histology (13.8% vs 2.1%), poorly differentiated tumors (37.9% vs. 19.2%), presence of LVSI (55.2% vs. 44.9%) and positive pelvic lymph nodes (27.6% vs 11.1%) than patients with tumors < 4 cm on final pathology. Upstaged patients were more likely to have preoperative imaging (51.7% vs. 30.3%) with over 85% of imaging being performed with CT or PET/CT.

Factors associated with pathologic upstaging included adenosquamous histology (p=.029), use of preoperative imaging (p=.034), moderately or poorly differentiated tumors (p=.035), positive pelvic lymph nodes (p=.028), and receipt of adjuvant therapy (p<.0001). Recurrence rates were higher in upstaged patients (20.7% vs. 6.1%, p=.017). Median PFS was shorter in upstaged patients than those with pathologically confirmed IB1 disease (84.3 m v 97.7 m, p=.019). There was a trend towards poorer OS in upstaged patients (p=.082)

Conclusions: Accurate evaluation of tumor size on clinical exam is challenging in patients with stage IB1 cervical cancer. Pathological tumor sizes > 4 cm are associated with poor prognostic features and worse outcomes compared to patients with pathologically confirmed IB1 cervical cancer. Further research on how to improve clinical staging should be undertaken.

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Poster #13

Postpartum colposcopy – Is it necessary?

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Objectives: We aimed to determine regression or progression of dysplasia after delivery in regards to necessity of postpartum colposcopy in patients at high risk of non-compliance with follow up.

Methods: This is a retrospective cohort study of pregnant patients with abnormal pap smears from 2009 through 2016. Data collected included demographics, cervical cytology, colposcopy impressions/pathology. Pap smears of HPV+, ASCUS HR HPV-, ASCUS HR HPV+ or LSIL were coded as low grade. ASC-H or HSIL were coded as high grade. Data were analyzed via chi square and logistic regression with significance determined at P<0.05. Power was calculated post-hoc.

Results: Power was calculated post-hoc and was found to be 88%. In this population, the no show rate to postpartum colposcopy appointment was 55.7%. 31.5% of patients did not have follow up cytology any time since delivery to present. Analysis revealed, for patients with follow up cytology available and low-grade antepartum pap smear, postpartum pap smears were negative, low grade and high grade at rates of 57.9%, 33.3% and 8.8% respectively. When dividing this group by shows and no shows to postpartum colposcopy, there was no statistically significant difference between follow up cytology (p = 0.11). For the same population, high grade antepartum pap smears were negative, low grade and high grade at rates of 28.9%, 25.7% and 45.7% respectively.

With respect to antepartum colposcopy compared to postpartum colposcopy, there was no significant difference between antepartum colposcopy impression and postpartum colposcopy pathology (p=0.54) (figure 1).

Conclusions: Low grade pap smears in pregnancy have low risk of progression and it may be reasonable to consider repeat pap in the postpartum period rather than repeat colposcopy. There was no statistically significant difference between next pap smears whether patients did or did not comply with their postpartum colposcopy, implying colposcopy may be an unnecessary intervention in this specific population. Further study is indicated to test this hypothesis.

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Poster #14

Risk of cervical and vaginal neoplasia after surgery for vulvar intraepithelial neoplasia or cancer: A 6-Year follow-up study

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Objectives: Current guidelines to continue cytology screening after hysterectomy are based on history of high-grade intraepithelial neoplasia of the cervix (CIN), but not of the vulva (VIN). Here, we aim to evaluate the utility of cytology among women, with and without prior hysterectomy, who underwent surgical management for VIN3+ disease by estimating the risk of high-grade cervical or vaginal intraepithelial neoplasia or cancer (CIN2+/VAIN2+) diagnosed during vulvar surveillance follow-up.

Methods: Women who underwent surgery for high-grade VIN or vulvar cancer between 2006 and 2014 were identified retrospectively. Patients who underwent prior hysterectomy for any indication were included. Univariate and multivariate logistic regression analyses were used to identify clinical factors of abnormal cytology after surgical treatment for VIN and vulvar cancer.

Results: During our 8-year study period, 302 women were followed with surveillance exams after vulvar surgery over a median follow-up of 72 months. During that time, 100 (33%) women had abnormal cytology: 69 (23%) low-grade, 28 (9%) high-grade, and 2 (0.7%) carcinoma. Overall, 33% of women had a prior hysterectomy, but the risk of intraepithelial neoplasia or cancer was not significantly different from women with an intact cervix [9/99 (9%) VAIN2+ risk vs. 15/203 (7%) CIN2+ risk]. Correlates of high-grade cytology following treatment for VIN/vulvar cancer included non-white race [odds radio (OR) 4.6, 95% confidence interval (CI) 2.4-8.8], immunodeficiency (patients with human immunodeficiency virus or on immunosuppressive medications) (OR 4.0, 95% CI 1.8-8.8), and prior abnormal cytology (OR 4.4, 95% CI 2.1-9.3). The multivariable analysis shows that they remained significant (p<0.01) (Table 1). Prior hysterectomy did not significantly decrease risk of abnormal cytology (OR 0.87, 95% CI 0.5-1.6).

