Patients with recent onset diabetes fast-tracked more effectively for pancreatic cancer screening

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A recent study conducted by researchers at University of Birmingham, in collaboration with University of Oxford, University of Nottingham and

University Hospitals Birmingham NHS Foundation Trust, developed a new prediction model as an effective way of identifying individuals suitable for fast-track abdominal imaging.

"One in 10 pancreatic cancer patients have new-onset diabetes and we know that some patients with newly diagnosed diabetes are worth exploring further to improve early detection of pancreatic cancer. We need to more accurately predict which of those patients should be referred for further investigation.

"We used health data records, from a larger patient population than has previously been studied, to develop a more nuanced method of stratification that could improve referral pathways," says Dr. Shivan Sivakumar, Associate Professor in oncology, specializing in pancreatic, liver and biliary tract cancer.

Weight loss and glycemic control are known biomarkers that can indicate pancreatic cancer risk and in, accordance with NICE recommendations, people over the age of 60 years with recent onset diabetes and weight loss currently undergo urgent abdominal CT imaging to assess for pancreatic cancer.

Pancreatic cancer is known for its poor prognosis, with less than a quarter of patients surviving past one year after diagnosis. Early detection is important as patients with early-stage disease are more likely to be able to tolerate chemotherapy and therefore have an improved 5-year survival rate, but most patients are not diagnosed until the later stages of the disease.

One way of detecting pancreatic cancer patients sooner is through screening patients with diabetes as there is a known association.

By looking at further potential biomarkers to determine which patients

would benefit from referral for abdominal imaging, there is a chance of picking more cancers and reducing the cost of imaging those who are not so high-risk.

This study used large-scale, population-representative, linked electronic health data records to develop and evaluate a new prediction model that can be used to predict risk of developing pancreatic cancer within two years of a diabetes diagnosis.

The new models used a variety of potential markers and were able to predict pancreatic cancer risk in patients aged between 30 and 85 years, rather than relying on the 60+ rule of thumb.

This study was the largest of its kind and offers improved accuracy compared to previous prediction models as it used a larger data set. The new prediction model could be more effective than current "rules-based" referral guidelines. Further external validation and health economic assessment is recommended.

Provided by University of Birmingham

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