aggressive tumors. Nevertheless, no difference in reoperation rate or local recurrences were found. Oncoplastic BCS is as safe as conventional BCS enabling breast conserving for patients who otherwise were candidates for mastectomy.

Conflict of interest: No conflict of interest.

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COMPARISON OF DIFFERENT DOSES OF SUPERPARAMAGNETIC IRON OXIDE FOR SENTINEL NODE BIOPSY IN BREAST CANCER: THE SUPERPARAMAGNETIC IRON OXIDE FOR SENTINEL NODE IN BREAST CANCER : (SUNRISE) RANDOMIZED TRIAL

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Background. Sentinel lymph node biopsy (SLNB) is the standard for axillary staging in breast cancer, Techniques for SLN include the use of radioisotope, blue dye, or a combination of both. Sentinel lymph node biopsy with 2 mL of superparamagnetic iron oxide (SPIO) tracer has shown to be non-inferior to the standard radioisotope technique in several studies. The aim of this study is to assess if the efficacy of SLN detection using Sentimag®/SiennaXP®, with different doses of the SPIO is non inferior to the conventional technique (radioisotope).
Material and methods. Patients with stage I breast cancer who underwent breast conservative surgery and sentinel lymph node biopsy were assigned consecutively (1:1:1) to one of the three groups defined by the different SPIO dose, group 1 (1mL), group 2 (1.5 mL) and group 3 (2 mL). Patient and tumor characteristics were analysed. Detection rate was assessed with both tracers for more than 90% concordance rates. Patients filled a questionnaire related to the presence of skin discoloration at 1 month post-operative visit, at 6 months and at 12 months. Patients signed a consent form.
Results. From September 2016 to July 2018, 135 patients were included in the trial, 45 in each group. Median age in group 1 was 58 years old, 63 y/o in group 2 and 65 y/o in group 3. (p=0.03). Detection rate by Tc 99 was successful in 44 (97.8%), 43 (95,6%) and in 45 (100%) in 1, 1,5 and 2 mL respectively. Detection rate by Sienna XP was successful in 44 (97.8%), 44 (97,8%) and in 45 (100%) in 1, 1,5 and 2 mL respectively. Concordance rates per patient between techniques was 95,6% for 1 mL, 93.3% for 1,5 mL and 100% for 2 mL. The SLN was positive in 8 (17,8%) in 1 mL, in 7 (15,6%) in 1,5 mL and in 7 (15,6%) in 2 mL. Concordance rates per patient with + SLN was 97,8% for 1 mL, 97,8% for 1,5 mL and 100% for 2 mL. P = 0, 9197. At 1 month follow up, patients in group 1 had less skin tattoo when compared with patients in group 2 and 3 (p= 0.02). There were no significant differences related to skin staining intensity by doses. On multivariate analysis, age and dose were significant associated for skin discoloration.
Conclusions. SLN with 1mL dose of SPIO has shown non-inferiority in the detection of SLN when compared to 1.5 and 2 mL. Increasing age and dose increased the risk of developing skin staining. Even though, most of the patients were not concern about the skin staining. Rates of discontinuation of skin discoloration will be assessed at 6 months follow up.
Conflict of interest: No conflict of interest.

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EVALUATION OF THE RETROGLANDULAR ONCOPLASTIC TECHNIQUE AS A STANDARD LEVEL I ONCOPLASTIC BREAST-CONSERVING SURGERY. A RETROSPECTIVE CLINICO-PATHOLOGICAL STUDY OF 102 BREAST CANCER PATIENTS.

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Background: Oncoplastic breast conserving surgery (OBCS) techniques are mainly performed from the front side through a skin incision placed on the breast skin envelope. This study presents the surgical technique of a novel Level I OBCS performing tumourectomy from retroglandular exploration through a skin incision placed in the inferior mammary fold.
Patients and methods: A retrospective single centre cohort study was performed involving early-stage breast cancer patients (n=102). Patients' characteristics and postoperative complications were recorded. The quality of life was rated by BREAST-Q. Aesthetic outcomes were evaluated by the Breast Cancer Conservative Treatment (BCCT.core) software and five-point Likert scale.
Results: The mean specimen weight was 49.8 g, the mean pathological tumour size was 15 mm. Due to positive surgical margins 13.7% re-excisions and 2.9 % mastectomies were performed. The mean operation time was 40 minutes. Minor and major morbidity rates were 13.7% and 10.8%. Median Likert scale score was 4.3, the objective outcome by the BCCT.core showed a median of the overall aesthetic outcome of 2.1 points.
Conclusion Retroglandular OBCS is a novel concept, effective Level I oncoplastic technique for radical resection of breast tumours $\leq$ 3 cm. Further advantages of the technique are the preservation of the initial natural shape of the breast, its safe, that it enables completion nipple-sparing mastectomy and the lack of need of contralateral symmetrisation. A disadvantage is the tendency for seroma formation. Limitation of the study is the short follow-up thus no conclusion can be drawn from the oncological point of view.
Conflict of interest: No conflict of interest.

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New Trends in HPB Surgery (Resection of Oligomets, Transplant)

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ELECTROMAGNETIC SURGICAL NAVIGATION SYSTEM FOR OPEN LIVER SURGERY: PRELIMINARY RESULTS

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Background: Due to the lack of real-time information on tumor localization and patient-specific anatomy during liver resections, 2 to 23% of procedures result in irradical resections. To improve radical resections rates and reduce morbidity, we introduce and evaluate an in-house-developed electromagnetic (EM) navigation system for real-time visualization and guidance during open liver surgery.
Material and methods: To enable real-time tracking of the tumor, three EM patient trackers were attached to superficial bony landmarks of the patient. After laparotomy, one EM-sensor and 4 surgical clips were placed on the liver surface, in close proximity to the target tumor, followed by an intraoperative CT scan with i.v. iodine contrast, visualizing main blood vessels, the sensor and the clips. The scan was directly correlated to a diagnostic MRI scan containing a 3D model of the liver. During the procedure, an electromagnetically-tracked-pointer was used for anatomical guidance within the model, visualized on OR screens. Accuracy of the system was assessed in five patients by pointing at 4 surgical clips, visible in intraoperative CT scan, and on visible anatomical landmarks.
Results: This novel technology resulted in accurate and intuitive real-time visualization of liver anatomy and tumor location, which could be confirmed by intraoperative checks on visible anatomical landmarks. Based on 40 accuracy measurement verified by intraoperative CT, the

average accuracy of the system was 5.6 ± 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.