

High-dose prostate therapy that halves trips to hospital: Having just 20 sessions of intensity modulated radiotherapy is effective and could save the NHS millions

By **Oona Mashta**, www.dailymail.co.uk
January 11th, 2016



When David, 73, was offered the chance to take part in the trial, he didn't hesitate

After the initial shock of being diagnosed with prostate cancer, David Parker just wanted to get the treatment over and done with.

'Fortunately, the cancer was still confined to my prostate, but I was advised to have radiotherapy because it could otherwise spread,' says David, 73, a retired

engineer from Surbiton, Surrey.

'The problem is that radiotherapy is usually done in 37 sessions; you have it five days a week for seven-and-a-half weeks. And going to hospital nearly every day for nearly two months seemed like a long time to me.'

So when he was offered the chance to take part in a trial that meant just 20 sessions of radiation - at higher doses - he didn't hesitate.

David was diagnosed with prostate cancer five years ago. He'd been going to the loo up to six times a night, which can be a symptom of the disease, but had initially dismissed this as a natural part of ageing. But when his younger brother, Barry, was diagnosed with advanced prostate cancer at 63, doctors advised David to get tested, as the disease can run in families.

'Obviously I did so immediately and it was a good job I did, too, as I know that prostate cancer is very treatable in the early stages,' says David.

A blood test revealed he had high levels of prostate-specific antigen (PSA) in his blood; raised levels can be a sign of prostate cancer. A biopsy confirmed the diagnosis. Every year more than 41,000 men are diagnosed with prostate cancer; about 11,000 men die from it.

The main treatments are surgery and radiotherapy; every year, about 15,800 prostate cancer patients have radiotherapy, often alongside hormone therapy, which works to shrink the cancer, delay its growth and reduce symptoms.

Radiotherapy uses high-energy X-rays (usually delivered from outside the body) to destroy the DNA inside the cancer cells, causing them to die. The problem is that healthy cells can also be damaged, though modern techniques aim to target the dose very precisely in order to avoid this.

Typical damage might be to the bowel, resulting in loose movements and a need to rush to the loo, and the bladder, causing more frequent and urgent urination.

These problems usually resolve themselves within three to four weeks after treatment is completed.



Before his radiotherapy, David underwent a month of hormone treatment - two fortnightly injections - to reduce the amount of testosterone

Photo by: which can fuel prostate cancer

About half of prostate cancer patients suffer with temporary erectile dysfunction after radiotherapy. The standard treatment is to deliver the radiation over 37 days; the thinking has been that dividing it into many small doses (known as fractions) would better protect healthy tissue.

But experts came to think that patients could be given larger doses over a shorter time as the more sophisticated technology available meant radiotherapy could be targeted precisely, so even with larger doses there would not be a greater risk to healthy tissue.

This has been tested in a nine-year trial run by the Institute of Cancer Research and funded by Cancer Research UK and the Department of Health.

Patients are given stronger doses of radiotherapy delivered over fewer sessions, cutting the standard treatment time in half.

Apart from saving patients repeated hospital visits it could save the NHS tens of millions of pounds a year

More than 3,200 patients were recruited between 2002 and 2011 - in all cases, the cancer had not spread outside the prostate gland.

Results of the study, presented at the National Cancer Research Institute conference in Liverpool in November, showed the shorter, more intense treatment plan was as effective and did not worsen side-effects.

As well as proving effective, the shorter courses of higher doses could also save the NHS millions of pounds a year, say the researchers.

The findings echo previous results by researchers looking at radiation treatment

in breast cancer. As well as reducing hospital visits for patients, this form of treatment is thought to have saved the NHS £50 million per year since 2009. The latest prostate cancer trial compared standard radiotherapy treatment with two higher-dose radiotherapy courses over a shorter duration - one group of patients had 20 doses (one a day, five days a week) in four weeks, the other had 19 doses in just under four weeks - but each session took ten minutes for all patients. In both higher-dose groups, the total overall dose was actually lower than with the standard treatment plan and the side-effects were similar in all three groups.

All the men on the trial were treated with a radiotherapy technique called intensity modulated radiotherapy (IMRT), which allows doctors to vary the intensity of the beams and shape them to the exact part of the prostate that needs to be treated.



The latest prostate cancer trial compared standard radiotherapy treatment with two higher-dose radiotherapy courses over a shorter duration

This means that a high dose of radiation can be directed at the prostate, without causing too much damage to the surrounding healthy tissue.

Five years after the cancer treatment had finished, 88 per cent of the men who had been given the standard treatment were free from cancer, compared with 90 per cent in the group who had 20 rounds of higher-dose radiotherapy, and 86 per cent in the final group who had 19 doses.

In addition, the researchers concluded that giving radiotherapy in high doses is

safe and causes no more side-effects than standard, longer-term treatment. Before his radiotherapy, David underwent a month of hormone treatment - two fortnightly injections - to reduce the amount of testosterone (which can fuel prostate cancer) in his body, helping to shrink the cancer.

Then followed the course of radiotherapy. 'For the first three months I had problems with my bowels,' he says. 'I had less control and I was going a couple of times a day.'

'The doctors said the radiotherapy must have hit my bowel, which is why I suffered for the first few weeks, but it's now fine.' Five years on, he remains cancer free.

Professor David Dearnaley, from the Institute of Cancer Research and The Royal Marsden Hospital in London, and the lead researcher in the trial, says: 'Our results make a compelling case to change practice within the NHS and move from a 37-day regimen to one that lasts 20 days.'

'Apart from saving patients repeated hospital visits it could save the NHS tens of millions of pounds a year.'

'The results apply to radiotherapy using high quality IMRT - these techniques are widely available across the NHS, which means implementation of the change could take place very quickly once the study results are published.'

Professor Malcolm Mason, a prostate cancer expert at Cancer Research UK, adds: 'These results are great news for men. From a logistical and patient convenience point of view, being able to treat patients over a shorter period of time has been a goal for specialists, but the question has always been whether it was safe to do so.'

'This study shows that it is safe and effective, and there should be no reason why this cannot be implemented immediately - it is saving NHS resources.'

He said data from large clinical trials was needed to give a clearer picture of its long-term efficacy and added: 'We look forward to seeing more research.'