

GENETIC KEY TO BREAST CANCER

A multinational genome-wide association study has identified novel loci for breast cancer susceptibility. Despite the identification of the major susceptibility genes *BRCA1* and *BRCA2* in the 1990s, the majority of multiple-case breast cancer families do not exhibit mutations in these genes. To identify further susceptibility alleles, researchers conducted a three-stage analysis. The first two stages included a susceptibility study of over 8000 breast cancer patients and controls. In the third part of the study, 30 single nucleotide polymorphisms were tested for confirmation in over 44000 cases and controls. Five novel breast cancer susceptibility loci were identified, and patterns of risk established for the genes. Although most previously identified genes are associated with DNA repair, the susceptibility loci in this study contain genes related to the control of cell growth or signalling. The authors comment that the results demonstrate the critical importance of study size in such genetic association studies.

Nature 2007; 447: 1087-1093

MORE CONDITIONS — BETTER CARE

Concern that quality-of-care indicators do not take into account patients with multiple chronic conditions has prompted US researchers to investigate the relationship between number of medical conditions and quality of care. Using established measurements of quality of medical care, researchers studied data from three separate studies involving over 7500 patients, analysing the association between the care received and the number of chronic medical illnesses suffered by each patient. Conditions included depression, diabetes, heart failure, hypertension and chronic obstructive pulmonary disease. Even when the authors controlled for potential artefacts, such as the same care processes satisfying quality indicators for different conditions, quality of care was found to increase as the number of medical conditions increased.

N Engl J Med 2007; 356: 2496-2504



NA ZDOROVYE!

The exceptionally low life expectancy of men in Russia may be related to hazardous alcohol consumption, according to a population-based case-control study. The probability for a Russian man of dying between 25 and 65 years is 0.55, compared with 0.15 for English men. In an attempt to shed light on this alarming statistic, researchers focused on a typical Russian industrial city, researching all deaths in men aged 25–54 years over a 2-year period. Information was gathered about the subjects' alcohol consumption in the form of beverages (beer, wine and spirits) and non-beverage alcohols (including medicinal tinctures, colognes and cleaning agents). Results indicated that 43% of deaths in men aged 25–54 years in the study population were attributable to hazardous drinking alone. Men who drank non-beverage alcohol were more at risk than those who drank beer, wine or spirits, and this risk was strongly associated with frequency of consumption. The researchers comment that the consumption of such cheaper, easily accessible forms of ethanol may be a marker for hazardous drinking, and that the fluctuating but consistently high mortality of Russian men may be linked to this behaviour.

Lancet 2007; 369: 2001-2009

COLD FEET

Imaging methods used in the investigation of lower limb peripheral arterial disease are increasingly complex, with results determining the treatment and outcome for patients. British researchers have conducted a systematic review aimed at clarifying the options by collecting data on the use of duplex ultrasonography, magnetic resonance angiography, and computed tomography angiography. Using 107 published studies, the authors extracted data on detection of stenosis, outcomes for patients, adverse events, and patient preferences. Although limited by the lack of high-quality, well reported studies and the possibility of inter-observer variability, the review indicates that contrast-enhanced magnetic resonance angiography appears to be more specific than computed tomography angiography, that is, better at ruling out stenosis over 50%.

BMJ 2007; 334: 1257

HAEMATOCRITICAL

Postoperative mortality is significantly increased in elderly patients with abnormal preoperative haematocrit levels, according to US researchers. In a large multicentre study of Veterans Affairs patients undergoing non-cardiac surgery, over 310000 patients were stratified into categories of anaemia, normal haematocrit, and polycythaemia. The primary outcome measure in the study was 30-day postoperative mortality, with a secondary outcome being the occurrence of cardiac events. After taking into account possible confounders, the results showed a monotonic increase in mortality and cardiac events with either positive or negative deviations from normal haematocrit levels. Despite limitations such as the smaller number of polycythaemic patients involved, and the observational nature of the study, the authors concluded that even minimal deviations from a normal haematocrit result in increased postoperative risk for elderly patients.

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