

Introduction This study aimed to preoperatively identify high- and low-risk subgroups of patients with lymph node (LN) metastasis in presumed early-stage endometrioid endometrial cancer patients treated with systematic pelvic and para-aortic lymphadenectomy.

Methods Clinicopathologic data of presumed early-stage endometrioid EC patients (N = 361) treated with total hysterectomy with systematic lymphadenectomy between March 2000 and July 2022 were analyzed. None of the patients had definite evidence of LN metastasis in a preoperative magnetic resonance imaging (MRI). Preoperative risk factors including tumor location on MRI for LN metastasis were used to identify variables associated with LN metastasis. Multivariate models were estimated using the backward logistic regression method.

Results LN metastasis was confirmed in 19 patients (5.3%). Cervical stroma invasion on MRI (odds ratio, 4.386; 95% confidence interval, 1.020 – 18.852; P = 0.047), Cornual location on MRI (odds ratio, 36.208; 95% confidence interval, 7.902 – 165.913; P < 0.001), and lower uterine segment/isthmus location on MRI (odds ratio, 8.454; 95% confidence interval, 1.567 – 45.610; P = 0.013) were independent variables for LN metastasis. Patients were categorized into low- and high-risk groups according to risk criteria. Significant differences in the rates of LN metastasis were observed between the groups (0.4% vs. 22.2%, P < 0.001).

Conclusion/Implications A model using tumor location including uterine cornua and lower uterine segment/isthmus was significantly correlated with the risk of LN metastasis. Even in presumed early-stage endometrioid endometrial cancer patients, therefore, tumor location including cornua and isthmus should be investigated to determine whether to perform sentinel LN biopsy or lymphadenectomy.

PRO32/#594

REFINING COPY NUMBER-LOW ENDOMETRIAL CARCINOMA BY ESTROGEN RECEPTOR IMMUNOHISTOCHEMISTRY

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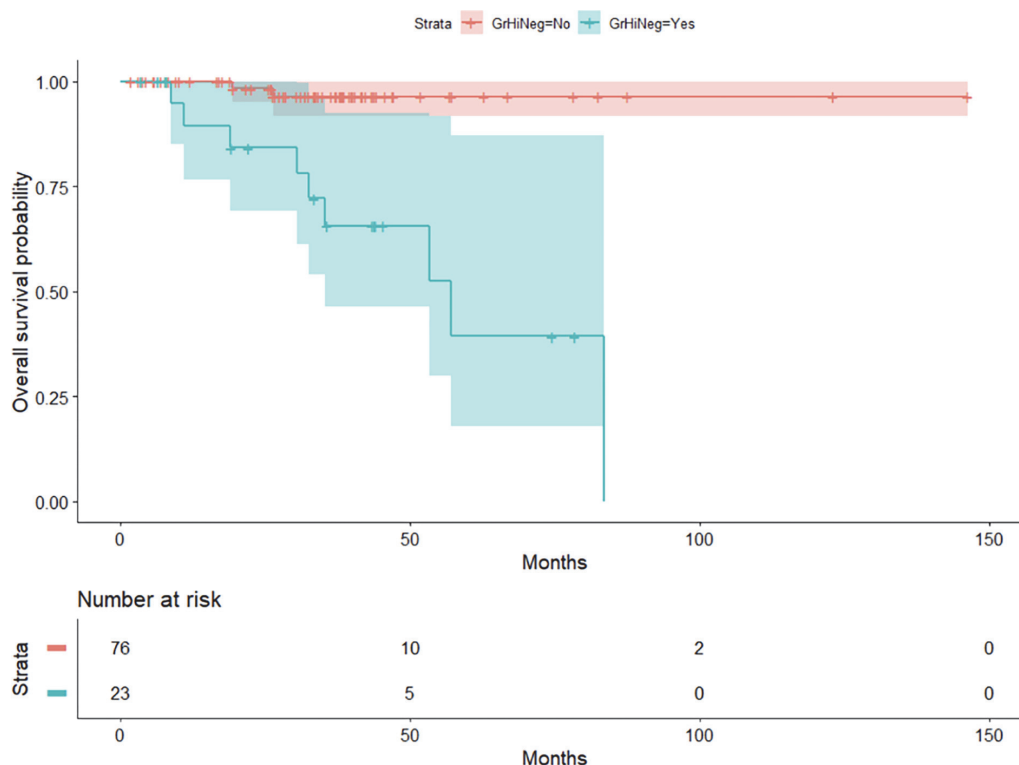
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Introduction To further subclassify copy number-low endometrial carcinomas (CNL-EC) based on immunohistochemistry (IHC) with prognostic implications.

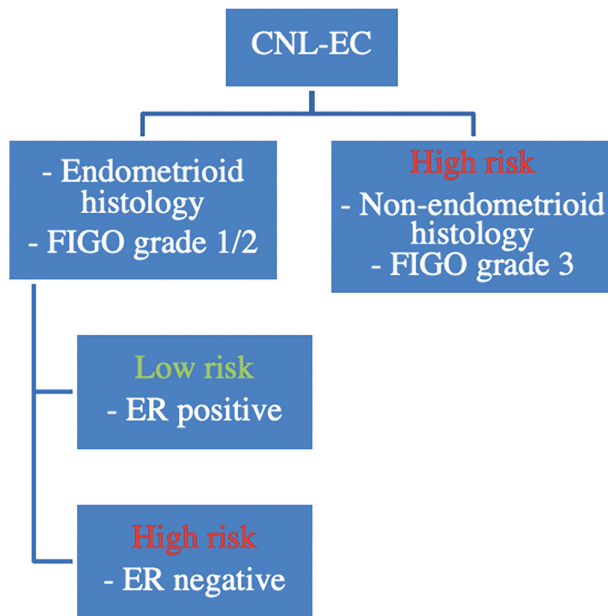
Methods We compiled EC patients who received their primary treatment at our institution from 2014 to 2022, and who had CNL-EC based on a surrogate of The Cancer Genome Atlas (TCGA) prognostic EC molecular subtype. Estrogen receptor (ER) and PTEN IHC was performed.

