21.0. The p-value of 0.05 was consider statistically significant.

Results: There were 562 cases recruited in the study. Mean age of patients was 43 years. The mean BMI was 25.74 kg/m² (range, 14.38–66.12). The BMI was divided into 3 groups: 1) Normal weight (BMI, 18.5–22.9 kg/m²) was 210 cases (37.3%); 2) Over-weight (BMI, 23–24.9 kg/m²) was 90 cases (16.0%); and 3) Obese (BMI ≥25 kg/m²) was 262 cases (46.6%). The pathological reports demonstrated 36 cases of endometrial hyperplasia and 22 cases of endometrial cancer. There was a correlation between obese women and endometrial hyperplasia with odds ratio 5.9 and p-value 0.015. However, there were no statistically significant between other BMI patterns and endometrial pathology.

Conclusion: There was a significant correlation between obesity and endometrial hyperplasia in premenopausal women with abnormal uterine bleeding.

Poster (E23)

Endometrial Hyperplasia, Endometrial Intra-epithelial Neoplasia, and Endometrial Cancer

<https://doi.org/10.3802/jgo.2021.32.S1.E23>

Incidence of parametrial spreading in endometrial cancer at stages I and II in Siriraj Hospital

Suwanit Therasakvichya,^{*} Sasimas Rujirawong, Boonlert Viriyapak, Atthapon Jaishuen

Faculty of Medicine, Siriraj Hospital, Mahidol University, Bangkok, Thailand (suwanit.the@mahidol.ac.th)

Objective: To identify the incidence of parametrial involvement in endometrial cancer stages I and II and the related risk factors.

Methods: The retrospective descriptive study was performed to review data from patients with endometrial cancer, clinical stages I and II who underwent surgical treatment as primary therapy. The data included patients' status, pathological reports (especially parametrial involvement), stage, adjuvant treatment, complications of treatment, and response of disease.

Results: The medical charts of 76 patients were reviewed and 3 cases were excluded from this study because of incomplete pathological report. The mean age was 58 years old. Most of them were early stage (IA, IB and II that defined according to International Federation of Gynecology and Obstetrics 2009 surgical stage with radical or modified radical hysterectomy), 31 (42.5%) tumor grade I, and 76.7% endometrioid adenocarcinoma. Three patients (4.1%) had parametrial involvement. The tumor spread into parametrium by lymphovascular space invasion in 2 cases and one case had lymph node metastasis. Because of the small number of

cases, it is hard to use this data to identify the risk factors and correlation of parametrial involvement.

Conclusion: The incidence of parametrial involvement was too small. The benefit of radical or modified radical hysterectomy to identify parametrial involvement in endometrial cancer is not strongly suggested from the results of this study. A prospective study with adequate sample size and long term follow up should be considered.

Poster (E24)

Endometrial Hyperplasia, Endometrial Intra-epithelial Neoplasia, and Endometrial Cancer

<https://doi.org/10.3802/jgo.2021.32.S1.E24>

Management of inoperable endometrial cancer

Supakorn Pitakkarnkul,¹ Saranya Chanpanitkitchot,² Siriwan Tangjitgamol^{3,*}

¹Gynecologic Oncology Division, National Cancer Institute, Bangkok, Thailand

²Department of Obstetrics and Gynecology, Rajavithi Hospital, College of Medicine, Rangsit University, Bangkok, Thailand

³Department of Obstetrics and Gynecology, Faculty of Medicine Vajira Hospital, Navamindradhiraj University, Bangkok, Thailand (siriwanonco@yahoo.com)

Objective: Most existing information about treatment for inoperable epithelial-myoepithelial carcinoma (EMC) are derived from retrospective studies or case series. Without evidence-based data from randomized study, collective data from available reports would be helpful for a gynecologic oncologist to select an alternative treatment option for EMC patients who are not candidates for primary surgery.

Methods: This work collected and summarized data from literature review of relevant studies according to the treatment intention (definitive or neoadjuvant). Treatment given with a palliative aim, either chemo- or hormonal therapy, or best supportive care is beyond the scope of this review.

Results: The 3 major types of treatment for inoperable EMC were radiation therapy, chemotherapy, or their combination, and interval surgery. Radiation therapy alone (of different modes) was used as a sole definitive modality of therapy particularly for early-stage diseases which limited to uterine body, cervix, with or without parametrial invasion. A more common treatment modality was neoadjuvant treatment prior to surgery. Post-operative adjuvant treatment was also sometimes used depending mainly on the sites of disease and results of surgery. Data of neoadjuvant hormonal or radiation therapy were limited focusing on laboratory outcomes or having only small number of patients, respectively. Most neoadjuvant treatment before surgery was chemotherapy and

fewer with combined chemo-radiation. Surgery was generally proceeded particularly in the patients who had responses or at least stable diseases to neoadjuvant treatment. Peri-operative outcomes after neoadjuvant treatment were superior compared to those of primary surgery whereas survival data were still inconsistent. Features which had or tended to have favorable prognosis were younger age, early-stage disease, response to neoadjuvant treatment, low pre-operative CA125, and optimal surgery. Among different modalities of neoadjuvant treatment which has become a frequent mode of treatment, neoadjuvant chemotherapy was more common than radiation therapy alone or chemoradiation.

