2006 through 2010; clinical data were collected through September 2014. We identified demographic, lifestyle, and medical factors, measured at baseline, that associated with development of EAC within 5 years using logistic regression analysis. We used these data to create a model to identify individuals at risk for EAC. Model performance was assessed using area under the receiver operating characteristics curve (AUROC), sensitivity, and specificity analyses.

Results Within up to 5 years of follow up, 220 individuals developed EAC. Age, sex, smoking, body mass index, and history of esophageal conditions or treatments identified individuals who developed EAC (AUROC, 0.80; 95% CI, 0.77–0.82). We used these factors to develop a scoring system and identified a point cut off that 1 04 723 individuals (29.5%), including 170 of the 220 cases with EAC, were above. The scoring system identified individuals who developed EAC with 77.4% sensitivity and 70.5% specificity. The 5 year risk of EAC was 0.16% for individuals with scores above the threshold and 0.02% for individuals with scores below the threshold.

Conclusions We combined data on several well-established risk factors that are available to clinicians to develop a system to identify individuals with a higher absolute risk of EAC within 5 years. Studies are needed to evaluate the utility of these factors in a multi-stage, triaged, screening program.

OTU-013 OUTCOMES OF 360 HALO EXPRESS RADIO-FREQUENCY ABLATION FOR BARRETT'S OESOPHAGUS RELATED NEOPLASIA

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Introduction Radio-frequency ablation (RFA) for the treatment of Barrett's oesophagus (BE) related neoplasia ablative intervention after endoscopic resection (ER) For circumferential BE, the 3 cm HALO 360.

balloon used to treat large areas. A new device, the HALO 360 Express self-sizing catheter was recently launched and can potentially allow quicker ablation times and better coverage of the mucosa due to the improved tissue/catheter contact and 4 cm balloon length. We have previously presented initial data of 3 month follow up in these patients but now present more extensive data including end of treatment biopsies.

Method Specialist centres in the UK and Ireland submitted cases where Halo 360 express had been used. Patients returned for follow up at 3 months after index RFA express treatment. surface area regression of BE regression of intestinal metaplasia (EoT (End of Treatment) CR-IM) and dysplasia (EoT CR-D) were analysed.[MDP1] .

Results 11 centres submitted 123 patients treated with the HALO 360 Express catheter. 112 of these cases had 3 month follow up. The mean age was 67 years±10. 83% were male. 43 patients (35%) had low grade dysplasia (LGD) as initial histology; 62 had high grade dysplasia (HGD) 50%, 19 had intramucosal carcinoma (15%), 1 had invasive adenocarcinoma. 54 (44%) had had previous endoscopic mucosal resection (EMR). The mean pre-treatment circumferential Barrett's segment was 5.5 cm ±4.3 cm and the mean mucosal length (M) was 7.8 cm ±3.6 cm mean% reduction in C of 78%±36% and mean reduction in M of 55%±36% at this first 3 month follow up.

17 patients developed strictures which required dilation at this 3 month follow up. The median number of dilations was 2 (IQR2–4). 4/17 (24%) were treated with 12J/no clean, 10/17 were treated with 10J/no clean (59%), 3/17 (17%) had been treated with 10J/clean protocol. 8/17 (47%) had had previous EMR.

47 patients had 12 month EoT biopsies, 40 (85%) had CR-D and 34 (76%) had CR-IM. 4/112 patients (<4%) had progressed to invasive cancer at the time of writing. The median number of treatments (focal RFA, EMR, APC (argon plasma coagulation)) to EoT was 2(IQR1–4).

Conclusions The HALO 360 Express catheter shows good reduction in C and M length at 3 months, and effective eradication of IM and Dysplasia in those at 12 months. However, as previously reported by us the stricture rate is high.

OTU-014 REPRODUCTIVE FACTORS AND RISK OF GASTRIC CANCER BY ANATOMICAL SUBSITE: THE EPIC STUDY

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Introduction Gastric cancer is more common in men than in women, indicating a potential role for sex hormones in its development. The aetiology of gastric cancer differs by anatomical subsite; however, few studies have compared hormonal and reproductive risk factors by subsite in prospective analyses. We investigated the association between reproductive factors and the risk of gastric cancer by subsite in the European Prospective Investigation into Cancer and Nutrition (EPIC) cohort.

Methods EPIC is an on-going multicentre prospective cohort study, which comprises of 5 21 448 men and women, aged 25–70 years, recruited between 1992–2000 from ten European countries. Questionnaires administered at baseline assessed reproductive factors, including age at menarche, menopause, first pregnancy, and first child birth, as well as parity, breast feeding, menopausal hormonal therapy, and oral contraceptive use. The association between reproductive factors and gastric cancer were examined in Cox proportional hazard models to estimate hazard ratios (HRs) and 95% confidence intervals (CIs), adjusting for potential confounders.

Results During an average of 14 years of follow up, 83 gastric cardia cancers and 191 gastric non-cardia cancers were diagnosed among 3 43 985 women. Compared to women who had their first pregnancy at an earlier age (<22 years), women who had their pregnancy at a later age (>26 years) had a decreased risk of gastric non-cardia cancer (HR 0.55, 95% CI: 0.32–0.92). In addition, compared with women who had not undergone ovariectomy, women who had a bilateral ovariectomy had an increased risk of gastric non-cardia cancer

(HR 1.83, 95% CI: 1.02–3.28). For gastric cardia cancer, there was also an elevated risk among women who had a bilateral ovariectomy but this did not quite attain statistical significance (HR 2.19, 95% CI: 0.98–4.86). The remaining reproductive factors analysed were not associated with risk of gastric cardia or non-cardia cancer.

