

Simple test could hold key to early diagnosis of cancers

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Cancers of the gut, stomach and pancreas could be detected much sooner with a simple urine test, research suggests.

Researchers at the University of Edinburgh have identified key proteins in the urine of patients with advanced cancers.

The findings could help the detection of these cancers in people who have not yet started to show symptoms of the disease.

This would enable patients to be diagnosed much earlier, leading to improved [survival rates](#).

Only around 10 per cent of patients with these cancers - known as cancers of the upper gastrointestinal tract - are still alive five years after diagnosis.

This is because such cancers, which tend to be aggressive, are often diagnosed at an advanced stage.

Dr Holger Husi, of the University of Edinburgh's Tissue Injury and Repair Group, said: "The aim of this work is to enable these cancers to be diagnosed much earlier. This would help us to treat the [cancer](#) before it has a chance to spread. The majority of these cancers are currently diagnosed late where no surgery is possible due to its advanced stage. Earlier diagnosis would mean that curative surgery or chemotherapy would be possible for more patients."

The research, published in the journal *Proteomics-Clinical Applications*, compared urine samples from patients with upper gastrointestinal cancers with urine samples from people who were cancer-free.

Scientists analysed the samples to identify thousands of proteins. They then identified six particular proteins, which were present in 98 per cent of the cancer cases but absent in almost 90

per cent of samples from patients without cancer.

The researchers then narrowed molecules down to the two proteins - S100A6 and S1009 - most likely to appear in samples from patients with cancer but be absent from the other samples.

The scientists now intend to see whether people with early stage cancers, which have not yet been diagnosed, have the same levels of proteins present.

This would involve analysing samples from at least 1,000 volunteers and tracking the participants over a number of years to identify those who are then later diagnosed with upper gastrointestinal cancers.

Provided by University of Edinburgh

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