

TASWEEKEND

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IN THE BUSINESS OF HOPE

Groundbreaking work, through a series of cutting-edge clinical trials, being undertaken by two of the state's leading cancer specialists Louise Nott and Michael Jones, is helping many Tasmanians lead longer and healthier lives, writes Linda Smith



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IN THE business OF HOPE

Groundbreaking work, in a series of cutting-edge clinical trials, being undertaken by a Hobart-based team – led by two of the state's leading cancer specialists – is helping Tasmanians lead longer and healthier lives, writes **Linda Smith**

Photography NIKKI DAVIS-JONES



Louise Nott grew up on a farm in northern Tasmania and spent her childhood caring for sick and injured animals.

"We had a range of livestock on our farm and I loved our animals," Nott recalls.

"I would care for, and raise, the sick lambs when the ewes were unable to. I loved bottle-rearing the calves. We also took in wildlife, injured on the roads, and restored them to health (where possible) so they could be released into the wild ... or to the local wildlife park. I quickly learnt that life could be fragile and precious. I had this enduring want to be able to help all living things above everything else."

Nott, who attended Hagley Farm Primary School and Launceston's St Patrick's College, intended to pursue a career as a veterinarian, but soon realised she was better placed caring for people.

"Initially I thought veterinary science was my calling," Nott explains. "But after an encounter with an angry bull on work experience, I decided it was not for me and that perhaps helping humans might be a better option – I have never looked back."

Nott is now a leading cancer specialist in Tasmania, working not only as a medical oncology consultant at the Royal Hobart Hospital but also a Clinical Associate Professor at the Menzies Institute for Medical Research and as Director of Medical Oncology for the Icon Group, which runs private cancer clinics across Australia, including a clinic in Hobart's CBD, where she works as a visiting medical oncologist.

Hobart's Icon Cancer Centre is led by a team of highly experienced cancer specialists – including Nott and Clinical Associate Professor Michael Jones – who provide a wide range of

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cutting-edge treatment options to Tasmanians with cancer, including radiation therapy, chemotherapy and immunotherapy, as well as pharmacy and imaging all in one location on the corner of Campbell and Melville streets (opposite TasTafe).

The centre runs separately to Tasmania's public hospitals but maintains a close connection with clinicians across both the public and private systems. And since opening in 2017, Nott says Icon Hobart has recorded "some incredible achievements", allowing staff to "make a real difference to local cancer patients' lives, every day".

"As a team, we have treated approximately 2200 radiation oncology patients, delivering more than 42,000 individual radiation treatment sessions," she says. "And had approximately 10,000 admissions to our day-oncology hospital, where we've administered

COVER STORY



approximately 17,000 infusions.”

And one of the most groundbreaking aspects of the centre is its leading work in clinical trials, with a range of trials and treatment advancements ultimately helping Tasmanians lead longer and healthier lives.

Cancer is a leading cause of death in Australia – figures from the Australian Institute of Health and Welfare show more than 48,000 Australians died from cancer (all cancers excluding non-melanoma skin cancers) in 2020 – an average of 132 deaths every day – and cancer accounts for about three in every 10 deaths in Australia.

It was estimated that 162,000 new cancer cases would be diagnosed in Australia last year (exact figures are yet to be published) – an average of 440 a day – with about 50,000 Australians likely to have died from cancer last year.

The number of deaths from cancer in Australia has risen steadily over the past four decades and almost doubled between 1980 (when there were 24,900 cancer deaths) and 2020 (when there were 48,266 deaths). The increase is attributed mainly to population growth and an ageing population. In contrast, the age-standardised mortality rate for all cancers has decreased by 29 per cent, from 209 deaths per 100,000 people in 1982 to an estimated 149 deaths per 100,000 people in 2021.

Meanwhile figures from the Tasmanian Cancer Registry show that in 1980, there were 1271 Tasmanians diagnosed with cancer, while 621 Tasmanians died of cancer in that same year.

In 2019, there were 3728 Tasmanians diagnosed with cancer (population growth, an ageing population, improvements in



Clinical Associate Professor and medical oncologist Louise Nott and Clinical Associate Professor and radiation oncologist Michael Jones, left, are among those who're leading a team of highly experienced cancer specialists working at the Icon Cancer Centre to help many Tasmanians lead longer and healthier lives; and, above, the Hobart Icon Cancer Centre, on the corner of Campbell and Melville streets, where the groundbreaking work is taking place.

technology, greater public awareness and national screening programs are all considered to have contributed to the increase) while 911 Tasmanians died of cancer that year.

Tasmanians have a one in three chance of developing cancer by the age of 75 and a one in two chance of developing cancer by age 85.

While the number of cancer diagnoses have risen steadily since 1980, it is promising to see that cancer deaths in Tasmania have been trending downwards since 2015.

Nott says she's never going to be able to cure all her patients, but breakthroughs in research have helped produce more favourable patient outcomes.

