Introduction/Background Endometrial cancer (EC) is currently the most frequent cancer affecting the female genital system. The treatment of choice is represented by surgery, which consists of bilateral hysterectomy and adnexectomy with lymphadenectomy (L) according to risk factor for recurrence. The systematic lymphadenectomy procedure is often associated with postoperative complications, such as lymphedema, lymphocysts, lymphorrhoea. Recently, sentinel lymph node mapping have overcome the complications associated with L, though there is limited access to this tecnique. The aim of the study was to evaluate the role of radiomic analysis of pelvic adipose tissue at CT in predicting the incidence of post-oeprative complications of L.
Methodology Consecutive patients who underwent surgical treatment of endometrial cancer at Careggi University Hospital between January 2016 and Decemeber 2019 were enrolled. Only patients underwent to pelvic lymphadenectomy were enrolled. Exclusion criteria were bulky nodes at the preoperative imagings. Staging CT images were used fot the radiomic analysis; pelvic adipose tissue was identified and segmented, so the images were imported to the 3D Slicer software. Subsequently, the extractions of the three radiomics features (busyness, flatness, elongation) of the rea of interest were carried out.
Results Twenty seven patients were enrolled. Five patients developed post-operative complications. The value of Busyness, Flatness and elongation correlated with postoperative complications (p= 0.04, p= 0.021, p=0.03, respectively).
Conclusion Our preliminary study shows that radiomic might be useful to predict whether a patient will develop any complications associated with the lymphadenectomy. Consequently pre-operative imaging might be used also to select which patient benefit the most from sentinel node study instead of L.
Disclosures The authors have no conflicts of interest to declare.

548 ONCOLOGICAL OUTCOME OF SENTINEL LYMPH NODE MAPPING OR COMPREHENSIVE SURGICAL STAGING IN PATIENTS WITH NODE-NEGATIVE INTERMEDIATE-RISK ENDOMETRIAL CANCER

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Introduction/Background The role of lymphadenectomy in surgical staging for endometrial cancer remains controversial. The standard of care – consisting of a pelvic and para-aortic lymphadenectomy (LND) – has failed to show survival advantage while leading to an increased peri- and postoperative morbidity. Sentinel lymph node (SLN) mapping has gained popularity, offering a compromise between no nodal staging and complete LND. Multiple studies have demonstrated high detecection rates and negative predictive values of SLN mapping with near-infrared fluorescence imaging and indocyanine green (ICG) in endometrial cancer. However, the literature contains limited data on its safety and oncological outcomes. Aim of this study is to evaluate the oncological outcome of SLN mapping in patients with intermediate-risk endometrial cancer.
Methodology In a retrospective, single-center study, we investigated the oncological outcome of patients with stage I intermediate-risk endometrial cancer who underwent surgical staging at our institution between February 2013 and July 2020.
Results Out of a total number of 306 patients with endometrial cancer, 57 patients were diagnosed with node-negative intermediate-risk endometroid endometrial cancer (FIGO IA grade 3, FIGO IB grade 1 or 2). All patients were treated with laparoscopic hysterectomy and bilateral salpingo-oophorectomy with ICG SLN mapping. 31 patients additionally underwent comprehensive surgical staging (four systematic pelvic lymphadenectomies and 27 pelvic and para-aortic lymphadenectomies, LND group). Mean follow up time was 38.0 months. Adjuvant treatment consisted of vaginal brachytherapy in 49 patients, additional chemotherapy in four patients and no adjuvant treatment in eight patients. Between the two cohorts, there were no differences in age or BMI. The mean number of lymph nodes removed (4.04 vs. 45.5), the duration of the surgical procedure (131.3 vs. 287 minutes) as well as the intraoperative blood loss (101.9 vs. 258.1 ml) were significantly higher in the LND group (p=0.000, 0.000 and 0.026, respectively). Recurrence rates (7.7% SLN, 9.7% LND, p=0.585) and death due to disease (3.8% SLN, 3.2% LND, p=0.709) were similar between the two groups. Further on, there was no statistically significant difference in overall and recurrence free survival for patients with SLN mapping only compared to the LND cohort (p=0.541 and 0.480, respectively).
Conclusion In our cohort, the use of ICG SLN mapping alone did not impair oncological outcome compared to a complete lymphadenectomy. It therefore might provide an efficient alternative of nodal staging with less morbidity in intermediate-risk endometrial cancer patients. However, prospective studies on larger numbers of patients are needed to confirm our findings.
Disclosures No disclosures.

549 SENTINEL LYMPH NODE MAPPING WITH INDOCYANINE GREEN IN ROBOTIC-ASSISTED LAPAROSCOPIC SURGERY FOR EARLY ENDOMETRIAL CANCER: A POPULATION-BASED COHORT STUDY

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Introduction/Background The sentinel lymph node (SLN) biopsy may have a key role in endometrial cancer (EC), as the therapeutic effect of lympadenectomy per se remains a field of contention. The aim of this study was to analyse our experience using indocyanine green for SLN mapping in a minimally robotic-assisted laparoscopic approach with Da Vinci Si near-infrared (NIR) fluorescence imaging system.
Methodology This is a retrospective population-based cohort study of prospectively collected data, spanning the period from January 2015 to March 2020. A total of 172 women, who underwent robot-assisted laparoscopic surgery with the Da Vinci Si Surgical System with NIR imaging and indocyanine (ICG) fluorescence detection for early stage EC, were enrolled. Cervical injection with ICG (2 ml) was performed for all patients. Baseline demographics, peri-operative and follow-up data were prospectively collected. We calculated the unilateral and bilateral detection rate. Possible correlations amongst the variables were examined using the Spearman's correlation coefficient (rho), whilst multivariate logistic

regression was performed to identify independent predictors of unilateral/bilateral detection.

