#305 (R)ETROSPECTIVE (A)NALYSIS OF THE CORRELATION OF (M)SI-H/DMMR STATUS AND RESPONSE TO THERAPY FOR (E)NDOMETRIAL CANCER: RAME STUDY, A MULTICENTER EXPERIENCE

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Introduction/Background There is little evidence about sensitivity to chemotherapy (CT) according to microsatellite instability (MSI) high (h)/mismatch repair (MMR) deficiency (d) status in patients with endometrial cancer (EC).

Methodology The RAME study is a retrospective analysis aiming to assess response to CT in MSI-h/dMMR and MSI-low(l)/proficient (p)MMR EC patients. Primary endpoints were recurrence-free survival (RFS) for patients with no advanced disease at diagnosis and progression-free survival (PFS) and overall survival (OS) in patients with advanced/recurrent disease.

Results 312 patients treated between January 2010 and January 2022 in 4 high volume MITO centers were selected. 239 patients had endometrioid EC (76.6%), 151 had FIGO stage I at diagnosis (48.9%) and 71 were MSI-h/dMMR (22.8%), mainly detected with immunohistochemistry (92%). Median age was 65 (31–91) years. At diagnosis, no difference in terms of age (p=0.26), FIGO stage (p=0.43) and comorbidities (p=0.66) were identified between MSI-h/dMMR and MSI-low/pMMR. Among the 278 patients with no metastatic disease at diagnosis, median RFS was 100.0 months (95%CI 59.4–140.7) for MSI-l/pMMR and 120.9 months (60.0–181.8) for MSI-h/dMMR (Hazard Ratio 0.81, 95%CI 0.50–1.31, p=0.39). Seventy-seven patients received first-line CT for advanced/recurrent disease, 76.6% (59/77) received platinum-based CT and 19.5% (15/77) were MSI-l/pMMR. In this setting, median PFS was 10.3 months (95%CI 7.7–12.8) and median OS was 37.2 months (95%CI 28.0–46.4) for MSI-l/pMMR; median PFS was 6.3 months (95%CI 2.0–10.6) and median OS was 14.0 months (95%CI 1.0–27.1) for MSI-h/dMMR, with a significantly worse OS in MSI-h/dMMR patients (HR 2.26, 95% IC 1.04 – 4.92, p=0.039). In the subgroup of patients receiving platinum-based CT, no statistically significant difference in PFS (p=0.21) and OS (p=0.057) were detected but PFS and OS were numerically longer in the MSI-l/pMMR population.

Conclusion Patients with metastatic MSI-h/dMMR EC receiving first-line chemotherapy had numerically worse PFS and OS in comparison with MSH-l/pMMR EC.

Disclosures None

#309 PREOPERATIVE MAGNETIC RESONANCE IMAGING FOR EVALUATION OF MYOMETRIAL INVASION IN ENDOMETRIAL CARCINOMA

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Introduction/Background Endometrium cancer is the most common gynecologic malignancy in developed countries. 70–80% of patients with endometrial cancer are Stage 1 at diagnosis. Prognosis, recurrence and survival depend mainly on the surgical stage of the tumor. In our study, we investigated the effectiveness of preoperative MRI in demonstrating myometrial invasion.

Methodology In our study, endometrial cancer patients who underwent surgery in our clinic between April 2010 and April 2019 were retrospectively evaluated. A total of 123 patients who underwent MRI in the preoperative period were included in the study. Types other than Endometroid type Endometrium cancer were excluded.

Results When the postoperative staging of our patients was analyzed, 59 of 69 cases with superficial myometrial invasion were correctly identified by MRI. The accuracy rate of MRI in showing superficial myometrial invasion was 85%. In addition, 85 of 112 patients identified as Stage 1 by MRI were also identified as Stage 1 after surgery. According to MRI, 24% of the stage 1 patients had a more advanced stage.

Conclusion This study shows that preoperative MRI in early-stage endometrial cancer may be important in predicting the stage and thus guiding surgery. The high accuracy rate in cases with superficial myometrial invasion makes MRI valuable in patients with Stage 1 and may thus expand the use of laparoscopy in endometrial cancer. It may also reduce the need for lymphadenectomy, which may increase morbidity, in patients with Stage 1A.

Disclosures I have no potential conflict of interest to report

#311 SAFETY OF INDOCYANINE GREEN (ICG) FOR SENTINEL LYMPH NODE MAPPING IN ENDOMETRIAL CANCER

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Introduction/Background Sentinel lymph node (SLN) mapping by intracervical indocyanine green (ICG) injection has become the standard for nodal staging in endometrial cancer (EC). Adverse reactions to ICG are extremely rare, although information about the safety of this tracer in patients with a history of drug or iodine hypersensitivity is limited. We aim to evaluate the rate of allergic reactions to ICG injected during SLN mapping in EC patients.

Methodology All EC patients who underwent SLN surgical staging by ICG cervical injection at Mayo Clinic, Rochester, MN, between 2014 and 2018, were retrospectively evaluated. Any anaphylactic/allergic reaction occurring intraoperatively or within seven days after surgery was identified.

