OC-069

## IS SURVEILLANCE OF BARRETT'S OESOPHAGUS COST-EFFECTIVE WHEN ENDOTHERAPY IS USED TO TREAT HIGH GRADE DYSPLASIA OR EARLY CANCER IN BARRETT'S OESOPHAGUS?

doi:10.1136/gut.2011.239301.69

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**Introduction** There is emerging interest in the role of endotherapy in the management of high grade dysplasia (HGD) and intra-mucosal cancer in Barrett's oesophagus (BO). We have previously shown that stepwise endoscopic mucosal resection (EMR) and radiofrequency ablation (RFA) for visible HGD and RFA for flat HGD is cost-effective compared to photo-dynamic therapy or oesophagectomy.[1]

**Aim** To assess the cost-effectiveness of surveillance of Barrett's oesophagus when EMR-RFA for visible HGD and RFA for flat HGD is used to treat HGD or intra-mucosal cancer in BO.

**Methods** A Markov model was created using a base population of 1000 50-year-old Caucasian males with BO followed to 75 years of age. All patients were assumed to be fit for oesophagectomy. Surveillance intervals were compared with strategies of no surveillance and surveillance with oesophagectomy for HGD. Cost-effectiveness was expressed as net amount per quality adjusted life year (QALY) and base-costs for treatment were obtained from the Department of Health HRG tariffs for 2007/2008. Monte Carlo simulation and probabilistic sensitivity analysis were carried out.

**Results** 2-yearly surveillance with endoscopic therapy to treat HGD/intra-mucosal cancer in BO was the most cost-effective option yielding an incremental cost-effectiveness ratio (ICER) of 13,447 compared to no surveillance and other surveillance intervals (1, 2, 3, 4 and 5-yearly) and when no endotherapy was used as a comparative strategy. It was also more cost effective than a strategy of oesophagectomy for HGD/intra-mucosal cancer.

**Conclusion** 2-yearly surveillance of BO is cost-effective when endotherapy is used to treat HGD and intra-mucosal cancer in BO.

**Competing interests** None.

**Keywords** Barrett's oesophagus, cost-effectiveness, high grade dysplasia, markov model.

### REFERENCE

1. Menon S, Trudgill N. What is the most cost-effective therapy for high-grade dysplasia in Barrett's oesophagus. *Gut* 2010;59(Suppl I):A47.

**Table 1** OC-069 Cost-effectiveness of BO surveillance

| Interval | Cost | Effectiveness (QALY) | Cost/Effectiveness | ICER |
|---|---|---|---|---|
| No surveillance | £3707 | 13.74 QALY | 270 | |
| 2- yearly surveillance | £10610 | 14.25 QALY | 744 | 13447 |
| 5-yearly surveillance | £11976 | 13.52 QALY | 886 | (Dominated) |
| Yearly surveillance | £15289 | 13.54 QALY | 1130 | (Dominated) |