

****Embargo: 5.30am Monday 23 March Australian Eastern Daylight Time**

Prostate Cancer / Randomised Controlled Trial

***The Lancet*: Australian prostate cancer study finds molecular imaging could transform management of patients with aggressive cancer**

Results from a randomised controlled trial – the ProPSMA Study - involving 300 prostate cancer patients find that a molecular imaging technique is more accurate than conventional medical imaging and recommends the scans be introduced into routine clinical practice.

A medical imaging technique *known as* PSMA PET/CT that provides detailed body scans while detecting levels of a molecule associated with prostate cancer could help doctors better tailor treatments for their patients, by determining the extent of disease spread at the time of diagnosis, a randomised controlled trial involving 300 patients in Australia published in *The Lancet* journal has found.

The approach combines two imaging technologies – positron emission tomography (PET) and computed tomography (CT) – and is almost one third more accurate than standard imaging at pinpointing the spread of prostate cancer throughout the body. PSMA PET/CT proved to be 92% accurate compared with only 65% accuracy with standard imaging.

Prostate cancer is commonly treated by surgery to remove the prostate or intensive radiotherapy to target the tumour. If there is a high risk the cancer may have spread to other parts of the body, patients may be offered medical imaging – typically CT and bone scans – to help doctors determine if additional treatments are needed.

Study lead Professor Michael Hofman of the Peter MacCallum Cancer Centre, Melbourne, said: “Taken together, our findings indicate that PSMA-PET/CT scans offer greater accuracy than conventional imaging and can better inform treatment decisions. We recommend that clinical guidelines should be updated to include PSMA PET/CT as part of the diagnostic pathway for men with high risk prostate cancer.”

Other findings of the study showed that PSMA-PET/CT had fewer uncertain findings than conventional imaging, resulted in half the radiation dose to patients and had a greater impact in changing patient management. 28% of men had the treatment plans changed the PSMA PET/CT scans compared to 15% following conventional imaging.

Professor Declan Murphy, senior author, of Peter MacCallum Cancer Centre, Melbourne, said, “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 the cancer has spread, which means some men are not given the additional treatments they need. Our findings suggest PSMA-PET/CT could help identify these men sooner, so they get the most appropriate care.”

Associate Professor Roslyn Francis, co-author and scientific Chair of the Australasian Radiopharmaceutical Trials network, said: “Costs associated with PSMA-PET/CT vary in different regions of the world but this approach may offer savings over conventional imaging techniques. A full health-economic analysis will help to determine the cost effectiveness of introducing PSMA-PET/CT, both from a patient and a healthcare perspective”

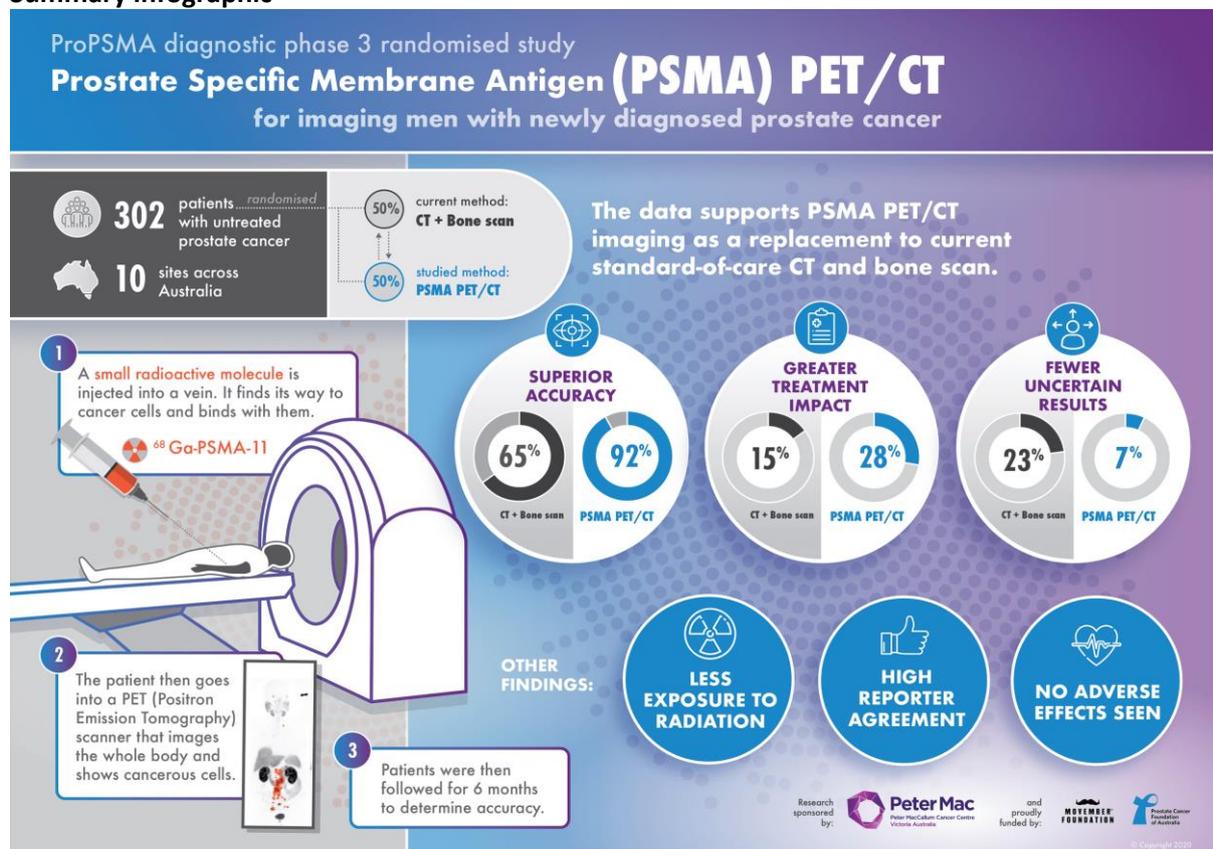
Dr Stephen Mark, President of the Urological Society of Australia and New Zealand, welcomed the results saying “the results of this ground-breaking study have been eagerly anticipated and will be of great significance in the treatment of men with aggressive prostate cancer all around the world.”

