed to verify the effectiveness of the proposed index. Statistical significance was set to be 5%. Receiver operating characteristic (ROC) analysis was also made. The present study was approved from the Institutional review board at Shizuoka Cancer Center.
Results: Mann–Whitney U test revealed that the present index was useful to discriminate melanomas from SK and nevus. An area under the ROC curve was 0.93 with the present index, while it was 0.77 with the pseudo-fractal dimension based index which we had proposed previously. A linear discrimination analysis gave an accuracy of 91.1%, a sensitivity of 92.3% (95% CI: 85.0–99.6%), and a specificity of 90.5%(95% CI: 84.9–96.1%).
Conclusions: We have proposed a noble melanoma discrimination index derived from spectra which vary from site to site. Although the sample size is still small, the index has been considered to be useful for discriminating melanomas from SK and nevus. The present result suggests that disordered nature of pigment skin lesions may be important in melanoma screening system.

66 Publish or perish in cancer – but where?

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Background: Bibliometric analysis has previously been employed as a method of correlating research productivity in oncology with geographic variation in output and funding, and the development of translational research. Investigation of output across a range of disciplines within oncology has not been undertaken previously. The aims of this study are to measure the proportion, quality and relevance of articles relating to common malignancies in the medical press.
Materials and Methods: Both PubMed and the WoS databases were consulted for the reference period 01/01/2007 to 31/12/2007. Publications were retrieved by searching for each malignancy using its medical subject heading (MeSH) term in PubMed. The subheadings encompassed by each MeSH term were then employed to perform an equivalent search in the WoS database. The 26 malignancies with the highest incidence as defined by the Surveillance, Epidemiology, and End Results (SEER) database of the National Cancer Institute (NCI) in 2006 were included in the study. The top twenty journals by impact factor (IF) and eigenfactor (EF) in general medicine and oncology journals, and the presence of each malignancy within these titles was then analysed. The journals publishing most prolifically on each neoplasm were also identified and their impact assessed.
Results: The two databases generated 63260 (PubMed) and 126845 (WoS) entries, respectively. The 26 neoplasms accounted for 25% of total output from the top medical publications. 5 malignancies dominated the first quartile of output in the top oncology journals; breast, prostate, lung, and intestinal cancer, and leukaemia. Journals publishing most frequently on these neoplasms are associated with much higher IFs and EFs, though these measures are not equivalent across all sub-specialties. The EF and IF correlated strongly in the general medical ($r = 0.854$, $p = 0.000$) but not in the oncology literature ($r = 0.289$, $p = 0.217$).
Conclusions: Oncology enjoys a disproportionately large representation in what are traditionally regarded as the more prestigious medical journals. 5 malignancies receive the majority of this attention however, and there is a need to delineate between proxy measures of quality and the relevance of output when assessing its relative merit. Our results also suggest that the most relevant information for those working in many of the oncologic sub-specialties is not necessarily to be found in the most prestigious journals as delineated by proxy indicators of quality. These findings raise significant questions regarding the best method of assessment of research and scientific output in the field of oncology.

67 A case-control study on the effect of ApoE genotypes on head and neck cancer risk

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Background: The Apolipoprotein E gene (19q13.2) which is involved in the clearance of lipoproteins from plasma has three major isoforms encoded by ε2, ε3 and ε4 alleles with different receptor-binding abilities. Since a nearly linear relationship between A*poE* genotypes and levels of total and low-density lipoprotein serum cholesterol (LDL-C) has been reported, the ε4 allele is associated with hypercholesterolemia whereas the ε2 allele relates with the reverse effect if compared to the reference ε3 allele. An inverse relationship between serum cholesterol and head and neck cancer has been previously suggested but the role of *apoE* genotypes on HNC etiology has never been investigated. Since the question on the role of hypocholesterolemia as a predisposing factor, or result of the preclinical stage of HNC itself, remains still under debate, our hospital-based case-control study aimed to overcome