Health | WA News

Perth's Liver Cancer Collaborative global spearhead in research of liver cancer in all stages

Claire Sadler | The West Australian Tue, 3 June 2025 2:00AM | Comments |



🛍 Liver cancer collaborative. Pictured are back L-R Louise Winteringham, Megan Collins, Oliver Duncan, and front L-R Shirley Go, Michael Wallace, Nina Tirnitz-Parker and Tim Mitchell Ian Munro Credit: Ian Munro/The West Australian



A world-leading biobank in Perth is offering new hope in the treatment of a deadly cancer.



The Liver Cancer Collaborative, which is led by UWA and Curtin University, is among the first in the world to research all stages of liver cancer.



Located at the Harry Perkins Institute in Nedlands, the biobank stores more than 350 WA patients' cancerous liver tissue and blood samples.

Liver cancer is the sixth most deadliest cancer in Australia, with less than 20 per cent of people living for five years after diagnosis.

Most people who develop it have an underlying liver disease, often cirrhosis – a condition where healthy cells are replaced by scar tissue.

Since opening in 2020, the biobank has collected liver cancer tissue while also tracking patients throughout their cancer journey to see how they react to treatments.

Clinical lead Michael Wallace said this was one of the first biobanks in the world to research tissue from intermediate and advanced liver cancer rather than just the early stages of the disease.

"Most of the genetic analysis of liver tumours over the years have been tissue from a tumour that had been operated on and removed, now that created a natural bias because the people that are typically operated on have the very early stage disease," he said.

"We really want to try and make sure that patients with intermediate or advanced stage disease are included within our biobank not just the early-stage cancers."

He said research on the deadly disease had fallen behind other types of cancer research due to biopsies — a procedure to remove a piece of tissue to determine if cancer is present — not being routinely used to diagnose a person with liver cancer.

Traditionally, liver cancer has not been diagnosed on a biopsy as it's one of the few where a diagnosis can be made from an MRI or a CT scan alone.

"For years, people have been avoiding performing liver biopsies because they felt that it probably wasn't necessary and there also was some risk involved," Dr Wallace said.

"Over time, with the use of really sophisticated biopsy techniques and really experienced radiologists who take these biopsies, we've demonstrated that biopsying a liver tumour is actually quite safe, that has then allowed us to use excess biopsy specimens to perform research on so that we can get a better understanding of the cancer.



Liver cancer collaborative. Pictured are clinical lead Michael Wallace and program director Nina Tirnitz-Parker. Credit: lan Munro/The West Australian

"That has been one of the really big changes that I think is driving a deeper understanding of liver cancer around the world and we're at the forefront of that."

This has allowed it to test new drugs on tumour samples in a bid to create personalised treatments that match the right patient with the right therapy as well as working to predict recurrence of the cancer.

Liver Cancer Collaborative program director Nina Tirnitz-Parker said the access to the samples would expand how the deadly disease could be treated.

"It's only now becoming possible to biopsy and really look into the genetic make up of a tumour and to see why certain patients respond and others do not," she said.

"We can now gain a much better understanding now that we can look and get the molecular fingerprints of those tumours and also trace people over time.

"Our collaborative is really aiming to personalise treatment so we get the right treatment at the right

time, people will hopefully have less side effects with the right treatment and we can try and diagnose it earlier."

Dr Wallace urged anyone with an underlying liver disease to be screened every six months in order to catch liver cancer early.

The biobank's collaborators include Sir Charles Gairdner Hospital, Royal Perth Hospital, Fiona Stanley Hospital, PathWest, Consumer and Community Health Research Network and Proteomics International Laboratories.