Prostate cancer screening 'hope'

Prostate cancer accounts for a quarter of cancers in men
UK researchers have discovered seven new genes associated with prostate cancer, which could be used to identify high-risk men more accurately.

Some of the genes could also lead to new treatments, the study in Nature Genetics suggests.

A trial is starting later this year to screen for the risk genes in men with a family history of the cancer.

The genes, found through analysis of 10,000 individuals, are present in over half of all prostate cancer cases.

Prostate cancer is the most common cancer in men in the UK.

From a public health point of view, this could be very helpful because it will allow us to target scarce resources to where they are really needed
Dr Ros Eeles

"How testing saved my life"

There is currently no routine screening programme in the UK, although men with a family history of the disease can have a prostate specific antigen (PSA) blood test to detect signs of the disease.

But this is notoriously inaccurate and although 10-15% of men will have high enough PSA levels to warrant carrying out a prostate biopsy, only 2-3% will require any treatment.

Genome-wide scan

More than half a million single letter variations in the DNA code were analysed in men in the UK and Australia.

Researchers said the seven genes they found had not previously been linked to prostate cancer.

One of them, MSMB, can be measured in the blood and may be particularly helpful in screening for or monitor progression of the disease.

Another, LMTK2, is a potential target for new treatments, the researchers said.

Within three to four years, it should be possible to offer "genetic profiling" to men to assess their risk of developing the condition, the researchers believe.
It will enable doctors to more accurately decide which men need more regular monitoring or a biopsy.

Dr Ros Eeles, who led the study at the Institute of Cancer Research said: "From a public health point of view, this could be very helpful because it will allow us to target scarce resources to where they are really needed.

She said genetic profiling would definitely happen but researchers were not in a position to offer the test just yet.

"We're doing the trial because we need to see who would come forward for the test, who would benefit, what kind of results do they get on their biopsies and what kind of cancer develops."

Professor Doug Easton, genetic epidemiology expert at the University of Cambridge, who analysed the data said the results would "greatly improve" the understanding of how prostate cancer develops.

He added that most people would have at least one of the genes but it was the combination of a few that would increase a person's risk above the population average.

Targets

Nick James, professor of clinical oncology at the University of Birmingham and consultant in clinical oncology at the Queen Elizabeth Hospital, said it had proved much more difficult to find genes in prostate cancer compared with some other cancers.

He said: "This work provides two useful avenues."

"One is that finding faulty genes gives researchers a chance to look at their products that may be good targets for new treatments.

"Secondly, this discovery may mean that we can target screening for prostate cancer - a process that has been very controversial due to over diagnosis of clinically insignificant cancer - to groups of men that we know to have higher risk of developing the disease."