# Largest review of management and treatment of Barrett's dysplasia and adenocarcinoma

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The world's largest review of all the evidence on the best way of managing and treating common pre-cancerous and cancerous conditions of the oesophagus (gullet) has found that good endoscopy equipment, more endoscopic surgery, and more tissue sampling are required to improve care for patients.

The multi-national team of researchers led by Professor Janusz Jankowski of the Blizard Institute of Cell and Molecular Science at Queen Mary, University of London (UK), reviewed nearly 12,000 papers on the care and treatment of Barrett's Dysplasia and early-stage oesophageal adenocarcinoma. Their research is published online in the August issue of the medical journal *Gastroenterology* [1].

They used a new method of analysing the data, called the Delphi process, to reach agreement on the strength of the evidence contained within all the papers and to make recommendations for the management of patients with these conditions. This is the first time that a review of all the available research in this area has been attempted.

"In the absence of top grade evidence from large randomised clinical trials, this large systematic review, using a global consensus achieved by the Delphi voting method, allows real clarity about the best ways to treat this disease," said Professor Jankowski, who is the Sir James Black Professor of Gastrointestinal Biology and Trials.

Barrett's oesophagus [2] is a condition in which abnormal changes occur

in cells lining the lower end of the gullet. It is usually caused by acid reflux and the incidence has been increasing over the past few years, with 10-20 per cent of patients with acid reflux developing Barrett's oesophagus. It can progress to become Barrett's dysplasia, when the cells become pre-cancerous, and can then develop into oesophageal adenocarcinoma (cancer). Five-year survival following a diagnosis of adenocarcinoma is less than 15 per cent, and so it is important to detect and treat the conditions while they are still in their early stages. However, there is a lack of agreement on the best way of managing and treating them.

Having reviewed all the available studies, Professor Jankowski and his colleagues drafted statements on the diagnosis, epidemiology, methods of surveillance, approaches to treatment, and prevention of high-grade dysplasia and early adenocarcinoma in patients with Barrett's oesophagus. Then they conducted four rounds of anonymous voting on the statements until consensus was achieved in 81 of the 91 statements (consensus meant that 80 per cent or more strongly agreed or agreed with reservation on a statement). This is known as the Delphi process.

"The key messages to emerge from this process are that the endoscopic equipment needs to be good (vital in times of cutbacks) and that endoscopic surgery can be better than the more risky open surgery," said Professor Jankowski. "In addition, there needs to be more and larger samples of tissues taken so that the pathologist can make sure that no early cancers are missed. At present, there are no reliable biomarkers (molecular changes) that can replace good equipment, a well-trained endoscopist and a methodical pathologist."

Endoscopy involves the insertion of a thin tube that contains a light source, a video camera and, when necessary, instruments for performing surgery or taking tissue samples. For Barrett's oesophagus, dysplasia and oesophageal cancer, it is inserted via the throat, avoiding the need for a

surgeon to open the chest to access the oesophagus.

Professor Jankowski said: "This huge systematic review using the Delphi process with 92 international experts really does underline that hospitals need good equipment, doctors need the best training in both diagnostic and endoscopic techniques and a good expert pathologist to process the samples. In times of cutbacks it is likely that some units will refer patients to larger centres nearby. Although some patients will be inconvenienced, it does mean they will get the best of local expertise."

He concluded: "We have used novel methods and a huge team to come up with simple ways to improve care in one of the commonest pre-cancerous conditions, which, if left unmonitored or untreated, can develop into a cancer that is usually fatal. Most of our findings are relevant to clinical practice and should be used immediately to guide clinical activity. In addition, areas where we were not able to reach agreement indicate where future clinical research is likely to most productive. We often talk about increasing cancer rates in the UK; while we strive to find better cures for cancer, it is still the case that prevention is even better. This paper provides a solid basis for better oesophageal cancer prevention."

Barrett's oesophagus occurs in about two per cent of the population, with the highest risk among men over 50 years old in developed countries. The risk of developing oesophageal adenocarcinoma among people with Barrett's oesophagus has been estimated to be approximately 0.5-1 per cent a year. Oesophageal cancer is the eighth most common cancer worldwide, fifth equal commonest cancer in the UK, with nearly 482,000 new cases diagnosed and about 406,500 deaths each year [3].

**More information:** [1] "Consensus statements for management of Barrett's dysplasia and early-stage esophageal adenocarcinoma, based on a Delphi process", by Janusz A.Z. Jankowski et al. *Gastroenterology*

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[2] Barrett's oesophagus is named after Norman Barrett, a British surgeon who first described the condition in 1950.

[3] Jankowski JA, Provenzale D, Moayyedi P. "Esophageal adenocarcinoma arising from Barrett's metaplasia has regional variations in the West (systematic review)". *Gastroenterology* 2002;122:588-590.

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