

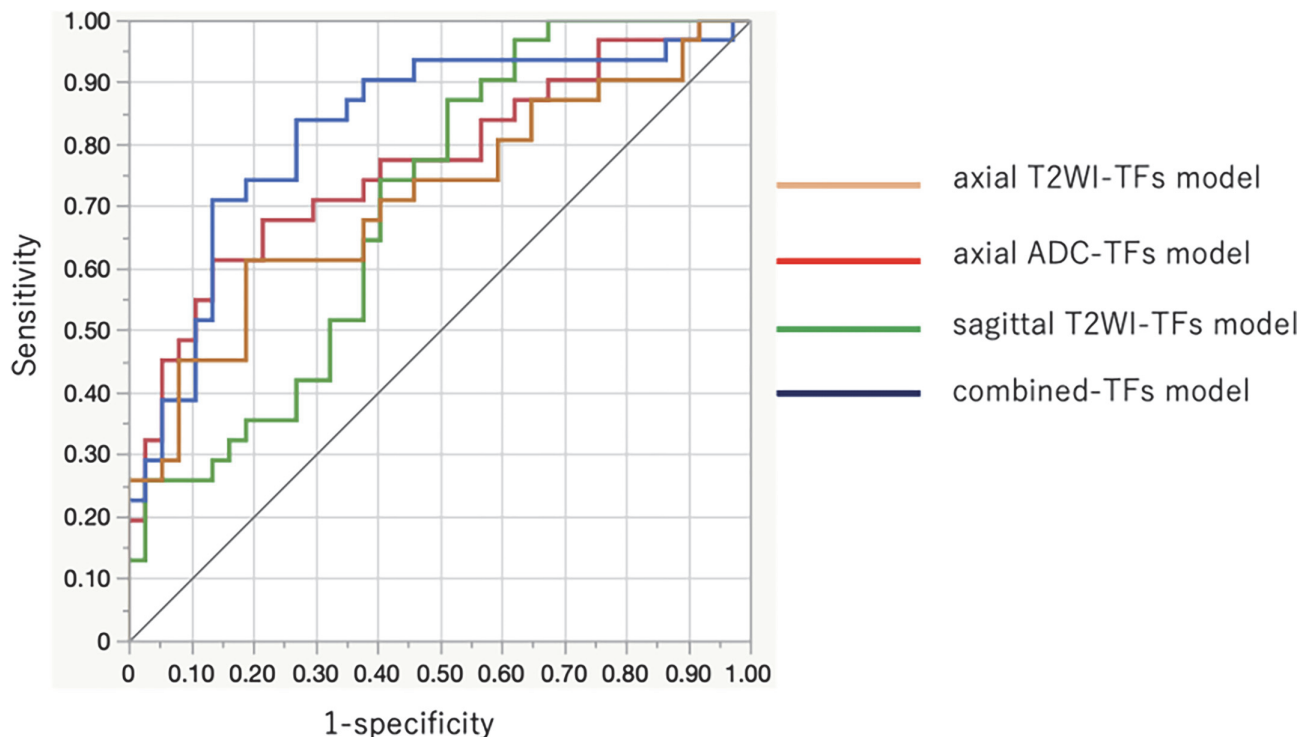
EP136/#225

EVALUATION OF UTERINE ENDOMETRIAL CARCINOMA HISTOLOGICAL GRADES USING MAGNETIC RESONANCE IMAGING TEXTURE ANALYSES

¹Eito Kozawa*, ¹Kaiji Inoue, ¹Saki Tuchihasi, ¹Hirokazu Shimizu, ²Yasutaka Baba, ³Kosei Hasegawa, ⁴Masanori Yasuda. ¹Saitama Medical University, Radiology, Saitama, Japan; ²Saitama Medical University, International Medical Center, Imaging Diagnosis, Saitama, Japan; ³Saitama Medical University, International Medical Center, Gynecologic Oncology, Saitama, Japan; ⁴Saitama Medical University, International Medical Center, Pathologic Diagnosis, Saitama, Japan

10.1136/ijgc-2023-IGCS.232

Introduction The histological tumor grade of uterine endometrial carcinoma (UEC) is one factor that can determine the prognosis. However, studies have shown that some histological grades assigned by preoperative biopsy results did not correspond to the final grades of the surgical specimens. This study evaluated the possibility of predicting the UEC histological grade using magnetic resonance imaging texture features (TFs). **Methods** This retrospective study included 70 patients with UEC. We evaluated axial T2-weighted imaging (T2WI) TFs, axial apparent diffusion coefficient (ADC) TFs, sagittal T2WI TFs, and their combinations to determine histological class 1



