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Cancer fight in new light

Herald Sun, Melbourne

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Killing ovarian tumours

BRIGID O'CONNELL

A LIGHT therapy used to treat skin cancer and sun spots is emerging as a promising treatment for reaching cancer cells deep in the body, with Melbourne researchers finding the first evidence of its ability to kill ovarian tumours.

Ovarian cancer is notoriously deadly given its vague symptoms typically lead it to be diagnosed late.

Fewer than half of these women will live more than five years after diagnosis, as most ultimately become resistant to standard chemotherapy.

But new research from the

Hudson Institute of Medical Research has found that a treatment called photodynamic light therapy is able to dramatically shrink ovarian cancers in mice, while sparing the surrounding healthy tissue.

The treatment works by giving the patient a drug containing a light-sensitive compound; this is administered intravenously for solid tumours and as a skin cream for treating melanoma.

These compounds sit inert in the cancer cells until a specific wavelength of light is shined on them, causing a reaction in the tumour.

The proof-of-concept work in mice — using a new type of the light therapy called PhotoSoft Technology developed by Victorian medical technology

firm Invion — saw it able to halve the size of ovarian tumours in mice in three weeks.

Lead researcher Dr Andrew Stephens, head of Hudson's ovarian cancer biomarker laboratory, said it was believed the treatment worked in two ways: first, by triggering instant cell death and, secondly, by rallying the immune system to continue attacking the cancer.

"It's like a little explosion in the cell that damages the cancer cell and it dies immediately," Dr Stephens said.

"Over the next few weeks we believe it starts to recognise the tumour as bad and continues to attack it and remove it.

"That's something we'll be looking at over the next few months."



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Dr Stephens said with ovarian cancer being resistant to traditional and some new types of treatment — such as immunotherapy, which is revolutionising outcomes for blood cancer and melanoma — this could be a promising way of getting the immune system to make a more sustained attack on the cancer.

“The key outcome from this work is we’ve really got potentially another string in the bow where conventional therapies aren’t working,” he said.

The Photosoft Technology will be tested in Australians with skin cancer from next year. Peter MacCallum Cancer Centre will also test it in animal models of anal cancer.

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