importance were calculated in the test cohort. The Ethics Committee approved this study.

Results The accuracy and AUC values for segregating stage I US from UM were 87% and 0.89, respectively. Variable important parameters for this classifier included age, CRP, and Hematocrit. Additionally, they were 85% and 0.95 in leiomyosarcoma, and 92% and 0.81 in ESS, respectively. Furthermore, unsupervised clustering analysis based on RF showed significant differences in two clusters in clinical stage I US with a median progression-free survival of 47 (3–115) vs. 13 (1–93) months ($P < 0.001$).

Conclusion/Implications The RF approach using common blood biomarkers and patient age can differentiate its malignancy and prognosis of US patients before primary intervention. This predictive model may provide a clinically useful approach to preoperative diagnosis distinct from conventional imaging techniques.

EP170/#355 MELK-MEDIATED PHOSPHORYLATION OF RB1 AND MAD2L1 PROMOTES CHROMOSOMAL INSTABILITY IN UTERINE LEIOMYOSARCOMA

[1]Qiuli Teng*, [2]Zhiwei Zhang, [1]Chenggong Sun, [1]Xinyue Ma, [1]Huan Wu, [1]Shi Yan, [1]Cunzhong Yuan, [1]Kun Song, [1]Qing Zhang, [1]Beihua Kong. *[1]Qilu hospital of Shandong University, Obstetrics and Gynecology, Jinan, Shandong province, China; [2]Beijing Chao-Yang Hospital, Capital Medical University, Obstetrics and Gynecology, Beijing, China*

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Introduction This study aimed to investigate the molecular pathogenesis of Uterine Leiomyosarcoma (ULMS), a highly lethal gynecologic malignancy with limited treatment options, and identify potential therapeutic strategies. ULMS is characterized by chromosomal instability (CIN), and its molecular mechanisms remain poorly understood.

Methods We conducted Whole Genome and Target Region Sequencing to investigate genomic alterations in ULMS. mRNA profiling analysis identified differential expression of genes involved in mitosis and nuclear division pathways, including MELK. In vitro and in vivo experiments assessed the effects of MELK overexpression on cellular proliferation, migration, and invasion.

Results Our study revealed that global chromosomal instability (CIN) was more prevalent than nucleotide alterations in ULMS. Additionally, mRNA profiling analysis showed differential expression of many genes involved in mitosis and nuclear division pathways, including MELK. We demonstrated that MELK promotes cellular proliferation, migration, and invasion in ULMS by phosphorylating MAD2L1 at the S170 site, causing its dissociation from CDC20 and subsequent conversion to its inactive form, O-MAD2, leading to uneven chromosomal distribution in daughter cells. MELK also promotes cell cycle progression by phosphorylating RB1 at the S252 site, leading to high cellularity and nuclear atypia formation in vitro and in vivo.

Conclusion/Implications Our study provides a comprehensive analysis of genomic alterations underlying CIN in ULMS and identifies MELK as a potential therapeutic target. The MELK-mediated molecular mechanism of CIN in ULMS provides insight into developing new therapies targeting this pathway. Further research is needed to develop effective therapeutic strategies for treating ULMS.

EP171/#796 THE NEED FOR LYMPH NODE EVALUATION IN LATE-STAGE UTERINE CARCINOSARCOMA – A MULTICENTER RETROSPECTIVE STUDY

[1]Yaokai Wang, [2]Juan Peng, [3]Lizhou Liu, [1]Bei Liu, [1]Xian Li, [4,5]Suk Lau, [4,5]Shuk Kwok, [4,5]Mandy Chu, [4,5]Siew Fei Ngu, [1,4,5]Karen Chan, [1]Li Zhang, [1,4,5]Hextan Ngan, [1,4,5]Ka Tse*. *[1]the University of Hong Kong-Shenzhen Hospital, Gynecology and Obstetrics, Guangdong, China; [2]the Third Affiliated Hospital of Zhengzhou University, Department of Obstetrics and Gynecology, Zhengzhou, China; [3]Shenzhen Maternal and Child Health Care Hospital, Department of Obstetrics and Gynecology, Shenzhen, China; [4]School of Clinical Medicine, the University of Hong Kong, Department of Obstetrics and Gynecology, Hongkong, China; [5]Queen Mary Hospital, Department of Obstetrics and Gynecology, Hongkong, China*

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Introduction Uterine carcinosarcoma (UCS) is a highly aggressive, rare, biphasic tumor.Lymph node evaluation by either lymphadenectomy (LND) or sentinel lymph node biopsy (SLNB) is recommended. However, its value in late-stage disease remains unclear.

Methods Clinical data of patients with UCS from four different hospitals between February 2006 and December 2021 were reviewed. Patients with prior radiotherapy and/or chemotherapy were excluded. Progression-free survival (PFS) and overall survival (OS) were determined.

Results Among 103 UCS patients, 91 UCS patients had enough follow-up data. 47 (51.6%) were diagnosed at stage III-IV, among which 24 (51.1%) had LND. 16 patients (34.0%) had lymph node metastases (LNM). Patients undergoing LND was associated with longer median PFS (20.2 months vs. 5.7 months, $P = 0.009$) and OS (29.1 months vs. 14.1 months, $P < 0.009$) compared to those without LND. Multivariate analyses demonstrated that LND (hazard ratio, HR 0.447, 95% confidence interval (CI) 0.23 – 0.86, $P = 0.16$) and chemotherapy (HR 0.070, 95% CI 0.03 – 0.19, $P < 0.001$) were significant prognostic factors for PFS in late-stage patients. Additionally, LND (HR 0.133, 95% CI 0.04 – 0.50, $P = 0.003$) and chemotherapy (HR 0.102, 95% CI 0.03 – 0.33, $P < 0.001$) were independent significant prognostic factors for OS.

Conclusion/Implications Despite the use of adjuvant therapy, LND remains an integral part of the surgical treatment. Further prospective studies are needed to elucidate its value in late-stage disease.

EP172/#839 SEROUS ENDOMETRIAL INTRAEPITHELIAL CARCINOMA: AN OBSERVATIONAL STUDY

Ciska Slaager, Heleen Van Beekhuizen*. *Erasmus MC Cancer Institute, University Medical Center Rotterdam, Gynecologic Oncology, Rotterdam, Netherlands*

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Introduction Serous endometrial intraepithelial carcinoma is described as a malignant, superficial spreading lesion with risk of extrauterine spread at time of diagnosis and poor outcome. The main objective of this study was to evaluate the surgical management of patients with serous endometrial intraepithelial carcinoma and its impact on oncologic outcomes and complications.

Methods This Dutch observational retrospective cohort study evaluated all patients diagnosed with pure serous endometrial intraepithelial carcinoma in The Netherlands, from January 2012 to July 2020. The pathological examination was

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