

Health Matters

# Reducing delays in correct treatment for bladder cancer

Patients with a common aggressive type of bladder cancer could get correct treatment significantly quicker as new research suggests that initial MRI imaging and biopsy could be used to reduce the time patients wait.

In a new study published recently, a research team from the University of Birmingham's Bladder Cancer Research Centre (BCRC) and Cancer Research UK Clinical Trials Unit (CRCTU) ran a randomised controlled trial testing whether adding a type of magnetic resonance imaging (mpMRI) as the first staging investigation was as effective and quicker than the usual surgical staging for bladder tumours.

The study saw 143 patients with suspected bladder cancer randomised into two groups, either going through the usual test called transurethral resection of bladder tumour (TURBT), or an initial MRI scan to decide upon the most appropriate next steps.

The team found that patients who were randomised to have MRI had a significant reduction in the time taken to receive their correct treatment with a median time of 53 days from first referral to correct treatment, which was 45 days quicker than the usual standard of care which had a median time of 98 days.

Usual tests for muscle invasive bladder cancer involve transurethral



resection, which is a surgical procedure carried out under anaesthetic by a surgeon in which a thin telescope inserted through the urethra is used to examine the bladder and remove tumour material.

Rik Bryan, professor in Urothelial Cancer Research and Director of the Bladder Cancer Research Centre at the University of Birmingham and first author of the study said:

"Bladder cancer is a common cancer and we know that with any cancer, and especially muscle-invasive bladder cancer, speed is of the essence when treating. Any ways to improve the time from initially suspecting cancer to getting the right treatment

gives patients the best chance of responding well.

"However, this aspect of the bladder cancer care pathway has remained essentially unchanged worldwide for over 100 years, whilst the rest of medicine and healthcare has innovated around it. We wanted to evaluate whether the 21st century approaches that have benefited the diagnosis and treatment of all other cancer patients would also benefit bladder cancer patients. The BladderPath trial looked at whether adding in some extra or alternative diagnostic testing, mpMRI first then and biopsy or TURBT, could speed up the time taken to receive the correct treatment for the

most concerning form of bladder cancer.

"This research shows that by adding an MRI pre-biopsy we can cut the time taken to

correct treatment for the worst bladder tumours -- those that invade the bladder muscle wall - by almost half, from 98 days down to 53 days. We've also shown that around 1 in 7 of these patients with problematic tumours can avoid the surgical procedure used to diagnose bladder cancer. As an MRI is considerably cheaper than this surgery, we estimate that this new diagnostic pathway will save money, as well as saving surgical theatre space and preventing patients from undergoing unnecessary procedures. The next step for this research is to assess whether this impacts the survival of these patients."

"We were delighted that the experimental diagnostic pathway that introduced MRI led to a vastly reduced time taken for patients to receive their correct treatments, from 98 days on average for the usual procedures reduced by more than 6 weeks to 53 days."

Nick James, Professor of Prostate and Bladder Cancer Research at The Institute of Cancer Research, London and Consultant Clinical Oncologist at The Royal Marsden NHS Foundation Trust, and the study Chief Investigator said:

"This research shows that by adding an MRI pre-biopsy we can cut the time taken to

correct treatment for the worst bladder tumours -- those that invade the bladder muscle wall - by almost half, from 98 days down to 53 days. We've also shown that around 1 in 7 of these patients with problematic tumours can avoid the surgical procedure used to diagnose bladder cancer. As an MRI is considerably cheaper than this surgery, we estimate that this new diagnostic pathway will save money, as well as saving surgical theatre space and preventing patients from undergoing unnecessary procedures. The next step for this research is to assess whether this impacts the survival of these patients."

# Predicting stroke risk through eye

V.V.S. Manian

"The discovery of a noninvasive method to predict stroke risk through retinal vascular 'fingerprints' is groundbreaking. It not only offers a practical approach to early detection but also has the potential to make stroke risk screening more accessible and less resource-intensive, especially in underserved communities." — Christopher Yi, MD

Stroke remains one of the leading causes of disability and death globally, with many cases linked to modifiable risk factors. Current risk prediction models typically rely on invasive tests such as blood draws, ultrasounds, CT scans, and MRIs, which can be costly and less feasible for large-scale screening. A retinal-based approach, however, leverages a noninvasive, simple diagnostic tool that could integrate seamlessly into routine eye exams, particularly in primary care settings. By improving early detection, healthcare providers can intervene sooner to manage risk factors and potentially prevent strokes.

Changes in the eye can indicate several other health concerns in the body, such as diabetes and high blood pressure. A new study has identified 29 vascular health indicators in the retina that forms a "fingerprint" which can help predict a person's stroke risk. Researchers believe this method provides a less invasive way to assess stroke risk compared to



traditional tests. While some may say the eyes are the window to the soul, doctors have long known that the eyes can also offer a valuable view into a person's overall health.

"The retina is one of the few places in the body where blood vessels can be directly observed non-invasively. Changes in the retinal blood vessels can indicate systemic vascular conditions such as hypertension, diabetes, and atherosclerosis," explains Mingguang He, MD, PhD, chair professor of Experimental Ophthalmology at The Hong Kong Polytechnic University and director of the Research Centre for SHARP Vision.

