

Doc Talk

SBRT a curative option for prostate cancer



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It leaves surrounding organs protected, reducing the risk of long-term side effects

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When the results of a routine cancer screening test revealed unusually high levels of prostate-specific antigens (PSA), 59-year-old Richard (not his real name) feared the worst.

A subsequent biopsy confirmed that he had prostate cancer. But his condition was a low-risk one.

Doctors suggested monitoring the cancer and treating it at the first sign of aggression.

He agreed to this, but the constant blood tests took their toll.

Distressed after a year of tests, he sought alternative treatments.

Doctors gave him a few choices - a prostatectomy, which is the surgical removal of the cancerous gland, or two months of non-invasive radiation therapy.



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- Prostatectomy: This would require hospitalisation and a period of post-operative recovery. It would also cause temporary urinary incontinence.

- Radiation therapy: This would cause loose or frequent stools, or bleeding from the back passage.

While either of these procedures would likely cure him, they could also leave him impotent.

Unwilling to take the risks and downtime from those options, he agreed to try a third option, "stereotactic body radiation therapy" (SBRT).

For two weeks after his first SBRT session, he experienced mild urinary irritation and a slower flow.

However, these side effects were short-lived and his PSA levels soon dropped to levels consistent with remission.

Today, four years after his five painless outpatient SBRT sessions, Richard leads a normal life, with no disruption to his urinary and sexual functions.

He is the first person in Singapore to have undergone SBRT for the prostate.

Pioneered in the early 2000s by doctors in the United States, SBRT is a highly accurate form of external beam radiotherapy, in which high-dose radiation beams enter the body at various angles and converge on the desired target.

This method leaves surrounding organs protected, limiting collateral damage to the body and reducing the risk of long-term side effects.

As it enables high doses to be applied with each treatment, fewer sessions are needed to eliminate the cancer.

Just 10 years ago, stereotactic or precision radiotherapy in Singapore was limited to treating brain tumours using the gamma-knife machine.

Today's treatments are faster, less invasive and equally effective.

Precision treatments such as SBRT provide prostate cancer patients with a convenient curative option with potentially fewer side effects.



Since then, advances in radiation technologies - including high-resolution imaging, improved computer processing power, direct image guidance before treatment and precise radiation beam-shaping techniques - have enabled unprecedented accuracy in targeting cancers in the body.

Following Richard's success story, about 30 patients in Singapore have received SBRT and achieved similar outcomes.

Overseas SBRT trials have also yielded positive outcomes.

A study in the US of 1,100 patients in 2013 showed cure rates of more than 90 and 80 per cent for low- and intermediate-risk prostate cancers, respectively.

That year, the American Society for Radiation Oncology certified SBRT as a viable treatment option.

Another study published recently in the European Journal Of Cancer found that SBRT resulted in a 98.6 per cent cure rate across five years.

Only 25 per cent of the patients experienced decreased erectile function, a percentage lower than usually reported with standard treatments.

Prostate cancer is Singapore's third most common cancer and the sixth-highest cause of cancer-related deaths among men.

The majority of cases occur in those over the age of 50.

Low-risk prostate cancer, while often not fatal, is being diagnosed at an increasing rate due to the proliferation of PSA screening.

For those facing early-stage prostate cancer, the good news is that a variety of treatments is available.

Thanks to advancements in medical technology, today's treatments are faster, less invasive and equally effective.

Precision treatments such as SBRT provide prostate-cancer patients with a convenient curative option with potentially fewer side effects.

•Dr Daniel Tan is a radiation oncologist and medical director of Asian American Radiation Oncology.

Dr Jonathan Teh, consultant radiation oncologist at the National Cancer Centre Singapore, contributed to this article.