

## HEALTHCARE MATTERS

Written by  
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# Advances in the management of prostate cancer

IT is known that around 670,000 men are diagnosed with prostate cancer each year, on a worldwide basis, of which about 35,000 cases are from the UK alone – that's about five per cent of all cases. In addition, treatment outcomes vary widely across the world.

In Britain prostate cancer is the second-highest cause of all cancer deaths (after lung cancer), responsible for well over 10,000 deaths each year. Perhaps of similar concern is the fact that the incidence of prostate cancer has tripled in the UK over the last 30 years – possibly driven by better detection rates (in part because of the more widespread use of PSA testing).

Here's what Tim Lane says:  
**Idai Makaya: Is it known what causes prostate cancer?**

Tim Lane: Not really. About 10 per cent of those developing prostate cancer have inherited one of a number of damaged genes.

The best known is a gene called RNASEL. The malfunction of the gene appears to leave individuals at greater susceptibility to some cancer-causing viral infections and allows abnormal cells to continue growing long after they should have been replaced.

In most patients, however, the disease results from the influence of a large number of abnormal genes working together and the acquisition of a number of defects that are accumulated throughout one's lifetime. It is generally referred to as the 'sporadic' form of the disease and accounts for 90 per cent of all cases.

Finding out what causes this damage is the key to understanding prostate cancer. There is some evidence a viral infection may be the initial 'prompt' that starts the

process of prostate cancer development.

**Q. Which demographic groups are most commonly affected by prostate cancer?**

A. Prostate cancer is most common in North America and North-Western Europe and less common in Asia, Africa and South and Central America. It is particularly prevalent in those of African-Caribbean descent. Age is the strongest risk factor – with the incidence rising significantly after the age of 50.

The majority of prostate cancer is found in men over the age of 65, with more than 70 per cent of men having prostate cancer by the age of 80. You are two- to three-times more likely to develop prostate cancer if a close relative (father or brother) has the disease (especially if they developed it at a young age). Individuals who are overweight and have a high fat diet (especially one rich in dairy products) are at higher risk.

**Q. Is there anything men can do to reduce their risk of developing the disease?**

A. Those with early prostate cancer appear to benefit with diets rich in carrots, broccoli and tomatoes (carotenoids and lycopenes). There is some evidence to suggest that low-fat diets and diets containing high levels of fruit might be advantageous. Other evidence is less convincing but suggests that foods containing antioxidants – such as Brazil nuts and sunflower seeds (selenium), peanuts and dark green leafy vegetables (Vitamin E) may also help. Regular exercise and maintaining a normal body weight are also believed to help.

**Q. What is the PSA test and how is it carried out?**

A. PSA (or prostate-specific antigen) is

*In this month's sponsored column Idai Makaya discusses prostate cancer with Urology Specialist Consultant and researcher, Tim Lane*

made naturally by the prostate. A little is found in the blood of all men. Higher levels are found in those with larger prostates – and following urinary tract infections – but also in those with prostate cancer. A simple blood test will detect it.

Unfortunately, it is not a particularly accurate test for prostate cancer. Measuring the different forms of PSA in the blood and expressing them as a ratio, or calculating its rate of rise may help improve its accuracy. It is seldom sufficient alone to make a diagnosis of prostate cancer. Newer urine-based tests, such as the PCA-3 test, may help in the decision-making process.

**Q. How is prostate cancer treated?**

A. There are a wide variety of very effective treatments for prostate cancer. In some cases no treatment is required and patients are simply monitored with repeat blood tests or prostate biopsies.

Medical treatments aim to deny prostate cancer cells testosterone (the male hormone) that is essential for its growth. It may come in the form of an injection or tablets and be prescribed continuously or intermittently (with periods of time without treatment). These treatments are not designed to cure the disease but aim to control its effects.

Radical treatments designed to cure the disease include surgery and radiotherapy. Both are very effective. Newer treatments, such as cryotherapy or HIFU (an ultrasound treatment), are less well tested and are generally recommended only as part of a research trial.

**Q. How effective is treatment for prostate cancer?**

A. Thankfully, treatment for prostate cancer is very effective. Putting a figure on 'success' is, however, quite tricky. An overall survival rate is difficult to predict because every case is very individual – with

outcomes depending on the stage of the disease at the time of diagnosis, its aggressiveness (often referred to as its "Gleason score") and the level of an individual patient's PSA.

As a general rule, however, of all the patients diagnosed with prostate cancer this year, over 80 per cent will be expected to live for at least five years. If the disease was confined to the prostate at the time of diagnosis then that figure rises to a very reassuring 99 per cent. For this group of patients, 65-90 per cent would also be expected to be alive and well after 10 years.

For those with very advanced disease at the time of diagnosis (about 20-30 per cent of all patients) 30 per cent would be expected to live for at least five years (with appropriate treatment). With continued improvements in the diagnosis and treatment of the disease, further improvements are inevitable.

**Q. I believe the five-year survival rate for Americans with prostate cancer is over 95 per cent – but in Britain it's more like 60-70 per cent (one of the lowest in the 'developed' world). Why is this?**

A. Survival rates appear to have been improving for 20 years. However, interpretation of survival trends is difficult because the 'case mix' on which results are based changes over time.

The same difficulty arises when comparing statistics between countries. PSA screening is popular in the USA – although there is little evidence to suggest that there is a survival benefit to those screened. It has resulted in the detection of a greater proportion of early, slow-growing tumours – effectively raising survival rates (something known as lead-time bias).

This doesn't mean that those patients are living longer following treatment – just that they have been aware of the disease for longer. All the same, prostate cancer has been a 'Cinderella' speciality in this country for many years – with little gov-

ernment money directed towards research. Now, with more recent and sustained improvements in both diagnosis and treatment being adopted nationally, it is hoped that survival outcomes will improve further.

**Q. What are the most significant advances in prostate cancer management and what does the future hold for prostate cancer treatment?**

A. While there continues to be improvements in the medical treatment of prostate cancer, few are likely to have as significant an effect as the hormone treatment introduced in the 1940s. Over the years there have been significant advances in radiotherapy treatments (principally in the form of radioactive seeds placed within the prostate and known as "brachytherapy").

The most significant advances, however, have been surgical – with minimally invasive techniques allowing patients to recover more rapidly and with shorter hospital stays. Robotic-assisted procedures are rapidly becoming more popular and can sometimes allow for greater accuracy and precision – such that side-effects are kept to a minimum and hospital stays now approach just one to two days.

■ *The content of this article is provided for general information only and should not be treated as a substitute for the professional medical advice of your doctor or other health care professional.*

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