Dr. He, the lead author of a new study recently published in the BMJ Journal - Heart, states that a vascular "fingerprint" on the retina may also be able to predict a person's stroke risk in a less invasive manner than traditional tests. He notes, "Retinal vascular analysis, a non-invasive screening approach for stroke risk assessment, performed

better than traditional risk stratification models. The 29 novel retinal indicators identified offer new avenues for stroke pathophysiology research."

According to researchers, the retinal vascular "fingerprint"—even when combined with just basic factors like age and gender—was as effective as traditional risk factors alone in predicting future stroke risk.

"Many of the elements of this 'fingerprint' are things that can be qualitatively appreciated but not quantitatively measured during your average eye exam. It would likely be both useful and interesting to make this analysis more readily available, allowing eye doctors to counsel their patients more effectively. This approach would likely improve the generalizability of stroke risk prediction," says Dr. He. By offering a noninvasive, cost-effective screening tool, retinal-based risk assessments could revolutionize the way strokes are predicted and prevented.

# Apollo's Centre for Digital Health & Precision Medicine

Apollo Hospitals, Apollo University and University of Leicester, United Kingdom, have partnered to establish the Centre for Digital Health and Precision Medicine (CDHPM) at The Apollo University campus in Chittoor of Andhra Pradesh.

The advanced research centre will bring together the expertise and resources of both institutions to create a global hub for digital health and precision medicine. The CDHPM Centre will be the hub in Chittoor, India. The hub at the University of Leicester will be based at the BHF Cardiovascular Research Centre at Glenfield Hospital, Leicester.

The Co-Directors of the centre will be Professor Sir Nilesh J Samani, Professor of Cardiology at the University of Leicester, and Dr Sujoy Kar, Adjunct Faculty, The Apollo University, Chief Medical Information Officer, Apollo Hospitals.

The CDHPM was inaugurated today by Dr. Prathap C. Reddy, chancellor of Apollo University and founding chairman, Apollo Hospitals in the presence of University of Leicester and The Apollo University's vice chancellors. The Centre, which is fully functional today, will focus on revolutionising patient care by developing novel digital and personalised solutions using advanced analytical approaches to



## Launch of the Centre for Digital Health and Precision Medicine

Transforming the future of healthcare and patient care through data & AI driven technology  
Uniting expertise to create a better future



routinely collect healthcare data.

Commenting on the launch of CDHPM, Dr. Prathap C. Reddy, said, "At The Apollo University, we have always been pro-health, and the CDHPM sits at the core of that belief. With the CDHPM, we aspire to transform healthcare delivery by bettering disease prediction, prevention, diagnosis, and management for acute and chronic conditions and are committed to profoundly impacting global healthcare."

"I am certain that such advancements will benefit patients globally and shape the future of personalised and data-driven medicine. I am happy to have launched the research centre in my birthplace in partnership with Leicester University." Dr. Vinod Bhat, vice chancellor of The Apollo University, noted: "The launch of the Centre for Digital Health and Precision Medicine marks a monu-

mental step forward in The Apollo University's commitment to revolutionising healthcare through innovation and collaboration. By integrating cutting-edge medical research with advanced technology, the Centre aims to redefine patient care and create a global benchmark for precision medicine. This partnership with the University of Leicester strengthens our academic and research capabilities and paves the way for transformative healthcare solutions to create new academic benchmarks." Commenting on the launch of CDHPM, professor Nishan Canagarajah, president and vice chancellor of the University of Leicester, said: "The establishment of the centre will allow Leicester and Apollo to build the healthcare of the future, which has the potential to transform lives not only in India and the UK but around the globe

mental step forward in The Apollo University's commitment to revolutionising healthcare through innovation and collaboration. By integrating cutting-edge medical research with advanced technology, the Centre aims to redefine patient care and create a global benchmark for precision medicine. This partnership with the University of Leicester strengthens our academic and research capabilities and paves the way for transformative healthcare solutions to create new academic benchmarks." Commenting on the launch of CDHPM, professor Nishan Canagarajah, president and vice chancellor of the University of Leicester, said: "The establishment of the centre will allow Leicester and Apollo to build the healthcare of the future, which has the potential to transform lives not only in India and the UK but around the globe

mental step forward in The Apollo University's commitment to revolutionising healthcare through innovation and collaboration. By integrating cutting-edge medical research with advanced technology, the Centre aims to redefine patient care and create a global benchmark for precision medicine. This partnership with the University of Leicester strengthens our academic and research capabilities and paves the way for transformative healthcare solutions to create new academic benchmarks." Commenting on the launch of CDHPM, professor Nishan Canagarajah, president and vice chancellor of the University of Leicester, said: "The establishment of the centre will allow Leicester and Apollo to build the healthcare of the future, which has the potential to transform lives not only in India and the UK but around the globe

# AI-based prediction to detect obesity risk

Woxsen University, one of the first private universities in the state of Telangana, claimed that its researchers, along with US Scientists, developed an AI-based prediction model to detect obesity risk.