Results 923 EC patients were included. 565 (61.2%) patients had a history of hypersensitivity to antibiotics and/or NSAIDs and/or other medications/food, while 25 (2.7%) patients had a history of iodine or iodine contrast media (ICM) reaction. No intraoperative anaphylaxis or severe delayed adverse reactions were observed after ICG injection. However, 10 (1.1%) patients developed a delayed short-lived localized skin rash within seven days after surgery. None of these cases had a history of ICM reaction, but 9/10 had a history of hypersensitivity towards non-iodinated allergens. These ten cases were reviewed from clinical records by a gynecologist and an allergologist, and it was concluded that the likelihood of these allergic reactions being related to ICG was low and more likely induced by other newly prescribed medications or contact sensitivity, based on timing and clinical/perioperative history. However, definitive allergic testing was not performed for the 10 cases with mild skin rash to establish the specific cause of the reaction.
Conclusion In our experience, the use of ICG for intracervical injection in SLN mapping is safe. ICG safety profile is confirmed even in the subset of patients with a history of hypersensitivity to drugs, iodine, or ICM.
Disclosures None

#313 IMPROVED OPERATIVE OUTCOMES AFTER SYSTEMATIZATION OF SLNB IN EC

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Introduction/Background The aim of this study is to observe how the operative results have changed and how the detection rates have evolved after the routine replacement of the lymphadenectomy technique by the SLNB technique.

Abstract #313 Table 1

Gross differences and after weighting of the variables of interest.

	Gross differences (CI 95%)	Adjusted differences (CI 95%)
Lymphadenectomy rate	-45.5% (-51.1, -45.5) ***	-49.4% (-63.77, -43.32) ***
Days of admission	-0.97 days (-1.19, -0.75) ***	-1.09 days (-1.53, -0.65) ***
Postoperative hemoglobin ^	0.69 g/dL (-0.06, 0.5)	0.66 g/dL (-0.17, 0.51)
Aortic Detection Rate	+14.1% (6.1-22.1) * / †††	+12.4% (0.5, 29.72) * / ††
Bilateral pelvic Detection Rate	+15.4% (7.9-24.8) *** / †††	+16.3% (7.8, 35.22) ** / †††
3 zones Detection Rate	+15.6% (6.5-34.8) ** / †††	+14.9% (2.96, 36.93) * / ††

A: adjusted to pre-operative hemoglobin concentration.
* superiority test: (*) p<0.05, (**) p<0.01, (***) p<0.001.
† Non-inferiority test, margin of -5%: (†) p<0.05, († †) p<0.01, († † †) p<0.001

Methodology A retrospective study was performed comparing the cohort of patients included in the prospective study of SLNB + lymphadenectomy in EC from July 2014 to December 2020 with the cohort of patients collected retrospectively from January 2021 to January 2023 of patients with EC operated on at our center using the validated SLNB technique with dual cervical and transcervical fundal injection of ICG.

In order to minimize confounding biases derived from the absence of randomization and to be able to estimate the population mean effect, inverse probability of treatment weighting (IPTW) was used, establishing a weight for each participant according to the baseline variables observed.
Results We included 442 in the analysis, Surgical staging was performed by SLNB&lymphadenectomy in 328 women if high or intermediate risk preoperative risk factors, and only by SLNB in 114.

There was a 45.5% reduction in the lymphadenectomy rates, a reduction of 0.97 days for days of hospitalization, an increase of 0.66 gr/dL of the levels of haemoglobin and an increase of detection rate for aortic, bilateral pelvic and Aortic&bilateral pelvic SLN of 12.4%, 16.3% and 14.9%.
Conclusion This study demonstrates that the incorporation of the SLNB for EC achieves a very significant reduction in the number of days of hospital stay, number of lymphadenectomies and an increase of the hemoglobin levels. We also found that once the technique was systematized all detection rates have improved, being very significant the improvement obtained at the level of bilateral pelvic detection.
Disclosures No disclosures.

#322 CHEMORADIOTHERAPY FOR UNRESECTABLE ENDOMETRIAL CANCER: CASE SERIES

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Introduction/Background Endometrial cancer is a common malignancy affecting women worldwide, and in some cases, surgical resection may be challenging due to its advanced stage. Historically, these cases were managed palliatively but, even if there is still a paucity of literature about this topic, chemoradiotherapy has emerged as an effective treatment option lately. The aim of this case series is to provide clinicians and researchers with a comprehensive understanding of the role of this approach in the management of unresectable endometrial cancer.
Methodology We retrospectively reviewed 5 patients diagnosed with FIGO stage IIIB-VA endometrial cancer in our institution, treated between 2020 and 2022. They completed treatment with Intensity-Modulated Radiation Therapy (IMRT) (dose 48.6 Gy in 1.8 Gy fractions given on 5 days per week) given with concurrent chemotherapy (consisting of two cycles of cisplatin 50 mg/m2 during radiotherapy, followed by four cycles of carboplatin AUC5 and paclitaxel 175 mg/m2). They were then reevaluated with MRI and stratified to receive definite high dose rate (HDR) brachytherapy or surgery. Progression-free survival (PFS), local control (LC), overall survival (OS), and grade $\geq$3 toxicities were reported.
Results Median age was 51 (range: 42–78) with median follow-up being 11 months (range: 5–24). Four patients were downstaged and received surgery followed by intracavitary HDR brachytherapy, while 1 of them did not show any radiological response and received intrauterine HDR brachytherapy. The actuarial 1-year LC, PFS and OS were 90%, 80%, and 100%. There were no acute grade $\geq$3 toxicities. There were 2 late grade $\geq$3 toxicities due to urinary toxicity and gastrointestinal side effects.
Conclusion The combination of radiotherapy and chemotherapy is a safe treatment option for women with locally extensive unresectable endometrial cancer, with favorable local