“Fortunately, through my career, I have seen clinical trial “breakthroughs” improve outcomes from many cancers in an unparalleled way,” she says. Whilst there is still much work to be done, I am grateful every day for the progress we have made. When I started as a medical oncologist I saw young patients with advanced melanoma dying within six months of their diagnosis. I observed the pain these people went through and the distress and grief their families suffered losing a parent, son/daughter, spouse.”

But she says clinical trials are making a huge difference, helping Tasmanians with melanoma to live longer, healthier lives.

“I was fortunate enough to be involved as an investigator in Tasmania with some of the pivotal international clinical trials that have revolutionised the care of patients with metastatic melanoma,” Nott explains. We now see approximately 50 per cent of the patients with this disease as long-term survivors. I have had many young patients survive this cancer and go on to live meaningful lives and have families of their own. As much as I hope to cure all my patients, the reality is that I cannot right now but I truly believe there is hope that one day we may be able to. The strength and resilience of my patients inspires me every day.”

Melanoma is one of the top three most common cancers in Tasmania, with about 420 new cases diagnosed per year. About 430 new cases of breast cancer are diagnosed per year, while about 560 new cases of prostate cancer are diagnosed per year. This is consistent with leading cancers nationally. About 400 Tasmanians are diagnosed with colorectal cancer each year, while about 330 are

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diagnosed with lung cancer.

Meanwhile there were about 417,000 cases of non-melanoma skin cancers treated in Australia in 2010, with 722 Australians dying from non-melanoma skin cancer in 2020.

There are more than one million living Australians who are either currently living with cancer, or have lived with cancer.

And about 70 per cent of all people with cancer now survive for at least five years after diagnosis, up from 51 per cent, 30 years ago.

"Over the past few decades, there has been a decline in cancer mortality rates, indicating improvements in cancer prevention, early detection and treatment," Nott says. "Australia has made significant progress in addressing various types of cancer through public health initiatives, advances in medical research, and improved healthcare services. However it's important to note that the trends in cancer mortality rates can vary across different types of cancer. Some cancers have shown more substantial declines in mortality rates, while others may have experienced less progress."

Icon offers the largest private cancer clinical trials program in Australia and Nott says trials are particularly beneficial to patients who have exhausted all other treatment options.

Previously Tasmanians would have been required to travel interstate or overseas to be part of some medical trials, but increasingly are able to participate in trials closer to home, something which is hugely important when many patients are already so ill and are not always fit to travel.

May 20 is International Clinical Trials Day,

which provides an opportunity to celebrate breakthroughs in medical research while also raising awareness about the role medical trials play in healthcare in Australia and across the world.

"Clinical trials help us understand if a new intervention (for example, a new treatment for cancer) is safe and effective compared to our current standard options, and are an important part of advancing our knowledge," Nott explains. "They are a vital path to providing new treatments for our patients who may have exhausted current options."

All cancer clinical trials have inclusion and exclusion criteria which help Nott and other oncology specialists determine whether the trial will be suitable for a particular patient. These criteria are generally based on the type and stage of their cancer, any previous treatment history and current medical conditions. Nott says guidelines not only help keep patients safe but ensure research produces reliable results.

Nott says clinical trials are generally structured in four stages. Each stage (or 'phase') is considered a separate trial and the data from each trial is reviewed before continuing on to the next phase to ensure patient safety. In most cases it takes about 10 years for an experimental treatment to move through all four phases.

Phase I trials are conducted to test a new intervention for the first time in a small group of people (generally less than 100) to evaluate safety. Phase II trials are conducted to examine this same intervention in a larger group of people (several hundred) to determine effectiveness and safety. Phase III trials are

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– Louise Nott

conducted to examine the effectiveness of the intervention in a larger group of people (up to several thousand) and provide further monitoring of side effects. Phase IV trials involve a review of data from an approved intervention after it has been made available to the general public to collect more information in the real-world setting.

In addition to the active treatment patients receive on a trial, there's usually a long follow-up period where staff continue monitoring patients to ensure their safety and response to treatment.

"Icon Cancer Centre provides treatment for cancer on clinical trials to help improve the options available locally," Nott says. "Icon Cancer Centre's mission is to provide the best care possible, to as many people as possible, as close to home as possible. A vital part of this mission is providing access to cutting-edge treatment options offered by clinical trials locally to ensure our patients are able to remain close to their families and extended support networks during an often-challenging journey."

"Patients can be referred by their doctors from other hospitals for consideration of a clinical trial run at Icon Cancer Centre. We currently offer trials in breast, prostate, lung and skin cancer. Most of these trials are large national or international trials that we participate in as one of many sites, with each site contributing valuable information to advance everyone's knowledge."