Obesity is becoming a significant global health issue, driven by lifestyle challenges such as diets rich in processed foods and low physical activity, which are further exacerbated by technological advancements and rapid urbanization.

To tackle this problem, a team of researchers from Woxsen University, including Dr. Shahid Mohammad Ganie, Dr. Hemachandran Kannan, and student Bobba Bharath Reddy alongside US Scientist Prof. Manjeet Rege, have explored how combining multiple machine learning methods can predict the risk of obesity based on lifestyle data, the Hyderabad based university said in a release here.

Their latest research introduced an AI-based prediction model that leverages boosting techniques to assess the risk of obesity more effectively.

Their research paper titled "An Investigation of Ensemble Learning Techniques for Obesity Risk Prediction Using Lifestyle Data," was published in the Decision Analytics Journal by Elsevier.

Prof. Manjeet Rege, a globally acclaimed expert in Artificial Intelligence and Data Science and Chair Professor of the Department of Software Engineering and Data Science at the University of St. Thomas, USA, recently visited Woxsen University in Hyderabad.

During his visit, he evaluated innovative research at the Manjeet Rege Analytics Lab, which is focussed on the transformative use of Explainable AI and Machine Learning in healthcare. According to the research, identifying the underlying causes of obesity risk in its early stages has become a challenge for medical practitioners.

In the healthcare sector, online medical repositories and hospitals are generating vast amounts of data, providing valuable resources for researchers to explore and leverage AI techniques to address real-life health issues.

The researchers explained that they selected three algorithms from each ensemble method, each possessing distinct characteristics and strengths,



to demonstrate the effectiveness of the proposed model from multiple perspectives. Additionally, preprocessing techniques were employed to enhance the quality of the data.

The team found that their approach contributes to a more comprehensive understanding of obesity risk factors, aiding healthcare providers in delivering targeted interventions based on specific obesity levels.

The researchers observed that while BMI (body mass index) is commonly used as the primary indicator of obesity risk, it has limitations in capturing the full complexity of obesity, which is influenced by behavioral, environmental, and genetic factors. They noted that BMI does not

account for critical health indicators such as muscle mass, fat distribution, or other variables, potentially reducing the precision of obesity classification.

Additionally, their study highlighted that while some machine learning models for obesity classification incorporate lifestyle factors, sex, and 3D body scans without relying solely on BMI, the datasets used in these models often stem from smaller sample sizes in specific regions or countries. This limited scope restricts the models' ability to generalize findings to broader or global populations.

The study also noted that the perfect climate for obesity to flourish has been created by traditional diets heavy in processed

foods and low physical activity as technology develops and urbanization picks up speed. The resultant effects include an increase in disorders linked to obesity, such as diabetes, heart problems, and other ailments.

Rege emphasised that detecting illnesses early and identifying risk factors can serve as a strong motivator for individuals. "Armed with this knowledge, people are more empowered to make healthier choices regarding their diet, lifestyle, and exercise," he stated. "Early identification of obesity-related issues is particularly advantageous, as it enables timely interventions and lifestyle adjustments." The researchers utilized a publicly available dataset drawn from diverse populations in countries like Colombia, Peru, and Mexico, incorporating factors such as eating habits, age, sex, physical condition, water and alcohol consumption, and the frequency of vegetable intake. This dataset included a broad range of features, including dietary patterns, physical activity levels, mental health, and sleep habits.

The team is hopeful that their findings will aid in developing more effective strategies for preventing and addressing obesity. They also proposed that future studies could leverage deep learning methods to improve the accuracy of obesity risk detection and prediction

**SHIVALIK SMALL FINANCE BANK LTD.**  
Registered Office : 501, Salcon Aurum, Jasola District Centre, New Delhi - 110025  
CIN : U65900DL2020PLC366027

**AUCTION NOTICE**

The following borrowers of Shivalik Small Finance Bank Ltd. are hereby informed that Gold Loans availed by them from the Bank have not been adjusted by them despite various demands and notices including individual notices issued by the Bank. All borrowers are hereby informed that it has been decided to auction the Gold ornaments kept as security with the Bank and accordingly 30th January 2025 has been fixed as the date of auction at 03:00 pm in the branch premises from where the loan was availed. All, including the borrowers, account holders and public at large can participate in this auction as per the terms and conditions of auction.

S. No.	Branch	Account No.	Acct Holder name	Father's/ Spouse Name	Address	Ac opening Date	Payoff
1.	CHENNAI	104142510753	SEKAR A T	S/O THIRUMALAI	23 50., THIRUMALAI, 83RD STREET, ASHOK NAGAR, CHENNAI, TAMILNADU 600083	10-06-2024	512,553.18
2.	CHENNAI	104142510904	SEKAR A T	S/O THIRUMALAI	23 50., THIRUMALAI, 83RD STREET, ASHOK NAGAR, CHENNAI, TAMILNADU 600083	19-07-2024	397,800.09

Auction date is 30th January 2025 @ 03:00 pm.

The Bank reserves the right to delete any account from the auction or cancel the auction without any prior notice.

Authorised Officer, Shivalik Small Finance Bank Ltd.