

Somerset's NHS pioneers clinical use of AI software to transform prostate cancer diagnosis

Cambridge, UK: 19 March 2024 – A groundbreaking way of supporting doctors to diagnose prostate cancer using the latest artificial intelligence (AI) technology has launched in Somerset.

Somerset NHS Foundation Trust (FT) has joined forces with Cambridge-based technology company, Lucida Medical, as the first NHS trust in the UK to introduce its AI tool, called Pi, to work alongside teams of radiologists.

With support from charities Macmillan Cancer Support and Prostate Cancer Research, the Pi tool is being introduced at both Yeovil District and Musgrove Park hospitals to assist radiologists in detecting clinically significant prostate cancer, using an AI technique that looks at a prostate MRI scan.

Macmillan estimates that there are more than 500,000 men living with prostate cancer in the UK*. It's the most common cancer in men, and 1 in 8 men will be diagnosed in their lifetime**. Prostate cancer is particularly dangerous when found at stages 3 or 4, and more than 12,000 deaths occur in the UK each year***.

Dr Paul Burn, a consultant radiologist at Somerset FT, explains how the trust came to be involved in this innovative project.

“This all started when we participated in a multi-centre national trial, called ‘PAIR-1’, that assessed the effectiveness of Pi,” he says.

“We then trialed a version of Pi at our trust, and we compared its results to radiologists’ reports in over 700 patients, to check that it would work for our purpose.

“The way it works is really simple – within a few minutes of the patient having their MRI scan, the Pi tool displays a number that gives a probability of cancer on the scan. It also shows the exact location of any tumours in the prostate by adding a colour overlay to the scan images.

“The software is located securely on a server within the hospital, so no patient data leaves the trust.

“Using it, we expect to help relieve pressure within our hospital, by enabling patients to go through the diagnostic pathway more rapidly and reducing diagnostic waiting times. It will also support our clinical departments that have smaller numbers of MRI reporters to manage their workload.

“We know that we have to be very careful with the way we use AI, and it’s absolutely not intended to replace a human being in any way – instead it’s simply helping to speed up the workflow and potentially aiding our radiologists provide a more accurate diagnosis.

“In many ways we’re using it as a ‘reporting buddy’, so it’ll help with prioritising patients based on clinical need, and telling us which patients we should report on first because they have a higher probability of cancer. Pi also measures the volume of the prostate gland for us, a repetitive job that is time-consuming for radiologists to do manually.

“Patients with prostate cancer have a complicated diagnostic pathway, needing an MRI and a biopsy and it is often challenging to complete all the steps within the national 28 day Faster Diagnosis Standard.

“Our aim is that by using this AI software, we will be able to speed up the process and enable us to prioritise those with cancer. It’ll also free up our radiologists to report on additional patients every day, and may in future allow us to book the patient in for a biopsy more quickly.”

Dr Antony Rix, CEO and co-founder of Lucida Medical, says: “NHS hospitals, including Musgrove Park and Yeovil, have made key contributions to the development and testing of Pi through clinical studies. It’s therefore a great pleasure to see Pi put to work to help prostate patients in Somerset get the best possible diagnosis.”

Dr Anthony Cunliffe, National Lead Medical Adviser at Macmillan Cancer Support, said: “Our investment in Lucida Medical and its pioneering AI platform, Pi is the latest venture as part of our Innovation Impact Investment Portfolio.

“Pi has the potential to transform how we diagnose and monitor patients with prostate cancer, so we’re thrilled to see this software being put to use in Musgrove Park and Yeovil. We look forward to seeing more hospitals across the UK and Europe recognising the great potential of this technology.”

Oliver Kemp, CEO at Prostate Cancer Research (PCR), said: “we are passionate about bringing the best diagnostics and treatments into clinical use to benefit prostate cancer patients. We are delighted that Lucida Medical has reached this tremendous milestone following PCR’s investment in the company and its revolutionary Pi technology.”

References:

* Macmillan Cancer Support. [Cancer prevalence](https://www.macmillan.org.uk/about-us/what-we-do/research/cancer-prevalence). Accessed February 2024

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** Lloyd T, Hounsome L, Mehay A et al. Lifetime risk of being diagnosed with, or dying from, prostate cancer by major ethnic group in England 2008–2010. *BMC Med* 2015; 13: 171

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*** Cancer Research UK. [Prostate cancer mortality](https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/prostate-cancer). Accessed February 2024

<https://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/prostate-cancer>



PHOTO CAPTION:

Colleagues at Somerset NHS Foundation Trust are pictured (left to right): Dr Paul Burn – consultant radiologist, Mr Neil Trent – consultant urologist, Miriam Spicer – cancer improvement manager, Adam Turner – head of radiology services.