Results A total of 104 patients with CNL-EC were included. Eighty eight of 104 (84.6%) were ER positive by IHC, with 86 of 88 (97.7%) with endometrioid morphology. ER-positivity was found in conjunction with PTEN mutation, identified by genomic profiling, in 81.8[EL1]%. After combining histology and grade into a single variable (low-grade vs high-grade endometrioid or non-endometrioid (NE)) multivariate analysis demonstrated that only ER IHC status and the combined histology/grade variable are significant contributors to overall survival (HR=8.6 and 9.8, respectively, P=0.02 and P=0.002, respectively). Of the 14 deaths documented in this cohort, all but three had either high-grade and/or NE, or ER-negative tumors.

Conclusion/Implications These data highlight the importance of ER-IHC testing in CNL-EC and supports subclassify CNL tumors into 2 prognostic groups: a higher-risk group including



Abstract PRO32/#594 Figure 1



Abstract PR032/#594 Figure 2

FIGO grade 3, ER-negative endometrioid tumors and/or non-endometrioid features, and a more favorable group (FIGO grade 1/2 endometrioid ER positive carcinomas). Utilizing ER-IHC with histology and FIGO grade allows for better risk-stratification of patients with CNL-EC.

PR033/#878

DIAGNOSTIC AND PROGNOSTIC ROLE OF CIRCULATING NEUTROPHIL EXTRACELLULAR TRAP MARKERS AND PREKALLIKREIN IN PATIENTS WITH ENDOMETRIAL CANCER

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Introduction Tumor-promoting inflammation is among the hallmarks of cancer. Prekallikrein is among the acute-phase reactants in the inflammatory response; moreover, neutrophils release nuclear contents into the extracellular space to create neutrophil extracellular traps (NET). We aimed to investigate the diagnostic and prognostic utilities of circulating plasma NET markers and prekallikrein for endometrial cancer.

Methods Circulating levels of three NET markers (histone-DNA complex, cell-free DNA, and neutrophil elastase) and prekallikrein were measured in 100 patients with endometrial cancer and 30 healthy controls. We used an area under the receiver operating characteristic curve (AUC) analysis to investigate their diagnostic and prognostic utilities for HGSOE.

Results Compared with healthy controls, patients with endometrial cancer showed significantly higher levels of the three

NET markers and prekallikrein. Patients with advanced-stage endometrial cancer showed significantly higher levels of the cell-free DNA ($P < 0.001$), compared with those with early-stage endometrial cancer. Further, the levels of histone-DNA complex, neutrophil elastase, and prekallikrein did not significantly differ according to the cancer stage. All markers showed significant diagnostic utility. Notably, a logistic regression-based model that comprised all four markers showed the strongest diagnostic power (AUC, 0.901). In multivariate analyses, neutrophil elastase was identified as an independent poor prognostic factor for overall survival and progression-free survival in patients with endometrial cancer.

Conclusion/Implications The levels of the three NET markers and prekallikrein might be novel diagnostic and prognostic markers for endometrial cancer.

PR034/#973

ONCOLOGIC OUTCOMES OF ROBOT-ASSISTED LAPAROSCOPY VERSUS LAPAROSCOPY FOR THE TREATMENT OF APPARENT EARLY STAGE ENDOMETRIOID ADENOCARCINOMA OF THE UTERUS

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Introduction To compare long-term oncologic outcomes in women with apparent uterine confined (or early-stage) endometrioid endometrial cancer undergoing minimally invasive surgical (MIS) staging with or without robotic assistance (RA). **Methods** We performed a retrospective chart review of all patients with apparent early-stage endometrioid endometrial cancer diagnosed at Memorial Sloan Kettering Cancer Center between January 2008 and January 2018. Clinicopathologic, surgical, and survival data were collected. Appropriate statistical methods were applied.

Results Of 1728 patients, 1389 (80.4%) underwent RA-laparoscopy, and 339 (19.6%) laparoscopy. Median age at diagnosis was 60 years, range (24–92), median body mass index (BMI) at diagnosis was 30.2 kg/m², range (15.1–71.2). Patient demographics and tumor characteristics were similar in the two groups. Perioperative complications were similar in both groups (9.9% vs 7.7%, $p = 0.2$). A higher proportion of patients in the RA group were discharged on day 0 (19.2% vs 5.3%, $p < 0.001$). Median follow-up was similar in the RA vs. laparoscopy group (55.7 months vs 52.9 months, $p = 0.37$). Comparing the RA and laparoscopic groups, the recurrence rate (9.5% vs. 7.4%, $p = 0.22$), 5-year progression-free survival (88.5% vs. 90%, $p = 0.38$), and 5-year overall survival (89% vs 89%, $p = 0.74$) were not significantly different.

Conclusion/Implications In apparent early-stage endometrioid endometrial cancers, surgical staging using RA-laparoscopy was not associated with any significant increase in adverse survival outcomes compared to laparoscopy.