Conclusion: Radiation therapy alone (of different modes) was used as a sole definitive modality of therapy particularly for early-stage diseases which limited to uterine body, cervix, with or without parametrial invasion. Among different modalities of neoadjuvant treatment, neoadjuvant chemotherapy was more common than radiation therapy alone or chemoradiation.

Poster (E25)

Endometrial Hyperplasia, Endometrial Intra-epithelial Neoplasia, and Endometrial Cancer

<https://doi.org/10.3802/jgo.2021.32.S1.E25>

Mismatch repair deficiency and real-world outcomes of immunotherapy in patients with endometrial cancer

Sohyun Nam, Shin-Wha Lee, Dae-Yeon Kim, Dae-Shik Suh, Jong-Hyeok Kim, Yong-Man Kim, Young-Tak Kim, Joo-Hyun Nam, Jeong-Yeol Park*

Asan Medical Center, Seoul, Korea (catgut1-0@hanmail.net)

Objective: To investigate the clinicopathologic characteristics and the oncologic outcomes of immunotherapy in patients with endometrial cancer according to mismatch repair deficient (MMRd)/microsatellite instability (MSI) status.

Methods: We conducted a single-center retrospective analysis and a total of 215 endometrial cancer patients who underwent MMRd/MSI tests between January 2011 and March 2021 were included.

Results: Of the total 215 patients, 169 patients (78.6%) had mismatch repair proficient (MMRp)/microsatellite stable (MSS) tumors and 46 patients (21.4%) had MMRd/MSI tumors. Between 2 groups, distribution of histologic types and pathological stage were not statistically different ($p=0.469$ and 0.431 , respectively). A total of 68 out of 215 patients were tested for programmed death-ligand 1 (PD-L1), and PD-L1 expression was observed in 51.9% in MMRp/MSS group and 85.7% in MMRd/MSI group ($p=0.022$). The progression-free survival and overall survival rates

did not statistically differ between 2 groups. Eight patients were treated with pembrolizumab and objective response rate was 37.5%, comprised of 3 partial responses. Sixteen patients received lenvatinib/pembrolizumab and objective response rate was 31.3, comprised of 3 complete responses and 2 partial responses. Grade 3 or higher adverse events occurred in 18.8% (3/16) of those treated with lenvatinib/pembrolizumab.

Conclusion: In patients with endometrial cancer, although MMRd/MSI is associated with a higher PD-L1 expression rate than MMRp/MSS, there was no effect on progression and overall survival. In clinical practice, immunotherapy was safe and efficacious in recurrent endometrial cancer.

Poster (E26)

Endometrial Hyperplasia, Endometrial Intra-epithelial Neoplasia, and Endometrial Cancer

<https://doi.org/10.3802/jgo.2021.32.S1.E26>

Nomogram for microscopic lymph node metastasis in surgically staged endometrioid endometrial cancer patients

Tae-Wook Kong,¹ Jayoun Kim,² Joo-Hyuk Son,¹ Jiheum Paek,¹ Suk-Joon Chang,^{1,*} Hee-Sug Ryu¹

¹Division of Gynecologic Oncology, Department of Obstetrics and Gynecology, Ajou University School of Medicine, Suwon, Korea (drchang@ajou.ac.kr)

²Medical Research Collaborating Center, Seoul National University College of Medicine, Seoul, Korea

Objective: To establish a nomogram for predicting microscopic lymph node (LN) metastasis in surgically staged endometrioid endometrial cancer (EC) patients.

Methods: Clinicopathologic data of presumed early-stage endometrioid EC patients ($n=338$) treated with lymphadenectomy between March 2000 and February 2018 were analyzed. The nomogram was developed based on multivariate logistic regression analysis of preoperative clinicopathologic data. The predicted and discriminative ability of the nomogram were evaluated by a concordance index and calibration curve. The high-risk group was predefined as having a predicted probability of LN metastasis $>50\%$.

Results: Thirty-four patients (10.1%) had microscopic LN metastasis. Multivariate analysis identified cancer antigen-125, myometrial invasion on magnetic resonance imaging (MRI), cervical stromal invasion on MRI as independent prognostic factors associated with LN metastasis. The concordance index of the nomogram was 0.818 (95% confidence interval= $0.793-0.935$), and calibration plots revealed good agreement between the observed probabilities and nomogram-