

## Which patients with Barrett's oesophagus are at the highest risk of cancer?

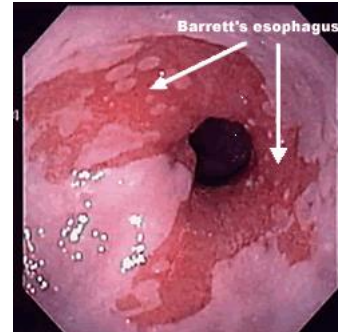
### What is Barrett's oesophagus?

Barrett's oesophagus develops as a result of experiencing acid reflux, or heartburn, over a long period of time.

It is diagnosed by having an endoscopy (a long, flexible tube with a camera that is swallowed) and allows doctors to see if the normal cells in the oesophagus (or gullet) have changed into Barrett's oesophagus cells.

In Northern Ireland, more than **13,000 people** were diagnosed with Barrett's oesophagus between 1993 and 2010.

Barrett's oesophagus is more common in men than women, and in people aged 50 years or older.



*Picture of the appearance of Barrett's oesophagus as viewed at an endoscopy.*

### What do we know about the risk of cancer in Barrett's oesophagus patients?

The vast majority of people with Barrett's oesophagus will not develop cancer of the oesophagus. However, a small proportion of Barrett's oesophagus patients (approximately 0.4%) will go on to develop a form of oesophageal cancer, called oesophageal adenocarcinoma, every year.

It is not clear what is different about the minority of patients who go on to get cancer compared with those who do not.

### What we wanted to find out:

**Can we identify which patients with Barrett's oesophagus in Northern Ireland are at the highest risk of cancer of the oesophagus?**

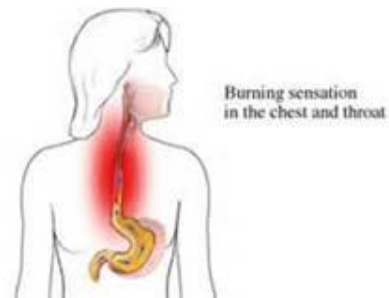


## What we did

- Working within the Northern Ireland Cancer Registry, we were able to create a register of all patients who have been diagnosed in Northern Ireland since 1993
- Medical notes were reviewed for over 3,000 of these patients to collect data on lifestyle factors, symptoms experienced and any features noted by doctors at the time someone's Barrett's oesophagus was diagnosed
- By the end of 2008, 117 of these patients had developed cancer of the oesophagus or advanced pre-cancerous cells (known as high-grade dysplasia)

## What we found

- Barrett's patients without heartburn symptoms should not be ignored – they actually had a greater risk of cancer than patients reporting symptoms



- Barrett's oesophagus patients who also had an ulcer in their oesophagus, as seen by the doctor at endoscopy were twice as likely to develop cancer as patients without an ulcer
  - No patients with short sections of Barrett's oesophagus cells (less than 3 cm) developed cancer
- This builds upon our previous results from this study that showed Barrett's patients who smoked were more likely to develop cancer



### Why this is important:

**Barrett's oesophagus patients who are found by their doctors to have longer sections of Barrett's oesophagus or an ulcer at endoscopy have an increased risk of cancer and should be considered for more intense surveillance to help diagnose cancer earlier.**

Patients who report no heartburn symptoms should be investigated in the same way as those who report symptoms of heartburn – 'silent' symptoms do not mean less risk of cancer.

**Citations:**

Coleman HG, Bhat S, Murray LJ, McManus DT, Gavin AT, Johnston BT. Symptoms and Endoscopic Features at Barrett's Esophagus Diagnosis: Implications for Neoplastic Progression Risk. *American Journal of Gastroenterology*; 2014; 109(4):527-34.

Coleman HG, Bhat S, Johnston BT, McManus D, Gavin AT, Murray LJ. Tobacco Smoking Increases the Risk of High-Grade Dysplasia and Cancer Among Patients with Barrett's Esophagus. *Gastroenterology* 2012; 142:233-240; *Epub* 2011 Nov 3.

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