Editor's notes:

About Somerset NHS Foundation Trust

Somerset NHS Foundation Trust runs acute hospital services, community services, mental health and learning disability services and a quarter of Somerset's GP practices. It runs services from two acute hospitals – Musgrove Park Hospital in Taunton, Yeovil Hospital in Yeovil – services in the community and services from the 13 community hospitals in the county, a range of mental health and learning disability services and Symphony Healthcare Services runs a quarter of GP practices in the county.

The trust is the result of two mergers. The first merger in April 2020, between Taunton and Somerset NHS Foundation Trust and Somerset Partnership NHS Foundation Trust, brought together acute services, community service and mental health and learning disability services. The second merger brought together acute services from both acute hospitals in the county and a large proportion of the county's GP practices.

The trust believes that the broad range of services that it offers within one organisation puts it in a better position to provide mental and physical health services for our population, helping people to enjoy healthier lives with improved equitable access to the specialist care and treatment they need, when they need it.

The trust is an integral part of the Somerset Integrated Care System and work with NHS, social care and voluntary sector partners in Somerset to plan and deliver services. We care

for patients predominantly from Somerset but also from North Somerset, the west of Dorset and north of Devon.

About Lucida Medical

Lucida Medical develops AI-based technology to assist clinicians to find cancer more accurately, diagnose and treat it more effectively, and save time. Lucida Medical was founded in 2019 by Dr. Antony Rix, an expert in medical devices, machine learning and AI, and Prof. Evis Sala, who at the time was Professor of Oncological Imaging at the University of Cambridge & Addenbrooke's Hospital, and who is now Chair of Radiology at the Università Cattolica del Sacro Cuore and Director of the Advanced Radiology Centre at the Policlinico Universitario A. Gemelli, IRCCS in Rome. Prostate Intelligence™ (Pi™) is intended for use to assist the diagnosis of prostate cancer, and is the company's first product to complete regulatory approvals.

Lucida Medical is backed by investors including XTX Ventures, Macmillan Cancer Support, Prostate Cancer Research, and leading radiologists and urologists. Following a successful collaboration with GE HealthCare in 2021, the company is now building partnerships with hospitals and leading vendors to make Pi™ available across Europe.

<https://lucidamedical.com>

X: [@LucidaMedical](#) | LinkedIn: <https://linkedin.com/company/lucida-medical>

About XTX Ventures

XTX Ventures is the venture capital arm of leading algorithmic trading company XTX Markets and is an early-stage VC fund investing solely in companies with machine learning as a core technology. This unique focus enables us to provide tailored operational support and guidance to our portfolio companies by leveraging XTX Markets' world-leading expertise in machine learning to help grow and enhance those businesses. We can lead or co-invest and have dedicated follow-on capital.

For more information please visit: <https://www.xtxmarkets.com/ventures/>

About Macmillan Cancer Support

At Macmillan, we give people with cancer everything we've got. If you're diagnosed, your worries are our worries. We will do whatever it takes to help you live life as fully as you can. And we don't stop there. We're going all out to find ever better ways to help people with cancer, helping to bring forward the day when everyone gets life-transforming support from day one. As cancer is evolving, so must we. Macmillan will not settle for anything other than the best possible support for people living with cancer. As a charity, we can't afford to stand still. Now more than ever, we need to take every chance to make a difference. But we cannot do it alone. We have been working with others for over 100 years and will continue to do so. So, we're working to create a vision of Macmillan that is shaped side by side with the people and communities we exist to support. To find out more about how Macmillan is doing this visit [Transforming Macmillan together | Macmillan Cancer Support](https://www.macmillan.org.uk/about-us/organisation/strategy/transforming-macmillan-together) (<https://www.macmillan.org.uk/about-us/organisation/strategy/transforming-macmillan-together>).

About Prostate Cancer Research

Prostate Cancer Research is a patient-centric research and information provision charity that is dedicated to improving and saving the lives of people with prostate cancer. They fund novel and innovative research projects at world-leading institutions that are working towards breakthroughs in the prevention, diagnosis and treatment of prostate cancer. They use their



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deep understanding of both patient priorities and the research ecosystem to direct their funding where it will have the most impact.

Over the past two years, they have more than trebled the amount of their research, and currently fund a breadth of research into topics such as AI, radiotherapy, hormone therapy and novel drug targets in multiple institutions across the UK. They also recently launched a new patient platform, 'the infopool' to help educate and empower patients at various stages along the treatment pathway.

For more information, please visit: www.pcr.org.uk

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