In focus: Technology

New cancer treatment at Prince of Wales Private Hospital

Turning the heat up on cancer
NEW CANCER treatment involving hyperthermia is being offered to patients at Prince of Wales Private Hospital. Diagnostic and interventional radiologist Dr Luke Baker and radiation oncologist Professor Michael Jackson teamed up to offer the treatment to patients at the Sydney-based hospital.

“The form of hyperthermia we are using is called oncothermia, and this particular method has not been used before in Australia,” explained Dr Baker.

“Oncothermia is based on the classical method of hyperthermia, one of the oldest cancer treatment methods. Unlike conventional hyperthermia however, oncothermia does more than simply warm deep layers of tissue. It also combines such warming with a modulated electric field, with a carrier frequency of 13.56 MHz that is generated by two active electrodes.

“While traditional hyperthermia functions solely via thermodynamic parameters, such as temperature, oncothermia functions by controlling absorbed energy doses, via an approach similar to that used in radiation therapy. Oncothermia moves beyond conventional heat therapies by using controlled, selective energy transfer. It transports energy directly to malignant cells, via a selecting electric field, and selectively destroys malignant cells by applying the required specific energy dose.

“Oncothermia, a unique improvement on conventional oncological hyperthermia, represents the next generation of hyperthermia therapy.”

Oncothermia has been used in Europe and Asia, particularly Korea, since it was first developed in 1989 and is increasingly used around the world. It is administered through multiple treatments, each lasting 50 minutes. “We use it in conjunction with standard chemotherapy and radiotherapy,” said Dr Baker.

Dr Baker explained that the introduction of oncothermia to Australia was instigated by Mrs Jenny Barlow.

“Six years ago Jenny’s husband died from prostate cancer,” said Dr Baker. “Jenny was convinced that if he had been able to avail himself of this treatment, he may have survived.”

Determined to raise funds and awareness, Jenny contacted Professor Michael Jackson, who had a long-standing interest in hyperthermia treatment for cancer.

“We got together as a team to investigate further and decide whether it was something we could and should do,” Dr Baker said.

The group travelled to Korea to research the technique and see first-hand how well it worked. They were sufficiently impressed. Professor Jackson and Dr Baker then travelled to Europe for formal training on utilisation of the required equipment and protocols.

“We started treatment with our first patient at Prince of Wales Private Hospital on 19 November,” said Dr Baker.

Dr Baker said the Oncothermia Clinic offers a combined clinical and research service. All patients who undergo the treatment are required to participate.

“Our hope and expectation is that we will collect data, audit our work and publish on a regular basis. We are very keen to make sure this is a well-studied, well organised process,” said Dr Baker. “We’re going to study the extent of the effectiveness of the treatment in different tumours."

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