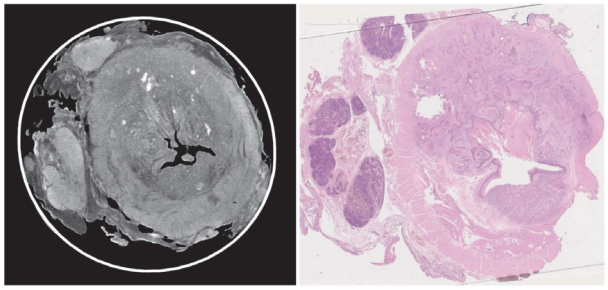

Abstract P239 Figure 1 CT slice showing oesophageal tumour with matched histology section

We reconstructed the images using MATLAB® software. Specimens were returned for clinical histopathological assessment allowing correlation between H&E slides and CT images.

Results We have performed 25 scans on 10 oesophagectomy samples and correlated them with histology

Scans of samples in formalin failed to show adequate contrast between oesophageal layers to enable tumour visualisation and staging. Infiltrating the tissue with ethanol led to much better image contrast.

We could easily identify mucosa, submucosa and both layers of muscle in reconstructed CT images. We also identified tumour infiltration through tissue layers and destruction of normal oesophageal morphology (figure 1). This was confirmed histologically and could be recognised by radiologists blinded to pathological staging

This is the first time that XPCI has been used to image human oesophageal tissue. We have demonstrated the feasibility of the technique and the possibility of obtaining high resolution images which mimic histology with the extra benefit of demonstrating three dimensional structure.

P240 ACCURACY OF CLINICAL STAGING FOR T2N0 OESOPHAGEAL CANCER: SYSTEMATIC REVIEW AND META-ANALYSIS

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10.1136/gutjnl-2020-bsgcampus.314

Background and Aims Oesophageal cancer is the 7th most common cause of cancer worldwide and is the 6th most common cause of overall cancer mortality. Clinical staging utilises multiple imaging modalities and is the most appropriate guide for treatment and prognostication. T2N0 oesophageal cancer is a treatment threshold for neo-adjuvant therapy, but data on the accuracy of current clinical staging tests for identifying this disease subgroup are conflicting.

Methods We performed a meta-analysis of all primary studies evaluating the accuracy of clinical staging (index test) compared to histopathological staging of oesophagectomy specimens (reference standard) in T2N0 oesophageal cancer. Clinical staging used a combination of PET, EUS, and CT imaging modalities. Patients were excluded if they had neo-adjuvant therapy to allow direct comparison between clinical and pathological staging. Databases searched included: Ovid MEDLINE, Ovid Embase and The Cochrane Library up to September 2019.

Abstract P240 Table 1

Outcome	Number of studies	Heterogeneity p-value	Heterogeneity I^2	Pooled % (95% CI)
Combined T/N stage accuracy	14	<0.01	88%	21% (17%, 26%)
T stage accuracy	16	<0.01	92%	30% (24%, 37%)
T downstaged	16	<0.01	96%	40% (31%, 48%)
T upstaged	17	<0.01	87%	28% (23%, 33%)
N upstaged	16	<0.01	87%	35% (30%, 40%)

The primary outcome was diagnostic accuracy of combined T and N clinical staging. Secondary outcomes were accuracy of T stage; percentage T downstaged; percentage T upstaged and percentage N upstaged.

We evaluated several sources of heterogeneity a priori including: publication date (before and after Jan 2015), date of first recruitment (before and after 2000), number of centre (single vs multicentre), sample size (<100 vs ≥100), geographical location (USA, Europe or Asia) and main histological subtype (adenocarcinoma or squamous cell carcinoma).

Results After removing duplicates, the search strategy identified 1,199 studies which were all screened by title and abstract. Eighteen studies met the inclusion criteria containing 5,115 patients. The combined T&N staging accuracy was 21% (95% confidence interval (CI), 17–26); T stage accuracy was 30% (95%CI, 24–37); percentage of patients with T down-staging was 40% (95%CI, 31–48); percentage of patients with T upstaging was 28% (95%CI, 23–33) and the percentage of patients with N upstaging was 35% (95%CI, 30–40)(table 1).

Sources of heterogeneity in accuracy of T&N staging included: number of centres (single centre=15% vs multicentre studies=27%; p=0.01); sample size (n≤100 patients=15% vs n≥100 patients=27%; p=0.01); study region (USA=19% vs Asia=19% vs Europe=38%; p<0.01).

Conclusion Staging for T2N0 oesophageal cancer remains inaccurate with a significant proportion of patients having their disease downstaged (therefore, could have been potentially offered endotherapy instead of oesophagectomy) as well as upstaged (therefore, they could have been potentially offered neo-adjuvant therapy). These findings were largely unchanged over the past two decades suggesting that there is an urgent need for more accurate staging tests for this subgroup of patients.

Gastroduodenal

P241 NO ACUTE CLINICALLY-SIGNIFICANT EVENTS DUE TO HYPOPHOSPHATAEMIA POST-FERRIC CARBOXYMALTOSE THERAPY: AN AUDIT

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10.1136/gutjnl-2020-bsgcampus.315

Background Ferric Carboxymaltose (Ferinject) is a commonly used intravenous iron preparation. Varying degrees of hypophosphataemia have been reported with Ferinject. This is thought to be due to FGF23 mediated renal phosphate wasting, which has been associated with osteomalacia. With only 2 case reports of symptomatic osteomalacia and insufficiency fractures, clinical significance of Ferinject related hypophosphatemia in the overall population receiving it is unclear. Alternative intravenous iron preparation Iron III Isomaltoside (Monofer), has been reported to have a lower incidence of hypophosphatemia compared to Ferinject (Detlie, et. al., 2019) but some case series have reported a higher rate of hypersensitivity reactions (Mulder, et. al., 2018)

Aim To investigate the incidence of clinically significant hypophosphataemia in patients receiving Ferinject therapy based at daycase unit at Nottingham University Hospitals.

