

Sponge on a string test could replace endoscopies

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Cancer Research UK-funded scientists have discovered that a 'sponge on a string' pill test can identify which people with a condition called Barrett's oesophagus have a low risk of developing oesophageal cancer - sparing them uncomfortable endoscopies. Researchers from the University of Cambridge gave 468 people who had Barrett's oesophagus a 'sponge on a string' (cytosponge) test (watch a video of the test). Barrett's oesophagus is a condition that can lead to oesophageal cancer in a small number of people.

They found that the cytosponge test together with additional laboratory tests identified that 35 per cent (162) of people with Barrett's in the study were at a low risk of developing oesophageal cancer.

The results show that patients with Barrett's could be given a cytosponge test by their local GP and monitored, to detect which patients were at low risk of developing cancer, rather than having regular endoscopies at hospital.

This could help save patients' time, as well as reducing the anxiety and discomfort of having endoscopy tests. Endoscopies are expensive and involve putting a camera down the throat to collect a sample of the cells lining the [oesophagus](#) for analysis under a microscope.

The cytosponge is a small pill with a string attached that the patient swallows, which expands into a small sponge when it reaches the stomach. This is slowly pulled back up the throat using the string, collecting cells from the oesophagus for analysis.

The researchers tested these cells for two specific genetic markers and changes in the cells that can be used to estimate an individual's risk of developing oesophageal cancer. These results, alongside other information including age and obesity, were used in a mathematical model to

classify patients' risk levels.

Barrett's oesophagus is caused by acid reflux. This can occur when acid travels back up the food pipe from the stomach causing symptoms such as heartburn. Cells in the oesophagus can then become damaged over time, leading to Barrett's oesophagus. People with the condition are also monitored for early signs of cancer, which can sometimes be triggered by cell damage.

Lead researcher Professor Rebecca Fitzgerald, based at the MRC Cancer Unit at the University of Cambridge, said: "Most people who have Barrett's oesophagus will not go on to develop oesophageal cancer, but at the moment there is no way of identifying who will and who won't. Our study is the first step in using the cytosponge to answer this question.

"We're assessing the cytosponge test in larger trials next year to understand more about how it can help diagnose oesophageal cancer sooner. Compared with endoscopies performed in hospital, the cytosponge causes minimal discomfort and is a quick, simple test that can be done by your GP."

Jessica Kirby, Cancer Research UK's senior health information manager, said: "It would be good news for patients if the cytosponge [test](#) could be used to replace uncomfortable endoscopies for some people.

"Twelve per cent of [people](#) with oesophageal [cancer](#) survive for at least 10 years, and part of the reason for the lower survival could be that the disease is often diagnosed at a late stage. Research like this helps us to understand more about the disease and could help doctors better predict who is at risk of [oesophageal cancer](#)."

The study is published in *The Lancet Gastroenterology & Hepatology*.

Provided by Cancer Research UK

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