Results He mean age and BMI was 66.9 years and 31.8 Kg/m2, respectively. 90 women (52.3%) were diagnosed with endometrioid histology, whilst 82 with other high-risk histology. In total, 321 SLNs were removed, whilst at least one SLN was obtained in 151 women for a detection rate of 87.8%. In 106 women (61.6%) bilateral SLNs were successfully mapped. On average 1.87 (0–5) SLNs were detected per patient. SLNs were most commonly identified in the external iliac basins (78.2%), followed by the obturator fossa (10.3%), internal iliac basins (5.9%), common iliac basins (3.73%), pre-sacral (0.93%) and para-aortic region (0.93%), respectively. Lymph node metastasis was detected in 25 women (14.5%). There was no statistical correlation between the SLN detection and the age, BMI, grade and histology, respectively. The bilateral SLN detection was adversely correlated with grade 3 (rho=-0.29, p-value=0.0001 and high-risk histology (rho=-0.3, p-value=0.0001). In multivariate analysis, both grade (OR=0.21, p-value=0.005) and high-risk histology (OR=0.39, p-value=0.04) remained significant. Only three cases of Grade 1 lower extremity lymphoedema were reported.

Conclusion Intra-operative SLN mapping using fluorescence imaging with ICG in EC patients is feasible, yields high detection rates and reduces the lymphadenectomy-associated morbidity. Further studies are warranted to evaluate its accuracy in high-risk EC.

Disclosures We certify that no party has a direct interest in the results of the research and that no benefit will be conferred to us or any organisation with which we are associated.

552 DUAL CERVICAL AND FUNDAL INJECTION IN ENDOMETRIAL CANCER

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Introduction/Background Sentinel node in endometrial cancer (EC) is an evolving technique to know the nodal status in a more precise way without the need to perform a complete lymphadenecotomy. The aim of this study was to describe our latest results using dual cervical and fundal indocyanine green (ICG) injection for detection of sentinel lymph node (SLN) in endometrial cancer and results of SLN biopsy.

Methodology This is an observational prospective study performed between 26 June 2014 and 31 December 2019, 278 patients underwent laparoscopic surgery for endometrial cancer at Hospital Uniersitario Donostia, in Spain. In all cases, we performed SLN biopsy with dual cervical and fundal ICG injection, looking for pelvic and aortic sentinel node. All SLNs were processed with an ultrastaging technique. A total of 128 patients with Intermediate and High risk EC also underwent total pelvic and paraaortic lymphadenectomy.

Results The detection rates were as follows: 93.52% (260/278) overall for SLNs; 90.65% (252/278) overall for pelvic SLNs; 67.99% (189/278) for bilateral SLNs; 66.91% (186/278) for paraaortic SLNs, and 2.88% (8/278) for isolated paraaortic SLNs. We found macroscopic lymph node metastasis in 26 patients (10.03%) and microdisease in lymph nodes in another 48 patients, raising the overall rate of lymph node involvement to 16.19%. There was one false negative (negative SLN biopsy but positive lymphadenectomy). 6.6% of all pelvic and also aortic sentinel nodes were positive for metastasis. Applying the SN algorithm, the sensitivity of detection was 97.9% (95% CI 89.1–99.6), specificity 100% (95% CI 98.2–100), negative predictive value 99.5% (95% CI 97.4–99.9), and positive predictive value 100% (95% CI 92.4–100).

Conclusion Dual sentinel node injection is a feasible technique that achieves adequate detection rates. Additionally, this technique allows a high rate of aortic detection, identifying a non-negligible percentage of isolated aortic metastases. Aortic metastases in endometrial cancer are possible and it is necessary to investigate the relevance of its detection.

Disclosures No disclosures.

Fertility pregnancy

227 FERTILITY-SPARING TREATMENT IN ADVANCED BORDERLINE OVARIAN TUMORS. AN ANALYSIS FROM THE MITO14 STUDY DATABASE

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Introduction/Background For advanced borderline ovarian tumors (BOTs), data concerning the efficacy and safety of fertility-sparing surgery (FSS) are very limited. The MITO14 is a multi-institutional retrospective study conducted among MITO Centres with the aim of systematically collecting data from consecutive BOT patients. In the present analysis, data are presented on women with advanced BOT registered into the MITO14 database and conservatively treated between January 1995 and December 2019.

Methodology The objectives were: i) to evaluate the recurrence rate and to determine predictors of recurrence; ii) to assess the impact of a FSS on disease-free survival (DFS) and disease-specific survival (DSS); iii) to evaluate pregnancy and live birth rates following treatment.

Only patients undergoing FSS and with histologically proven FIGO2014 stage II – III BOTs at final pathology were included. Cases submitted to bilateral salpingo-oophorectomy with uterine preservation were eligible. The following exclusion criteria were considered: i) age >45 years; ii) presence of second tumor(s) requiring therapy interfering with the treatment of BOT.

Results A total of 101 patients were recruited. The median follow-up time from primary cytoreduction was 124 months (IQR range 80–177.5). Fifty-five patients (54.5%) experienced at least one recurrence (median time to first relapse 21 months, IQR range 9–53), 53 of whom (96.3%) undergoing