Friday 26th July 2024

Leeds becomes the first hospital in the UK to benefit from revolutionary technology for patients with brain tumours thanks to charity funding

Leeds Hospitals Charity has invested £150,000 to fund state-of-the-art equipment at Leeds Teaching Hospitals NHS Trust that can more effectively diagnose brain tumours in real-time during an operation. This means that more of the tumour can be removed, whilst keeping healthy brain tissue safer.

The Zeiss Convivo Pathology Suite allows Neurosurgeons to use innovative new technology to produce high quality images of tumours from inside a patient's brain, in real-time. Pathologists can view these images as a livestream from anywhere in the world. This means that they can make a quicker and more accurate diagnosis during surgery and advise surgeons to remove as much of the tumour as possible with minimal damage to healthy cells surrounding it.

Thanks to donations, Leeds is pioneering the use of this technology in the UK, which could benefit up to 300 patients across Leeds Children's Hospital and Leeds Teaching Hospitals NHS Trust every year. Leeds has become the UK Reference Centre for Convivo, which means that it hosts surgeons and pathologists from other brain tumour centres who want to see it in action and learn.

55-year-old Michelle Hicks, from Horsforth, had surgery using this new technology in January 2024, she said:

"The 7th September 2023, is a date that I will never forget. What started off as an ordinary day working from home, ended with me waking up in a hospital bed, dazed and confused about what had happened to me. A CT scan revealed a large tumour on my brain, I needed to start treatment right away and spent the next couple of weeks in hospital. I couldn't really process it, I hadn't experienced any symptoms until that day.

"My life-saving surgery took place around five months ago, I spent 10 hours undergoing awake surgery; it was surreal. After the operation, our surgeon told my husband Martin and I about the new technology they had used to perform the surgery, explaining the equipment was charity funded. Martin remembers being told prior to surgery it was anticipated that about 70% of the tumour could be removed, but with the help of this technology Neurosurgeons were able to remove over 95% of my tumour; reducing the risk of it growing back.

"I'm slowly regaining my independence, and my long-term aspirations are to drive again and go out by myself. The staff told me, that if all goes well, I should make a full recovery within 12 months post-surgery. I'm so grateful to have this opportunity to rebuild my future."

Previously, samples removed from the head required a biopsy that was transported to a lab at a different hospital for analysis which proved a much more time-consuming process, with results sometimes coming back as inconclusive. This long-winded process also discouraged surgeons from taking more samples and samples had to be cut from the brain to be analysed.

Ryan Mathew, Associate Professor at the University of Leeds and Honorary Consultant Neurosurgeon at Leeds Teaching Hospitals NHS Trust and his team treat patients with a range of neurological conditions, including cancerous, non-cancerous and benign brain tumours, some of which can be life-threatening if not treated with surgery.

Mr Mathew said:

"We are so grateful that Leeds is the first hospital in the UK to benefit from this revolutionary technology, which allows us to work more accurately and efficiently and in turn reduce risks to patients, so they can recover much quicker, with as little disruption to their life as possible."

Mr Mathew was crucially supported by Dr Aruna Chakrabarty, Consultant Neuropathologist, to bring the Convivo to Leeds. Dr Chakrabarty is the lead Neuropathologist that helps interpret the Convivo images in real-time, to give essential feedback on tumour margins whilst the surgery is in progress.

There are hopes that the results from the images and data captured using this advanced technology will enable better education for trainee neurosurgeons and pathologists, as well as offering opportunities to develop research focusing on the use of AI in brain surgery.

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For more information, please contact Joanna Parker, PR & Media Manager at Leeds Hospitals Charity, on 0113 539 8613 or email joanna.parker@leedshospitalscharity.org.uk

About Leeds Hospitals Charity

Leeds Hospitals Charity is the charity partner of Leeds Teaching Hospitals NHS Trust, one of the biggest healthcare trusts in Europe. We raise funds for projects, above and beyond what the NHS can provide, to support the latest in healthcare innovation and technology, the treatment of rare conditions and to help reduce health inequalities.

Working with local communities, schools and businesses across the city and beyond, we provide £6 million in additional funding for Leeds Teaching Hospitals NHS Trust every year, supporting one million patients and their families and 22,000 NHS staff.

Leeds Hospitals Charity is a registered charity in England and Wales (1170369) and is an accredited member of the Association of Medical Research Charities (AMRC).

About Leeds Teaching Hospitals NHS Trust

Leeds Teaching Hospitals is one the largest and busiest acute hospital trusts in Europe. Every year Leeds Teaching Hospitals provides healthcare and specialist services for people from the city of Leeds, Yorkshire and the Humber and beyond. We play an important role in the training and education of medical, nursing and dental students, and are a centre of world-class research and pioneering new treatments.

Leeds Teaching Hospitals has a budget of £1.9 billion and employs almost 22,000 staff. Last year, the Trust provided over 1.6 million treatments and episodes of care.

Our care and clinical expertise is delivered from seven hospitals on five sites, and they are all joined by our vision to be the best for specialist and integrated care.

Michelle and Martin's Wedding Day

Michelle and Martin on holiday

Above and below the Zeiss Convivo Pathology Suite

Michelle and Martin at a party