Clinical trials are generally funded by sponsors such as pharmaceutical companies or collaborative groups like ANZUP (Australian

COVER STORY



and New Zealand Urogenital and Prostate Cancer Trials Group), an organisation which aims to improve outcomes for people affected by below the belt cancers. Nott says these study sponsors develop the clinical trial protocol that she and other specialists follow, provide the study treatment for patients and maintain strict monitoring of studies to ensure patient safety. Icon Cancer Centre also offers investigator-initiated trials which are funded by Icon Cancer Foundation, a not-for-profit organisation which is dedicated to supporting local research developed by Icon Cancer Centre doctors.

Figures show more than \$1.7bn was spent on cancer research in Australia between 2006 and 2011, and more than \$252m was spent between 2016 and 2018. The federal government was the largest contributor, providing 58 per cent of funding and 74 per cent of funding in those respective periods.

In 2015-16, cancer in Australia cost the health system more than \$10bn.

Nott was inspired to study medical oncology after seeing the work done by her mentor, Professor Ray Lowenthal, who pioneered clinical trials in Tasmania and opened the door to clinical research for Nott and others who are now working in the field.

She says the frustrating part about the job is it can take many years for the outcomes of clinical research to translate into real-world benefit.

It can be a rewarding job, as staff are providing vital support to patients – and their families – during a very difficult time. Oncologists offer hope to patients through treatments and clinical trials, which can potentially push cancer into remission or give patients more time with their loved ones. But it's also a challenging job, as many of the patients they see are very unwell, or are at the end of

their life.

But bringing many firsts to the state, and knowing that each new breakthrough is another step forward in the right direction, helps Nott cope with the harder aspects of the job.

As well as the establishment of the oncology clinical research centre in July 2021 and the start of private sector oncology trials later that year, which Nott says was “momentous” for improving access to clinical research for all Tasmanians. Icon also introduced the first private genetic counselling and lymphoedema screening services to the state. The centre also established the first oncology multidisciplinary meetings in the state outside of the Tasmanian Health Service in the areas of urology, melanoma and complex skin cancers.

Nott says she has learnt a lot from the many patients she has cared for over the years.

“My patients inform me the most about how to live my best life, rather than the other way around,” she says. “My patients have taught me to have gratitude for every day and not to take things for granted. I try not to sweat the small things and remain focused on the bigger picture. I gain great satisfaction in being able to do the best I possibly can for my patients and their families – delivering high quality cancer care, offering patients cutting-edge treatment opportunities close to home and most importantly just being there for them. I know how important my family is to me and I deeply appreciate the significance of family to others. The pain suffered by losing a family member to cancer is tangible and the hope of one day alleviating this pain drives me to strive for a world without cancer.

“But for now, the reality is that I will have sad days. I find heading out for a run after work on our beautiful Mt Wellington or along a local beach is the best way of re-focusing on the job at



Clinical Associate Professor and medical oncologist Louise Nott in her consulting rooms at the Hobart Icon Cancer Centre, far left; and Clinical Associate Professor and radiation oncologist Michael Jones with the linear accelerator in the radiation treatment bunker at the Icon centre, left; and, above, the Icon centre's day hospital area. Pictures: Nikki Davis-Jones and supplied by the Icon Cancer Centre.

hand. Gardening is also an escape for me. I absolutely love my job – the good and bad days.”

Nott's colleague, radiation oncologist Michael Jones, agrees that it can be a challenging career, but ultimately, he feels he's doing something worthwhile.

“Many of the patients we see are facing extremely difficult situations,” he says. “To help people through these times can be very satisfying. As doctors, our focus is on the patient and what they are going through, and ensuring we do a good job, but we'd be lying if we denied being affected at times. Treating young patients with cancer can be particularly affecting. I do sometimes find myself at a loss trying to make sense of it all.”

Jones grew up in country Victoria but married a Tasmanian. They settled in Hobart in 2017.

He works for both the Royal Hobart Hospital and Icon Cancer Centre.

“My father is a rural GP which had a big influence on me,” he says. “I originally studied engineering and geology before concluding I wanted a career that allowed me to help people more directly. After studying medicine, I chose to specialise in radiation oncology as it brought together my background in physics with a medical career. I most enjoy being able to combine patient interaction with the technical aspects of the job and knowing my efforts are being directed towards something worthwhile.”

He says the hope that we will one day live in a world where cancer is less prevalent or more easily treated and managed is a driving force for him.

“My family, like most, has been impacted by cancer,” he says. “This allows me to empathise with patients and better understand the patient perspective. While cancer remains a leading cause of death in our community, significant progress has been made. I believe further headway can be achieved through early detection by implementing more rigorous screening and perhaps incorporating promising tools such as liquid biopsies. On the therapeutic front, most exciting is the emergence of immunotherapy over the past decade which has already been a game changer for some patients – and this is only the beginning. I have an 18-month-old daughter and I certainly hope hers is a future in which cancer is detected early and, with improved therapies, has become a manageable disease.”

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