

average accuracy of the system was  $5.6 \pm 2.6$  mm.

**Conclusions:** This new EM-navigation system for open liver surgery with real-time tumor tracking allows for accurate localization of liver lesions and critical anatomy surrounding the resection area, even during manipulation of the liver. Keywords: image-guided surgery, liver resections, 3D model

**Conflict of interest:** No conflict of interest.

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#### A MULTICENTRE ANALYSIS ON THE IMPACT OF PRIMARY TUMOUR LOCATION IN PATIENTS UNDERGOING SURGERY FOR COLORECTAL LIVER METASTASIS.

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**Background:** In patients with resectable CRLM the prognostic impact of primary tumour location has been studied in several patient cohorts, with conflicting results. Therefore, we aimed to evaluate the impact of primary

tumour location in a large multicentre cohort of patients.

**Material and methods:** A multicentre retrospective observational cohort study was performed. Patients underwent surgery between 2000 and 2016. Patients with rectal cancer were excluded from the study.

**Results:** Ultimately 1834 patients were deemed eligible for the statistical analysis. There were 660 patients (36%) with a right-sided colonic tumour and 1174 patients (64%) with a left-sided colonic tumour. Median follow-up time of survivors was 78 months (IQR: 51-113 months). The estimated 10 years overall survival (OS) was 25% in patients with right-sided colon cancer (95% CI: 22-32%), compared to 34% in patients with left-sided colon cancer (95% CI: 31-38%). OS differed significantly between both groups ( $p < 0.001$ ). After correction for potential confounding factors, right-sidedness of the primary tumour was significantly associated with an increased risk of death (HR: 1.33, 95%CI: 1.15-1.52),  $p < 0.001$ ). Estimated 10 years recurrence-free survival (RFS) was 20% for patients with right-sided tumours (95% CI: 16-23%), and 22% for patients with left-sided tumours (95% CI: 20-25%). When comparing the RFS survival curves, no significant differences were seen ( $p = 0.259$ ). In addition, no association between primary tumour location and time to recurrence (HR: 1.10 (95% CI: 0.98–1.23),  $p = 0.122$ ) was observed in multivariable analysis.

**Conclusions:** The results presented in this multicentre study demonstrate that primary tumour location impacts OS after resection of CRLM. No impact on RFS was observed.

**Conflict of interest:** No conflict of interest.