The trial was conducted at 10 hospitals around Australia who were early adopters of this new technology. The ANZUP Cancer Trials Group supported the trial. ANZUP Chair, Professor Ian Davis, said, “This remarkable clinical trial brought together experts in nuclear medicine, surgery, oncology and clinical trials. This type of co-operative, academic trial is essential to producing the highest quality data leading to global changes in practice.”

The proPSMA study was funded by men’s health charity Movember via a partnership with the Prostate Cancer Foundation of Australia (PCFA). Dr Mark Buzza, Global Director of Prostate Cancer Biomedical Research at Movember said: “The research arising from the proPSMA study represents a really exciting development in novel imaging that will lead to the optimal management of men with high-risk prostate cancer. There is now solid evidence that PSMA PET/CT scans are the gold standard first-line imaging test for staging high-risk prostate cancer. We would like to see PSMA PET/CT scans adopted into clinical practice as soon as possible for this group of men.”

CEO of Prostate Cancer Foundation of Australia, Professor Jeff Dunn AO, hailed the study a game-changer. “These findings will transform the way we manage and treat prostate cancer, providing men around the world with much greater hope of combatting the disease effectively. Today we are one step closer to our vision of a future where no man dies of prostate cancer – standing on the shoulders of research leaders.”

Summary infographic



The Lancet video abstract: <https://www.youtube.com/watch?v=QKxPgEdLO2E&feature=youtu.be>

NOTES

This study was funded by Movember Australia and the Prostate Cancer Foundation of Australia. It was led by researchers at the Peter MacCallum Cancer Centre (Australia), and also conducted at the The University of Melbourne (Australia), Austin Health (Melbourne, Australia), University of Western Australia, Sir Charles Gairdner Hospital (Perth, Australia), Queensland University of Technology (Australia), The University of Queensland (Australia), University of Newcastle (Australia), Monash University (Australia), St Vincent's Health (Australia), the University of Sydney (Australia), The South Australian Health and Medical Research Institute (Australia) and The University of Adelaide (Australia).

For interviews with the Article authors, please contact study researchers directly:

- **Professor Michael Hofman** E) michael.hofman@petermac.org T) +61 419130646 twitter: @DrMHofman;
- **Professor Declan Murphy** E) Declan.murphy@petermac.org T) +61 410732813 twitter @declangmurphy
- **or Danny Rose, Interim Director of Communications, Peter MacCallum Cancer,** E) danny.rose@petermac.org T) +61407250088

For embargoed access to the Article and Comment, please see: <http://www.thelancet-press.com/embargo/prostatecancer.pdf>

NOTE: THE ABOVE LINK IS FOR JOURNALISTS ONLY; IF YOU WISH TO PROVIDE A LINK FOR YOUR READERS, PLEASE USE THE FOLLOWING, WHICH WILL GO LIVE AT THE TIME THE EMBARGO LIFTS:
[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)30314-7/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)30314-7/fulltext)