Prostate cancer blood test causes controversy

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Pity the middle-aged men agonising over whether or not to be screened for prostate cancer. Last year, a US government panel said that family doctors should not offer men a blood test for prostate cancer antigens, as a positive result might lead to potentially unnecessary treatment with nasty side effects. This week, a study argues that the test saves lives. Does it?

The test measures the level of prostate specific antigen (PSA) in the blood. The US Preventive Services Task Force (USPSTF) is against screening on the grounds that most prostate cancer is not aggressive, so chemo or radiotherapy are seldom needed; men with the disease often die of unrelated conditions.

Yet 90 per cent of men with PSA levels suggestive of prostate cancer go on to receive treatment with a risk of harmful side effects, according to the USPSTF's co-vice chairman, Michael LeFevre. For every 1000 men screened, two to three will suffer serious complications from treatment such as a blood clot, heart attack or stroke, and up to 40 will suffer erectile dysfunction, urinary incontinence or both.

What's more, the USPSTF's investigations suggest that 80 per cent of men with elevated PSA levels have a false-positive result, but end up undergoing a prostate biopsy with "meaningful risk of complication".

However, a new study by Edward Messing of the University of Rochester Medical Center in New York and colleagues argues that cases of the most aggressive form of prostate cancer would be treble what they are were it not for screening.

Spotted before it spreads?

The team looked at the number of men seeing their doctor with what turned out to be metastatic prostate cancer – where the cancer has already spread to other areas, mainly bone – before and after 1986, the year when the PSA test was introduced in nine US regions. These areas saw 2608 cases between 1983 and 1985, compared with 848 between 2006 and 2008. That suggests that the PSA test allows the disease to be spotted and treated before it can spread, Messing says.

Opponents of screening have attacked the finding. "It analyses whether metastatic disease is present at the time of prostate cancer diagnosis, not whether metastatic cancer eventually occurs or not," says Doug Campos-Outcalt at the University of Arizona in Phoenix, and an adviser to the USPSTF.

In other words, although mass screening leads to prostate cancer being spotted earlier, it does not tell us which cases will become aggressive. The only way to establish whether the PSA test genuinely prevents deaths from metastatic disease is using clinical trials that follow men who are randomly assigned to be screened or not screened, he says.

At least potential new treatments for metastatic cancer are emerging, but for now the PSA test
remains a bit of a gamble. "Before getting this test, men should learn what science tells us about the potential benefits and harms," says LeFevre.

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