New Prostate Treatment Prevents Cancer Spread

Australian and New Zealand researchers have discovered a powerful new prostate cancer treatment regime that can reduce the spread of aggressive but apparently localised tumours by more than 40 per cent.

The 5 year follow up results of the Trans-Tasman Radiation Oncology Group 03.04 RADAR trial give Australian and New Zealand men with newly-diagnosed cancer a better chance of survival without increased long term side effects.

"It's hugely exciting to find a treatment combination that can cause such a large reduction in the spread of high-grade prostate cancer with limited side effects and ultimately save the lives of people whose cancer could have otherwise spread," says Professor Jim Denham, lead author of the study published today in the prestigious journal The Lancet Oncology.

"Such a result is obviously of massive importance to newly-diagnosed men with localised but aggressive prostate cancer, their partners and their families. This is because the RADAR patients were spared the many long-term side effects associated with longer durations of testosterone suppression of between 28 and 36 months now commonly used in conjunction with radiotherapy around the world.”

The RADAR trial enrolled 1071 men with newly-diagnosed aggressive but localised prostate cancer between 2003 and 2007 from 23 centres across Australia and New Zealand. It was supported by National Health and Medical Research Council grants and funding from other sources, including Novartis Pharmaceuticals and Abbvie Pharmaceuticals, University of Newcastle, Calvary Health Care, Hunter Medical Research Institute (HMRI) and the Maitland Cancer Appeal.

During the trial all men received six months of testosterone suppression therapy, using leuprorelin, followed by radiotherapy. They were randomly allocated to either no further treatment or an extra 12 months of testosterone suppression therapy and/or 18 months of a different type of anti-cancer drug called zoledronic acid starting alongside their first leuprorelin injection.

For men with the most aggressive cancers - those with Gleason scores of 8-10 - the combination of 18 months testosterone suppression therapy and zoledronic acid plus radiotherapy emerged as the most effective.

Those men with less aggressive Gleason score 7 or less cancers benefited most from 18 months testosterone suppression plus radiotherapy without zoledronic acid.

Prof Denham says the results were better than expected – the treatment would likely have a knock-on effect of a 30-40 per cent lower death rate among men fighting this type of cancer.
The results point to emerging new standards of care for prostate cancer, especially if the findings hold true at the 10-year patient follow-up in 2017.

As all drugs used in the trials are already in widespread use, these treatments could in theory be used immediately, Prof Denham says.

"The only downside is that zoledronic acid, which costs about $2,500 for this course, is not subsidised for use in men with locally advanced prostate cancer," he says. "However, cancer centres in Australia and New Zealand may be able to purchase the medication at lower cost in the coming months so they can make it available at discounted prices."

The results, the first to be reported from the ongoing RADAR trial, were also presented at the premier cancer conference ASCO in Chicago in June.

It is one of many significant cancer studies underway through TROG Cancer Research, a world-leading clinical trials group focused on the benefits of radiotherapy, a treatment using high energy rays to destroy cancer cells.

"Radiotherapy is used by six in every 10 cancer patients, making it one of the most common cancer treatments available," says Joan Torony, TROG's Chief Operations Officer and Research Manager. "We're working hard in the areas of prostate, breast, lung and oesophageal cancers to find new, better and safer ways to treat people and save lives."

The paper, 'Main oncologic endpoints of the TROG (RADAR) randomised phase 3 trial for men with locally advanced prostate cancer', is available at [http://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(14)70328-6/fulltext](http://www.thelancet.com/journals/lanonc/article/PIIS1470-2045(14)70328-6/fulltext)

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**Prostate Cancer in Australia**

- Prostate cancer is the most common cancer diagnosed in Australia, and the third most common cause of cancer death
- It is more common in older men, with 85 per cent of cases diagnosed in men over 65 years of age
- Statistics show 3294 men died from prostate cancer in 2011, accounting for 13 per cent of all cancer deaths in Australian men
- The RADAR trial focused on localised but aggressive prostate cancers which account for about 35 per cent of new diagnoses of prostate cancer in Australia and New Zealand each year. However because even more advanced prostate cancers are much less commonly diagnosed nowadays, locally advanced cancers account for more than 50 per cent of all prostate cancer deaths
- Targeting these locally advanced cancers is one of the best ways to reduce the prostate cancer death rate and prevent suffering caused when prostate cancer spreads to other parts of the body. For these reasons, locally advanced cancers are the focus of TROG Cancer Research’s prostate cancer efforts.

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