

## EDITORIALS

## What should doctors say to men asking for a PSA test?

Patients need individual discussions about the benefits and harms of testing

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A *BMJ* Rapid Recommendation in this issue<sup>1</sup> reviews the evidence<sup>2</sup> behind prostate cancer screening, including the latest large trial of prostate cancer screening with the prostate-specific antigen (PSA) test which showed no difference in prostate cancer mortality after 10 years.<sup>3</sup> Neither the US Preventive Services Task Force<sup>4</sup> nor Public Health England<sup>5</sup> recommend population screening as there is little evidence that screening would reduce deaths from prostate cancer. However, both countries suggest that decisions about prostate cancer testing should involve discussion with individual patients of the potential benefits and harms of testing.

Prostate cancer deaths are common and now exceed breast cancer deaths in the UK, in part because the ageing population makes prostate cancer more common and in part because of advances in the treatment of breast cancer. Men will therefore continue to come to their general practitioners asking for a test, and their experiences vary greatly from GPs who simply offer the test with little discussion to those who decline, advising that the test has little or no value.

So what should doctors say? The problem is that the PSA test, the only test currently available, has a high incidence of false positive and false negative results, and many cancers detected through PSA are indolent and would never cause the patient any harm.<sup>3</sup>

A raised PSA level has traditionally led to a trans-rectal prostate biopsy. However, biopsy itself carries a risk of serious infection<sup>6</sup> and still does not distinguish with sufficient accuracy tumours that are unlikely to shorten life from those that need aggressive treatment.

The increasing use of multi-parametric magnetic resonance imaging (mp-MRI) before biopsy is improving diagnosis and may reduce the number of men needing biopsy.<sup>7</sup> However high quality mp-MRI before biopsy is currently only offered in 57% of hospitals in the UK, and patients may ask to be referred to a hospital offering this service—these hospitals can be identified in an interactive map provided by the charity Prostate Cancer UK.<sup>8</sup> The increasing use of trans-perineal biopsy should further reduce complications from the procedure.<sup>9,10</sup>

To add to the problems of inaccurate diagnosis and possible harms from the diagnostic test itself, the harms of treatment are considerable: many men are rendered impotent and some

incontinent from treatment.<sup>11</sup> Discussion with patients therefore needs to include the problems of both false positive and false negative test results.

False negatives are important—some patients with aggressive prostate cancer have normal PSA levels.<sup>3,12</sup> Therefore, testing should be accompanied by digital rectal examination, and a normal PSA result should not be regarded as reassuring if there are other symptoms suggesting urogenital cancer or metastatic disease.

False positives are equally troubling, as no one wants to risk disabling side effects for a “disease” that would never have caused harm; though the benefit of testing is likely to be seen as greater by individuals at higher risk, such as those with a family history of prostate cancer or patients of black ethnicity.

Many prostate cancers are low grade and, particularly in older men, unlikely to shorten life, and for this reason there is increasing use of “active surveillance,” including regular PSA testing and imaging when appropriate. This seems an effective approach for men with low risk, localised cancer.<sup>11</sup> GPs should therefore be prepared to discuss active surveillance as a positive treatment option when it is recommended by a specialist.

The UK prime minister recently committed £75m to prostate cancer research over the next five years.<sup>13</sup> This is very welcome as there are many problems that have the potential to be addressed by research over the next few years such as better screening tests (including free (unbound) PSA and biochemical and genetic markers), clear protocols for active surveillance, better focal treatments for localised disease, and better treatments for advanced cancer.

The interaction between germline genetics (our genetic make-up at birth) and the environment affects both the risk of developing prostate cancer and the risk of developing aggressive prostate cancer. Future efforts to characterise these risks more precisely for individuals, alongside less invasive methods of detecting potentially life-shortening disease are key to improving outcome for this most common of solid cancers.

In the meantime, conversations with patients requesting a PSA test should explore their reasons for requesting a test and include evidence based discussions about possible harms and benefits of PSA testing—informed by the patient’s ethnicity and family

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history—and about recent advances in the use of mp-MRI and active surveillance, which have the potential to reduce the harms of testing.

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