Abstract EP136/#225 Figure 1 The receiver operating characteristic curves analysis of the diagnostic model

Abstract EP136/#225 Table 1 Diagnostic performance of the model for differentiating histological class of uterus endometrial carcinoma

Model	Feature	AUC	Sensitivity	Specificity
sagittal T2-TFs model	first order maximum glcm joint energy glszm large area low gray level emphasis ngtdm busyness	0.70	0.49	0.87
axial ADC-TFs model	first order skewness Glcmln3 ngtdm busyness glcm correlation	0.77	0.87	0.61
axial T2WI-TFs model	first order skewness first order total energy ngtdm contrast ngtdm busyness	0.71	0.81	0.62
combined TFs model	glcm correlation on axial ADC-TF ngtdm strength on sagittal T2WI-TF ngtdm contrast on axial T2WI-TF ngtdm busyness on sagittal T2WI-TF	0.82	0.86	0.71

(Grade 1: n=33) and class 2 (Grade 2 and Grade 3: n=37) using texture analyses. The least absolute shrinkage and selection operator was used to select four TFs for each model and construct a discriminative model. A binary logistic regression analysis and receiver-operating characteristic analysis of the axial T2WI TFs, axial ADC TFs, sagittal T2WI TFs, and combined TFs models were performed to compare the two histological class.

Results Four models were constructed from each of the four selected features. The area under the curve (AUC) values of the discriminative model using these features were 0.71, 0.70, 0.77, and 0.82 for the sagittal T2WI TFs, axial T2WI TFs, axial ADC TFs, and combined TFs models, respectively. The AUC value of the combined TFs model was the highest.

Conclusion/Implications A combined TFs model may help distinguish UEC histological grades.

EP137/#905

COMBINED PELVIC AND PARA-AORTIC LYMPHADENECTOMY IS NOT ASSOCIATED WITH SURVIVAL BENEFIT IN EARLY-STAGE HIGH-GRADE ENDOMETRIAL ADENOCARCINOMA

Yen-Ling Lai*. National Taiwan University Hospital Hsin-Chu Branch, Department of Obstetrics and Gynecology, Hsin Chu, Taiwan

10.1136/ijgc-2023-IGCS.233

Introduction The therapeutic effect of para-aortic lymphadenectomy in early-stage high-grade endometrial cancer remains controversial. In this study, we investigated whether combined pelvic and para-aortic lymphadenectomy has a survival benefit compared to pelvic lymphadenectomy alone in patients with pathologically diagnosed FIGO stage I-II grade 3 endometrioid and non-endometrioid endometrial cancers.

Methods Weretrospectively reviewed the medical records of 281 patients with histologically confirmed FIGO stage I-II grade 3 endometrioid and non-endometrioid endometrial cancers who underwent pelvic lymphadenectomy alone or combined pelvic and para-aortic lymphadenectomy in staging surgery at two tertiary centers in Korea and Taiwan. Prognostic factors to predict outcomes in these cases were also analyzed.

Results Among 281 patients, 144 underwent pelvic lymphadenectomy alone and 137 underwent combined pelvic and para-aortic lymphadenectomy. Within a median follow-up of 45 months, there was no significant difference in recurrence-free survival (RFS) and overall survival (OS) between the two groups. In multivariable analysis, age at diagnosis ≥ 60 years (HR = 2.20, 95% CI 1.25–3.87, $p = 0.006$) and positive lymph-vascular space invasion (LVSI) (HR = 2.79, 95% CI 1.60–4.85, $p < 0.001$) were associated with worse RFS, and only non-endometrioid histology was associated with worse OS (HR=3.18, 95% CI 1.42–7.12, $p=0.005$). In further subgroup analysis, beneficial effects of combined pelvic and para-aortic lymphadenectomy on RFS and OS were not observed.

Conclusion/Implications In this study, combined pelvic and para-aortic lymphadenectomy could not improve survival compared to pelvic lymphadenectomy alone in patients with FIGO stage I-II grade 3 endometrioid and nonendometrioid endometrial cancers. Therefore, para-aortic lymphadenectomy may be omitted for these cases.