Conclusion The results of this study suggest that reproductive factors in women may influence risk for gastric cancer, particularly non-cardia gastric cancer.

OTU-015 THE ACCURACY AND TOLERABILITY OF MAGNET ASSISTED CAPSULE ENDOSCOPY FOR THE INVESTIGATION OF OESOPHAGEAL PATHOLOGY

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Introduction Gastroscopy (OGD) is the established method for the investigation of oesophageal disease. Magnet Assisted Capsule Endoscopy (MACE) potentially offers a comfortable, patient friendly and community-based alternative to conventional endoscopy. This pilot study aims to explore whether this approach can be used to detect oesophageal pathology.

Methods MACE procedures were carried out using the Mirocam Navi capsule endoscope, which is steerable with the use of an external handheld magnet. A total of 50 participants were enrolled, of which 34 had known pathology, 17 Barrett's Oesophagus (BO), 17 Oesophageal Varices (OV), with 16 controls. Patients underwent the MACE procedure first by a single operator blinded to the indication. The subsequent OGD was performed by a different endoscopist blinded to the MACE findings. Sedation pre-OGD was given as per patient preference. Diagnostic yield, comfort and patient preference between the two modalities were compared.

Results 47 patients undertook both procedures (3 patients were unable to swallow the capsule), with a mean age of 61 years old (range 39–83), M:F of 2.1:1. Participants had a mean BMI of 29.5, with an average chest measurement of 105.3 cms. Three patients were unable to swallow the capsule. Sedation was requested by patients, in addition to throat spray, in 60% of OGDs (median 3 mg midazolam and 50 mcg fentanyl). With the use of the magnet, it was possible to hold the capsule in the oesophagus for a mean duration of 3 mins and 10 s and a maximum of 10 mins and 34 s. A correct real time MACE diagnosis was made in 11/15 patients with OV, 16/16 patients with BO and 15/16 controls. MACE was also able to correctly identify incidental findings, such as oesophagitis, hiatus hernia and as well as an inlet patch. Sensitivity and specificity of diagnosing OV was 73.3% (95%CI: 0.45–0.91) and 96.9% (95%CI: 0.82–1) respectively and in diagnosing BO 100% (95%CI: 0.76–1) and 100% (95%CI: 0.86–1).

MACE was considered more comfortable than conventional endoscopy ($p < 0.0001$) with a mean score of 9.2 with MACE compared to 6.7 with OGD, when assessed on a 10-point scale. 78% of patients would prefer to undergo MACE if a further examination was required compared to 0% OGD (22% had no preference). No MACE or OGD related complications occurred.

Conclusion This pilot study demonstrates that MACE is both safe and well tolerated by patients. Accuracy for the diagnosis

of BO was high and may therefore have a role in screening for this condition.

OTU-016 TIMELINE AND LOCATION OF RECURRENCE FOLLOWING SUCCESSFUL ABLATION IN BARRETT'S OESOPHAGUS: AN INTERNATIONAL MULTICENTRE STUDY

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Introduction Surveillance intervals and biopsy protocols after complete remission of intestinal metaplasia (CRIM) post radio-frequency ablation (RFA) in Barrett's oesophagus (BO) are intensive and not based on substantial evidence. We aimed to assess the timeline, location, and histology of recurrence following CRIM with the goal of assessing the appropriateness of current recommendations.

Methods Data on patients undergoing RFA for BO-related neoplasia were obtained from prospectively maintained databases of five (3 USA and 2 UK) tertiary referral centres with expertise in management of BO-related neoplasia. Patients underwent RFA following endoscopic mucosal resection (EMR) of visible lesions. RFA was performed every three months till CRIM was confirmed endoscopically and histologically on two consecutive endoscopies. Subsequent surveillance was performed at 3, 6, 9, and 12 months thereafter. Recurrence incidence was estimated using Kaplan-Meier method and Cox Proportional Hazards models were used to assess predictors of recurrence.

Results 594 patients achieved CRIM as of April 1 st 2017 and were included in the analysis. Mean (standard deviation (SD)) age was 67 (10) years and 86% were males. Median (interquartile range (IQR)) BO segment length was 4 (2–6) cm. 90% of patients were treated for dysplasia or carcinoma. 151 subjects developed recurrent BO over a median (IQR) follow up of 2.8 (1.4–4.4) years. BO recurred at the gastroesophageal junction (GOJ) in 67% of subjects and in the tubular oesophagus in 33%. 84% of BO recurrences in the tubular oesophagus occurred within 5 cm of the GOJ. Histology of recurrences included cancer (9%), high grade dysplasia (HGD) (8%), low grade dysplasia (LGD) (12%), indefinite for dysplasia (2%) and non-dysplastic BO (69%). Annual incidence of any recurrence was 9.6%, dysplastic (LGD/HGD/cancer) recurrence was 2.8% and HGD/Cancer recurrence was 1.6%. The recurrence hazard rate did not vary over the follow-up ($p = 0.74$) with 19% risk within 2 years and an additional 49% risk over the next 8.6 years. Recurrence hazard rate of any dysplasia and HGD/Cancer while lower, also did not vary over the duration of follow up ($p = 0.94$ and $p = 0.88$, respectively) (Figure 1). In a multivariable model, baseline HGD/cancer predicted recurrence (hazard ratio 1.9, 95% CI 1.2–3.1, $p = 0.004$).

Conclusions In this large multicentre and international cohort study, BO recurrence risk (at least in the first 5 years following CRIM) did not appear to vary over time suggesting that continued surveillance remains important. Most recurrences