

significantly associated with raised liver function tests (ALT>100, ALT>350) nor with pre-operative diagnoses of cholecystitis, pancreatitis, jaundice or cholangitis. Out of the 248 patients, 4% of patients presented with pain post operatively (N=11). <1% (N=2/248) presented with CBD stones post-operatively despite a negative IOC. No patients presented with pancreatitis or cholangitis post-operatively. In addition, out of a larger cohort of 1957 LC performed by the senior author, 4.5% of cases had CBD stones detected on IOC.

**Conclusion** The incidence of CD stones is not well reported in published literature—the data that exists is mainly following repeat cholecystectomy for PCS rather than intraoperative detection. PCS is widely reported and can cause a therapeutic and diagnostic challenge. The presence of stones in the CD or within a retained gall bladder remnant may be the cause of residual symptoms, but are difficult to diagnose. We propose that the IOC is not only a diagnostic tool for identification of CBD stones and to delineate anatomy, but also serves a therapeutic purpose, allowing “milking” of the CD to remove any stones/debris which in our cohort has resulted in low rates of post-operative pain.

**Competing interests** None declared.

#### PWE-139 OUTCOME OF LIVER RESECTION FOR NON-COLORECTAL AND NON-NEUROENDOCRINE LIVER METASTASES (NCRNNE)

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**Introduction** The liver is a frequent site for tumour metastases, and surgery for colorectal liver metastases (CRLM) is well established, with survival rates accepted to be 50% in 5 years. However, surgery for NCRNNE has been approached with caution. We aimed to report the outcomes of surgery for NCRNNE in our unit, to determine the patterns of disease presentation, recurrence and survival.

**Methods** We identified 78 patients who had liver resection from NCRNNE primary tumours from 28 December 1992 to 2 August 2011 using a prospectively maintained database; Breast (N=19), Malignant Melanoma (N=4), Renal (N=10), Anal Squamous Cell Carcinoma (N=5), Lung (N=3), Sarcoma (N=15), GIST (N=13), Squamous-other (cervix, bile duct, oropharynx) (N=6) and Gastric Adenocarcinoma (N=3). The electronic records of all these patients were then retrospectively reviewed. We obtained data on patient demographics, presentation of disease, pathological data, recurrence and survival. Data were analysed using ANOVA and Kaplan–Meier tests.

**Results** The age at diagnosis varied with tumour type; the youngest was sarcoma (46 years) and the oldest gastric (67 years). The progression to detectable liver disease was quickest with Anal Squamous Cell Carcinoma metastases (172 days), which also had a 60% recurrence rate within a mean of 192 days. Malignant Melanomas had a 100% recurrence rate, which occurred at a mean of 321 days. Breast metastases were the least likely to recur (33%) and had a long disease-free period between recurrences (468 days). The largest metastases were seen in sarcomas (67 cm) and the smallest in melanomas (28 cm). There was no significant correlation between size or number of tumours and survival. The 1- 3- and 5-year survival from the time of NCRNNE metastectomy was 88%, 56% and 47% respectively, compared with 86%, 58% and 46% after CRLM metastectomy. Malignant Melanomas and Anal Squamous Cell Carcinoma had the poorest outcome; 100% mortality at 5 years.

**Conclusion** Liver Resection is an effective treatment for metastases from NCRNNE tumours in highly selective patients. In the right

patient, surgery offers similar survival rates to resection of CRC metastases, but some tumour types do better than others, and a decision to proceed with resection should take into account the histological diagnosis, and an understanding of the behaviour of that tumour type.

**Competing interests** None declared.

#### PWE-140 PERSISTENT SYMPTOMS FOLLOWING CHOLECYSTECTOMY IS UNACCEPTABLY HIGH AND IN NEED OF FURTHER EVALUATION

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**Introduction** Up to 20% of patients undergoing cholecystectomy continue to experience symptoms. We consider such results unacceptable high and in need of further evaluation. Our aim was to identify the biliary symptoms for which cholecystectomy was carried out and then determine the prevalence and the nature of persistent symptoms following the procedure in a cohort of 500 consecutive cases.

**Methods** A validated pre-operative symptoms survey was completed at the time of listing of 500 consecutive laparoscopic cholecystectomies (LC), followed by a follow-up phone survey 12 weeks after the procedure to record the nature, severity and frequency of symptoms experienced pre- and post-operatively. A detailed clinical profiling was carried out on all patients with persistent biliary symptoms.

**Results** All patients had at least two symptoms pre-operatively and 337 (67.4%) had three or more. The most common symptoms pre-operatively were abdominal pain (93.8%), nausea (65.8%), pain related to food (54.4%) and bloating (48.6%). A total of 90 patients were symptomatic postoperatively. 81 patients (16.2%) complained of abdominal pain, while 63 (12.6%) patients also experienced associated dyspeptic symptoms. Seventy three patients (14.6%) developed one or more new symptoms post-operatively, the most common being heartburn found in 34 (6.8%) and abdominal bloating in 29 (5.8%). 60 patients underwent further investigation following LC; 36 patients went on to have a secondary diagnosis made, the most common (13/36) being hiatus hernia, seven patients were found to have a retained common bile duct stone. Overall, there was no significant difference in histology among patients post-operatively.

**Conclusion** A significant number of patients continue to experience symptoms following laparoscopic cholecystectomy. In patients where pain was the most troublesome symptom preoperatively, significant symptomatic improvement was noted. Similarly, those patients that experienced symptoms more dyspeptic in nature preoperatively were less likely to be symptom free following LC. A careful biliary history, a focused physical examination and a thorough pre-operative assessment must be carried out prior to LC to rule out conditions that masquerade as gallbladder disease.

**Competing interests** None declared.

#### PWE-141 HEPATOCELLULAR CARCINOMA AND MICROVASCULAR INVASION IN CIRRHOTIC AND NON-CIRRHOTIC LIVERS: ARE THEY DIFFERENT DISEASES?

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