EP138/#520

PREDICTION OF FINAL PATHOLOGY DEPENDING ON PREOPERATIVE MYOMETRIAL INVASION AND GRADE ASSESSMENT IN LOW RISK ENDOMETRIAL CANCER PATIENTS: A KOREAN GYNECOLOGIC ONCOLOGY GROUP ANCILLARY STUDY

¹Bang-Hyun Lee*, ²Sokbom Kang, ³Jong-Hyeok Kim, ⁴Byoung Gie Kim, ⁵Jae-Weon Kim, ⁶Moon-Hong Kim, ⁷Xiaojun Chen, ⁸Jae-Hong No, ⁹Jong-Min Lee, ¹⁰Jae-Hoon Kim, ¹¹Hidemichi Watari, ¹²Seok Mo Kim, ¹⁰Sunghoon Kim, ¹³Seok Ju Seong, ¹⁴Dae Hoon Jeong, ¹⁵Yun Hwan Kim. ¹Inha University hospital, Inha University School of Medicine, Obstetrics and Gynecology, Incheon, Korea, Republic of; ²National Cancer Center, Gynecologic Oncology Research Branch, Research Institute and Hospital, Goyang, Korea, Republic of; ³University of Ulsan College of Medicine, Asan Medical Center, Department of Obstetrics and Gynecology, Seoul, Korea, Republic of; ⁴Sungkyunkwan University School of Medicine, Samsung Medical Center, Seoul, Korea, Republic of; ⁵Seoul National University, Obstetrics and Gynecology, Seoul, Korea, Republic of; ⁶Korea Cancer Center Hospital, Korea Institute of Radiological and Medical Sciences, Department of Obstetrics and Gynecology, Seoul, Korea, Republic of; ⁷Obstetrics and Gynecology Hospital of Fudan University, Gynecology, Shanghai, China; ⁸Seoul National University Bundang Hospital, Department of Obstetrics and Gynecology, Seongnam, Korea, Republic of; ⁹College of Medicine, Kyung Hee University Hospital at Gangdong Kyung Hee University, Department of Obstetrics and Gynecology, Seoul, Korea, Republic of; ¹⁰Institute of Women's Life Medical Science, Yonsei University College of Medicine, Department of Obstetrics and Gynecology, Seoul, Korea, Republic of; ¹¹Hokkaido University Hospital, Gynecology, Sapporo, Japan; ¹²Chonnam National University Medical School, Department of Obstetrics and Gynecology, Gwangju, Korea, Republic of; ¹³CHA Gangnam Medical Center, CHA University School of Medicine, Department of Obstetrics and Gynecology, Seoul, Korea, Republic of; ¹⁴Busan Paik Hospital, College of Medicine, Inje University, Department of Obstetrics and Gynecology, Busan, Korea, Republic of; ¹⁵Ewha Womans University Mokdong Hospital, Ewha Womans University College of Medicine, Department of Obstetrics and Gynecology, Seoul, Korea, Republic of

10.1136/ijgc-2023-IGCS.234

Introduction Fertility-sparing treatment might be considered option for reproductive women with low risk endometrial cancer (EC). However, in low risk EC patients, concordance rates between preoperative assessment and postoperative pathology are not high enough. We aimed to predict postoperative pathology depending on preoperative myometrial invasion (MI) and grade in low risk EC patients to help extend current criteria for fertility-sparing treatment.

Methods In Korean Gynecologic Oncology Group (KGOG) 2015, a prospective, multicenter study, 529 EC patients underwent preoperative assessment using MRI and endometrial biopsy followed by surgical staging. This ancillary study included patients who had no MI or MI $< 1/2$ on preoperative MRI and endometrioid adenocarcinoma and grade 1 or 2 on endometrial biopsy. Among eligible patients, Groups 1 - 4 were defined with no MI and grade 1, no MI and grade 2, MI $< 1/2$ and grade 1, and MI $< 1/2$ and grade 2, respectively. New prediction model using machine learning was developed.

Results Among 251 eligible patients, Groups 1 - 4 included 106 (42.2%) patients, 41 (16.3%), 74 (29.5%), and 30 (12.0%), respectively. Compared with conventional analysis, new prediction model showed somewhat better prediction values. In new prediction model, NPV, sensitivity, and AUC of preoperative each group to predict postoperative each group were 88.9%, 77.6%, and 0.714 for Group 1, 97.1%, 64.3%, and 0.676 for Group 2, 77.5%, 76.5%, and 0.641 for Group 3, and 92.4%, 64.9%, and 0.691% for Group 4.

Conclusion/Implications In low risk EC patients, prediction of postoperative pathology was ineffective enough. New prediction model might provide better prediction.