Prostate cancer patients with BRCA2 mutations require urgent treatment

Men who develop prostate cancer after inheriting a faulty gene need immediate surgery or radiotherapy rather than being placed under surveillance, as their disease is more aggressive than other types, a new study has found (Castro et al, 2013).

A team at The Institute of Cancer Research, London, and The Royal Marsden NHS Foundation Trust found prostate cancers spread more quickly and were more often fatal in men who had inherited a faulty BRCA2 gene than in men without the faulty gene.

The research could challenge current NHS guidelines for prostate cancer, under which BRCA2 mutation carriers are offered the same treatment options as non-carriers.

Alongside collaborators across the UK, the team examined the medical records of 61 BRCA2 mutation carriers, 18 BRCA1 mutation carriers and 1940 non-carriers.

They found BRCA1/2 mutation carriers were more likely to be diagnosed with advanced stage prostate cancers (37% *vs* 28%) or cancer that had already spread (18% *vs* 9%) than non-carriers. Among those whose cancers had not spread out of the prostate at diagnosis, within 5 years more carriers than non-carriers had metastatic disease (23% *vs* 7%).

Patients with BRCA2 mutations were also significantly less likely to survive the cancer, living an average of 6.5 years compared with 12.9 years for non-carriers. The team concluded that a BRCA2 test could be used in combination with other factors as a prognostic test. Men with a BRCA1 mutation also had a shorter average survival time of 10.5 years, but this was not statistically significant.

Senior author Professor Ros Eeles, Professor of Oncogenetics at The Institute of Cancer Research and Honorary Consultant in Clinical Oncology at The Royal Marsden, said: 'It is clear from our study that prostate cancers linked to inheritance of the BRCA2 cancer gene are more deadly than other types. It must make sense to start offering affected men immediate surgery or radiotherapy, even for early-stage cases that would otherwise be classified as low-risk.'

Castro E, Goh C, Olmos D et al (2013) Germline BRCA mutations are associated with higher risk of nodal involvement, distant metastasis, and poor survival outcomes in prostate cancer. *J Clin Oncol* Apr 8 (Epub ahead of print)

Professor Ros Eeles, Professor of Oncogenetics at The Institute of Cancer Research and Honorary Consultant in Clinical Oncology at The Royal Marsden

Early cognitive behavioural therapy reduces risk of psychosis, finds meta-analysis

Young people seeking help who are at high risk of developing psychosis could significantly reduce their chances of going on to develop a full-blown psychotic illness by getting early access to cognitive behavioural therapy, according to a systematic review and meta-analysis (Hutton and Taylor, 2013).

The review analysed previous studies which covered 800 people at high risk of developing psychosis. Patients were randomly allocated to receive either cognitive behavioural therapy or a control treatment, which was either treatment as usual or supportive counselling.

Dr Paul Hutton, who led the study, said: 'We found that the risk of developing a full-blown psychotic illness was more than halved for those receiving cognitive behavioural therapy at 6, 12 and 18–24 months after treatment started.'

He added: 'Our analysis also suggests that existing cognitive behavioural therapy approaches may need to be adapted to focus more on improving social and occupational functioning.'

Hutton P, Taylor PJ (2013) Cognitive behavioural therapy for psychosis prevention: a systematic review and meta-analysis. *Psychol Med* March 22 (Epub ahead of print)

Discovery of new genes will help treat childhood arthritis

Scientists from the Arthritis Research UK Epidemiology Unit at the University of Manchester have identified 14 new genes which could have important consequences for future treatments of juvenile idiopathic arthritis (Hinks et al, 2013).

The team looked at DNA extracted from blood and saliva samples of 2000 children with juvenile idiopathic arthritis and compared these to healthy people.

Dr Anne Hinks, joint lead author, said the findings were a significant breakthrough for understanding more about the biology of the disease and might help identify new treatments.

'This study set out to look for specific risk factors, she said. 'To identify these 14 genetic risk factors is quite a big breakthrough. It will help us to understand what's causing the condition, how it progresses and then to potentially develop new therapies.'

The findings may help to predict which children need specific treatment earlier and allow better control their pain, quality of life and long-term outcome. Currently 30% of children with juvenile idiopathic arthritis continue to suffer from arthritis in adulthood.

Hinks A, Cobb J, Marion MC et al (2013) Dense genotyping of immune-related disease regions identifies 14 new susceptibility loci for juvenile idiopathic arthritis. *Nat Genet* Apr 21 (Epub ahead of print) doi: 10.1038/ng.2614