

Prostate cancer's new standard of care

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Australian researchers have provided the world with what is likely to become a new standard of care for men with prostate cancer.

It is for men who have been diagnosed and are not sure what to do next. Specifically, it is for those with localised prostate cancer with aggressive features.



If their cancer spread is missed, men might undergo treatment with curative intent only to find out, six or 12 months later, that it failed, says Professor Hofman

The researchers, from 10 sites across the country, have demonstrated definitively how a form of molecular scanning can provide far more information than conventional scanning.

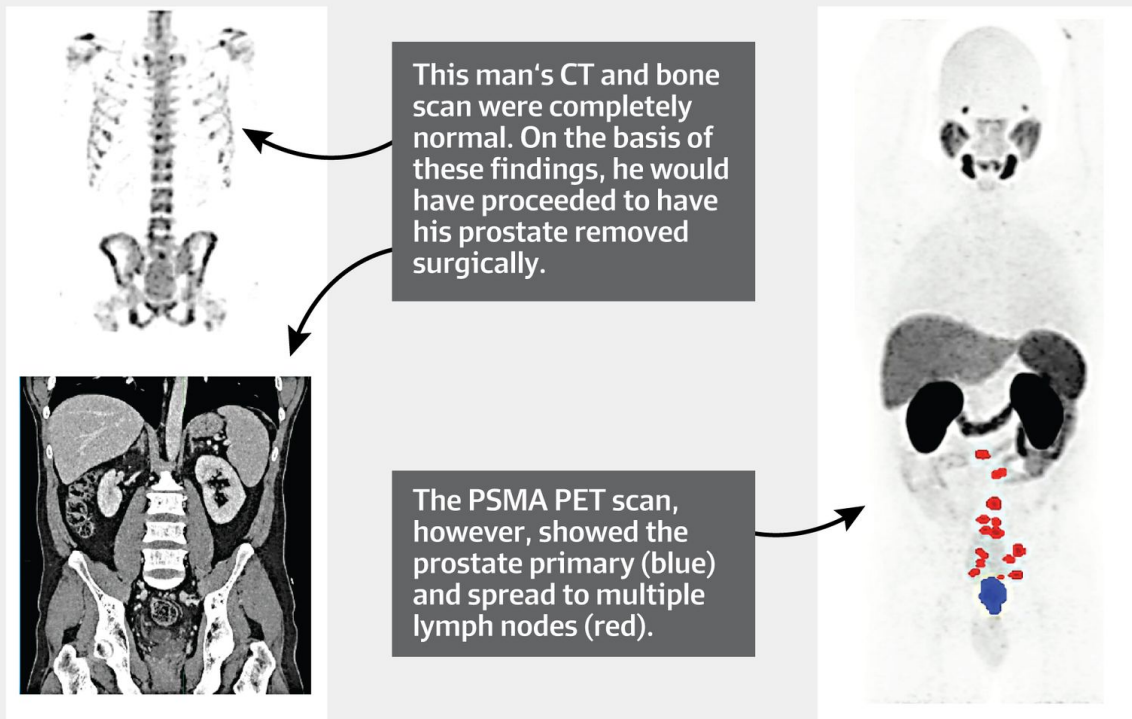
This extra information can be very important in deciding on a treatment plan. For many, it can save unnecessary surgery or radiation.

The research is published in the prestigious journal, The Lancet. It was to be released in a lead presentation at the European Association of Urology Conference in Amsterdam overnight, but the meeting was cancelled.

“The data is ground-breaking and should result in a change to guidelines which establishes this form of scanning as the new "gold standard”, says Professor Michael Hofman, chief investigator of the research project.

The single scan is a fusion of a nuclear PET scan and a CT scan. It uses a tiny dose of a radioactive tracer called Gallium-68 which is injected into the veins and finds its way to prostate cancer cells.

Conventional scanning vs new scanning in a 45 year old man



SOURCE: PROFESSOR MICHAEL HOFMAN

The tracer lodges itself in an antigen (protein) on the surface of each cancer cell and lights up during the PET scan, showing exactly where the cancer has spread.

The antigen is known as PSMA (for prostate specific membrane antigen) and the scan is called a PSMA PET/CT.

It helps to determine the stage of the disease by showing if it has travelled out of the prostate and where it has gone.

Traditionally, to determine if there is spread, men have both a CT and a bone scan. But, Professor Hofman says these can miss many cases of metastases.

“If missed, men undergo treatment with curative intent only to find out, six or 12 months later, that the treatment failed.”

Their blood marker for prostate cancer, PSA, begins rising again, indicating cancer is still present in their body.

“It’s quite likely a proportion of those men already had prostate cancer that had spread, “says Professor Hofman, a nuclear medicine physician-scientist at the Peter MacCallum Cancer Centre in Melbourne.

“With PSMA PET, however, we can visualise the whole body in 3D, and determine the distribution of prostate cancer spread more accurately than the CT and bone scans currently used.

“This is a major advance. Australia leads the world in PSMA PET and this is the first randomised controlled study of its kind.”

The study involved 300 men with high risk features who had not yet been treated. They received traditional scanning or nuclear scanning.

At a six-month follow-up, 30 per cent had cancer in their nodes in the pelvis or distant metastatic disease.

The results showed nuclear scans were superior in accuracy by 27 per cent. This extra knowledge led to a change in the way the men’s cancer was managed.

The new scan also exposed the men to less radiation than the two traditional scans.

“These results will change practice with immediate effect,” says Professor Declan Murphy, Director of Genitourinary Oncology of Peter MacCallum Cancer Centre and study co-lead.

“Around one in three prostate cancer patients will experience a disease relapse after surgery or radiotherapy. This is partly because current medical imaging techniques often fail to detect when their cancer has spread, and they are not given the additional treatments they need.”

“PSMA PET/CT is a one stop scan, and this trial demonstrates it is more accurate, uses less radiation, with less uncertain findings, than the current CT and bone scans which are used all over the world for men newly diagnosed with prostate cancer. “



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Australia already does many PSMA PET scans in men post-operatively and most of the literature is in that setting. This study focussed on high risk men prior to radiation or surgery.

Having been funded by the Prostate Cancer Foundation of Australia and Movember, it a truly Australian initiative.

Dr Mark Buzza, global director of prostate cancer biomedical research at Movember, wants to see the new scan in clinical practice as soon as possible, for this group of men.

Professor Jeff Dunn, CEO of the PCFA, says it’s a game changer. “Standing on the shoulders of research leaders, today we are one step closer to our vision of a future where no man dies of prostate cancer.”