Methods Electronic and paper medical records, including prescription charts, of patients receiving parenteral Ferinject between January 2017 and September 2019 were reviewed. Patients were identified from the local admission database. Data was collected including age, sex, and race, number of Ferinject infusions, Ferinject dose, eGFR, Vitamin D, parathyroid hormone (PTH) and phosphate levels before and after Ferinject infusion. Hospital admissions, symptoms related to hypophosphataemia and need for phosphate replacement was recorded. Normal lab phosphate levels were 0.80–1.50 mmol/L. Hypophosphatemia was defined as mild (0.65–0.79 mmol/L), moderate (0.32 to 0.64 mmol/L), and severe (<0.32 mmol/L).

Results We identified 400 (251 female and 149 male), patients who had received Ferinject during the study period. 56 (14%) and 51 (13%) patients had phosphate levels tested within 1 year before and after receiving Ferinject respectively. Of these patients, 4 (7%) had hypophosphataemia prior to and, 17 (33%) {3 mild, 13 moderate and 1 severe} after Ferinject therapy. None of the 17 patients had symptoms related to hypophosphataemia. 2 patients with moderate hypophosphataemia incidentally found on routine bloods were admitted for phosphate replacement. 3 patients were admitted for a cause unrelated to hypophosphataemia.

Conclusions Our audit demonstrates that in our practice no acute serious adverse events were recorded due to Ferinject related hypophosphatemia. The long term impact of Ferinject-related hypophosphataemia requires larger prospective studies. This is of particular relevance to patients with pre-existing risk factors for bone metabolism disorders. It is our practice to correct Vitamin D deficiency where possible prior to administration of Ferinject. It has not been our practice to routinely measure serum phosphate level post infusion.

P242 RETROSPECTIVE REVIEW OF SIGNET RING CANCERS OF GI TRACT

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10.1136/gutjnl-2020-bsgcampus.316

Introduction Signet ring cell cancer (SRCC) is a rare and aggressive adenocarcinoma. The incidence of SRCC is rising worldwide. It is often missed during endoscopic examination due to its subtle appearance. SRCC is often widespread at the time of diagnosis making treatment challenging. The aim of this review is to assess the significance of early diagnosis of SRCC and its response to treatment.

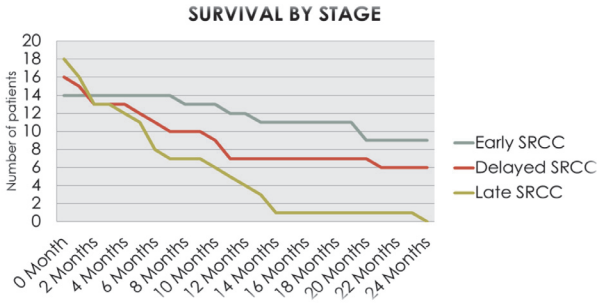
Methods We collected data from University Hospitals of Leicester for all patients who had histology confirmed diagnosis of SRCC between June 2005 and April 2018. We compared patients who had early SRCC (localized to the primary site), patient who had delayed SRCC (nodal spread) and patients who had late SRCC (distant spread) at the time of diagnosis. We excluded all patients whose staging could not be confirmed.

Results 51 patients were diagnosed with SRCC. 3 patients died before staging, hence excluded. 32/48 (66%) were males. Peak incidence age was seen between 70 and 79 years. SRCC was of gastric origin in 19/48 patients (40%), oesophageal in 14/48 patients (29%), colonic in 11/48 patients (23%) and pancreatic in 4/48 patients (8%).

14/48 patients (29%) had early SRCC, 16/48 patients (33%) had delayed SRCC, and 18/48 patients (38%) had late disease at the time of diagnosis.

11/14 (79%) of early SRCC patients and 10/16 (63%) of delayed presentations had surgical resection and neoadjuvant chemotherapy with or without radiotherapy. The rest of the patients were offered palliative therapy.

The 2 years survival among early SRCC group was 9/14 (64%), compared to 6/16 (38%) for the delayed SRCC group, and 0/18 (0%) survived in late group. The 2 years survival was 100% in patients treated by surgical resection, neoadjuvant chemotherapy and radiotherapy. Patients with colonic SRCC had the highest mean survival (26.5 months) compared to patients with pancreatic SRCC who had the lowest mean survival (7 months).



Abstract P242 Figure 1

Conclusions Early diagnosis and effective treatment of SRCC is likely to significantly improve the patient survival. SRCC of colonic origin appears to have the best prognosis. Our data suggest that combined surgical resection and chemo-radiotherapy has the best outcome. However, larger prospective study is likely to help in better understanding of this challenging cancer.

P243 NON-AMPULLARY SPORADIC DUODENAL ADENOMAS – TIME FOR A CONSENSUS ON ENDOSCOPIC RESECTION?

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10.1136/gutjnl-2020-bsgcampus.317