Abstracts

Introduction/Background Surgical staging of endometrial cancer (EC) serves to allocate women with lymph node metastases to adjuvant treatment. Sentinel lymph node (SLN) mapping has shown high accuracy to detect lymph node metastases in women with EC of low- or intermediate-risk (LR or IR) of lymph node metastases. The SENTIREC-endo study aims to investigate risks and benefits of a national protocolled adoption of SLN mapping to women with LR and IR EC, in a real-life clinical setting.

Methodology Preceded by a surgeon proficiency study, we performed a national multicenter prospective study of SLN-mapping in women with LR and IR EC from March 2017-February 2022. Postoperative complications were classified according to Clavien-Dindo. Lymphoedema was evaluated by validated patient-reported outcome measures at baseline and three months postoperatively. The Lymphoedema score was linearly transformed from 0 to 100 according to guidelines. Lymphoedema was assessed as a mean difference score and as incidence of swelling and heaviness, scores was compared using paired t-test.

Results 627 women were included in the analyses, 458 with LR- and 169 with IR EC. The SLN detection rate was 94.3% (591/627). The overall incidence of lymph node metastases was 9.3% (58/627), 4.4% (20/458) in the LR- and 22.5% (38/169) in the IR group. Only 0.3% (2/627) experienced an intraoperative complication associated with the SLN procedure. The incidence of postoperative complications was 8% (50/627). The mean difference score of lymphoedema was below the threshold for clinical importance 4.3/100 (95%CI 2.6–5.9). The incidence of leg swelling and heaviness was low, 5.2% and 6.1%, respectively.

Conclusion SLN mapping is a safe staging procedure in women with EC of LR and IR, carrying a very low risk of early lymphoedema, perioperative- and postoperative complications. The national change of clinical practice contributed to a more correct treatment allocation for both risk groups and thus supports further international implementation.

Disclosures There are no conflicts of interest to disclose.

Conclusion Our prospective study suggested that molecular features seem not helpful in tailoring the need for nodal dissection in EC. Further external validation is warranted.

Disclosures None

#224 LAPAROSCOPIC SENTINEL LYMPH NODE MAPPING USING INDOCYANINE GREEN DYE IN ENDOMETRIAL CANCER- AN INDIAN EXPERIENCE

1Anila Tresa Alukal*, 2Siva J Ranjith, 3Rena Anila Prabhakaran, 2Suchetha Jayathsh, 2Dhanya Dinesh. 1Sree Gokulam Medical College and Research Foundation, Thiruvananthapuram, India; 3Regional Cancer Centre, Thiruvananthapuram, India

Introduction/Background The sentinel node procedure helps to assess the nodal status in patients with low or intermediate risk groups helping in avoiding complete nodal dissection in endometrial cancers. The rate of identification of a sentinel node varied from 80% to 100%. Indocyanine green dye has shown a better detection rate when compared to the other tracers.

Methodology The aim of this study was to evaluate the feasibility of laparoscopic sentinel lymph node mapping using Indocyanine green (ICG) in early endometrial cancers. This was a prospective study done from January 2020 to June 2021 with a sample size of 25.

ICG dye was injected superficial and deep at the 3 O’clock and 9 O’clock positions of the cervix. Fluorescent signal from the sentinel nodes was identified and sentinel nodes were
excised. Patients underwent total laparoscopic hysterectomy with bilateral salpingo-oophorectomy and a complete pelvic and para-aortic lymph node dissection.

**Results**
The average duration of surgery was 4.8 hours. Hospital stay was 4 days.

Sentinel nodes were identified in 84% patients. Number of sentinel nodes isolated was 125 with a mean of 5 per patient. The Sentinel node detection rate was 84%. The detection rate in the right hemipelvis was 72% and in the left hemipelvis was 60%.

Around 56% of patients had sentinel node detection in bilateral hemipelvis. The sentinel node was detected in the para-aortic area for 44% of patients. The total number of lymph nodes obtained by lymphadenectomy was 394 with a mean of 15.7. Metastasis was identified in 8% of cases in the final histopathology in the pelvic sentinel node. No metastasis was detected in non-sentinel pelvic and paraaortic lymphadenectomy specimen.

**Conclusion**
Laparoscopic staging with sentinel node biopsy using ICG dye for Endometrial cancers are safe, easily reproducible and has a high detection rate.

**Disclosures**
There are no conflicts of interest.

#225 **INTEGRATING ESMO GUIDELINES WITH AN IMMUNOLOGICAL ENHANCED ENDOMETRIAL CANCER RISK CLASSIFICATION MODEL**

1Valentina Bruno*, 1Martina Betti, 1Lorenzo D’Ambrosio, 1Alice Massacci, 1Alessandro Buda, 1Benito Chiofalo, 1Giulia Piaggio, 1Gennaro Ciliberto, 1Faola Nisticò, 1Matteo Pallocca, 1Enrico Vizza.

1IRCCS Regina Elena National Cancer Institute, Rome, Italy; 2San Gerardo Hospital, University of Milano-Bicocca, Monza, Italy

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**Introduction/Background**
Endometrial cancer (EC) treatments are related to known prognostic factors included in the risk classes defined by the ESMO-ESGO-ESTRO consensus conference, together with the biomolecular classification. However, these prognostic factors are not sufficient to predict recurrence rate at early stages. The integration of immune signatures to existing molecular based models has not been extensively evaluated, nor mentioned in the guidelines. The aim of this study is to improve clinical risk prediction models by integrating existing guidelines with new -omic immunological predictive features extracted from TCGA-UCEC dataset.

**Methodology**
By deconvolution tools, we estimated the relative abundances of five main immune populations in public data and then applied feature selection methods to generate a machine learning (ML)-based model for disease-free survival probability prediction. We have also further investigated factors that may ease the re-stratification of early-stage cases which do experience relapse regardless of their low-risk profiles, trough deconvolution and differential expression analysis.

**Results**
We first obtain a ML-based model that can predict recurrence with a higher accuracy than guidelines parameters by introducing the immune framework, so far neglected by EC guidelines. Furthermore, we obtain an immune-based ultra-stratification in early stages population: to summarize, ‘hot tumors’ EC subtype tends not to relapse, and among recurrences ‘cold tumors’ EC subtype has a worst prognosis than ‘ultra-hot tumors’ in terms of OS.

**Conclusion**
In conclusion, we introduce a ML-based model to improve EC recurrence risk prediction, by integrating well-established risk class prognostic factors with new –omic immunological features, so far neglected by the guidelines. Furthermore, we identify novel endometrial cancer immunological profiles that enable an ultra-stratification of early-stage cases, discriminating those patients that experience relapse despite being assigned to the low-risk class. In endometrial cancer

**Abstract #225**

![Figure 1](http://ijgc.bmj.com/)

**Abstract #225 Figure 1** (A) Performances with and without novel features. TP: Percentage of correctly predicted high-risk profiles. TN: Percentage of misclassified high-risk profiles. Accuracy: Balanced between TP and TN. (B) Predicted survival curves for the two groups of interest (Relapse vs. No Relapse). (C) Feature importance and effect on DFS. Higher values are associated with a stronger effect on predictions. Higher segment lengths are associated with lower consistency of the feature importance across trees in the Random Forest. Green lines are associated with higher DFS, red lines are associated with a lower DFS, and gray lines are associated to a non-univocal effect. (D) Representation of all features of the model grouped by category; features in bold are novel.