

New study moves researchers closer to lung cancer blood test

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Early signs of lung cancer could be diagnosed using a simple blood test following a new discovery by scientists at the University of York.

Early detection of lung cancer has been shown to save lives, but available methods for screening at-risk people are either too costly or involve invasive procedures. The latest findings, published today in the US journal [Proceedings of the National Academy of Sciences](#), mean that a simple blood test could now be developed. Dr Dawn Coverley, who is based at the University's Department of Biology and is funded by Yorkshire Cancer Research, has found that an altered form of a protein called Ciz1 is present in lung cancers, even when they are at a very early stage.

She said: "The Ciz1 protein is involved in cell growth and division. Altered forms of this protein are present in [cancer cells](#), and one specific form is prevalent in lung cancers. Surprisingly, this variant-Ciz1 somehow gets into the blood stream and once there appears to be very stable. This means that by looking for variant Ciz1 in the blood we can pick out people who have small tumours in their lungs, without the need to take a biopsy or undergo surgery.

"We think that the test will be especially powerful when combined with X-ray or [CT imaging](#), and will offer doctors an alternative way to test whether an [abnormal growth](#) is cancerous. For the patient, this means that many could avoid invasive diagnostic procedures altogether."

Kathryn Scott, Head of Research Funding for Yorkshire Cancer Research, said: "This research is related to a cancer which is prevalent in Yorkshire towns and cities. Lung cancer is very difficult to treat and has a low survival rate, but it is traditionally underfunded in the UK. Yorkshire Cancer Research is strongly committed to funding projects such as these, which have enormous potential patient benefit."

Cizzle Biotech, a spin out company from the University of York that is funded primarily by Yorkshire [Cancer Research](#), the White Rose Seed Fund and Finance Yorkshire, is now translating the research into a test suitable for use in hospital diagnostic laboratories.

Provided by University of York

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