Conclusions: Women treated surgically for VIN/vulvar cancer have a 10% risk of at least high-grade cytology on surveillance screening. Prior hysterectomy does not mitigate the risk, as 9% will develop VAIN2+. Extrapolating from current guidelines, we recommend surveillance cytology screening at least 6-12 months after treatment, especially in women with a history of immunosuppression or prior abnormal cytology.

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Poster #15

The effect of adjuvant therapy for high intermediate-risk endometrial cancer on patients with recurrent disease

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Objectives: To determine if receipt of adjuvant treatment after surgical staging for high intermediate-risk endometrial cancer affects progression-free survival (PFS) or overall survival (OS) in women with recurrent disease.

Methods: After obtaining IRB approval, a multi-institutional retrospective cohort of women with recurrent endometrial cancer diagnosed between April 1999 and November 2016 was collected. Demographic information, operative reports, pathology reports, adjuvant treatment regimens, recurrence data, and date of death were abstracted from the patients' charts. Women who met criteria for high intermediate-risk disease as defined by GOG 99 (endometrioid histology grade 2-3, >2/3 myometrial invasion, lymphovascular space invasion; patients need ≥1 risk factor (RF) if age >70, ≥2 RF if age 50-69, 3 RF if age <50) were included in the analysis. Kaplan-Meier survival analysis was used to compare PFS and OS by treatment type without adjustment. A Cox proportional hazards analysis was also performed to assess how treatment was related to OS and PFS after adjustment.

Results: In the study, 63 patients met the inclusion criteria. Of these, 43 (68.2%) did not receive any adjuvant treatment and 20 (31.8%) received adjuvant therapy (radiation, chemotherapy, or a combination of both). Median PFS and OS were not statistically different between the two groups: PFS (16.9 vs. 18.8 months, $p=0.87$), OS (45.8 vs. 64.9, $p=0.57$). After adjusting for age, LVSI, grade, and depth of invasion, there was no difference in PFS (HR 1.51, 95% CI 0.65 – 3.53, p = 0.8072) or OS (HR 1.12, 95% CI 0.44 – 2.84, p=0.5702) between groups.

Conclusions: While adjuvant therapy for patients with high intermediate-risk endometrial cancer has been shown to improve PFS, it has never been shown to benefit OS, although many providers will still give adjuvant treatment. Our study suggests that in a real-world setting, even when limiting the analysis to just those patients that recur, adjuvant therapy did not offer a PFS or OS advantage over patients who did not receive any adjuvant treatment.

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Poster #16

Fertility sparing management of endometrial hyperplasia with atypia and grade 1 endometrial cancer in young women

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Objectives: Endometrial cancer (EC) is the most common gynecologic malignancy in the United States, and obesity is more strongly associated with the development of EC than any other cancer in women. The increasing rate of obesity has led to an unprecedented increase in endometrial hyperplasia with atypia (AEH) and EC in reproductive age women, many of whom wish to maintain their fertility. The role of levonorgestrel (LNG) IUDs and GnRH agonists, alone and in combination, in the treatment of AEH and early stage EC, has been well studied. In this study, we assess the efficacy of a multimodal protocol combining a LNG-IUD, GnRH agonist, aromatase inhibitor, and metformin, to specifically address the dysfunctional metabolic and pro-inflammatory state, as well as the peripheral conversion of estrogen, seen in obese reproductive age women.

Methods: Retrospective case series of obese reproductive age women, with either AEH or Grade 1-2 EC, who were treated with our multimodal protocol at a single academic center from 2014 to 2019. Study participants underwent a baseline D&C followed by placement of a LNG-IUD, and initiation of a GnRH agonist and metformin. Once in a medically induced menopause, they were started on an aromatase inhibitor. Patients were also referred for nutrition and exercise counseling. Serial endometrial biopsies were done at 3, 6, and 9 months—and a D&C was done at 12 months. Outcomes included response rates to the protocol at each interval and fertility rates following treatment.

Results: Thirteen patients were treated with our multimodal protocol—8 had AEH (61.5%), 4 had Grade 1 EC (30.8%), and 1 had Grade 2 EC (7.7%). Almost half (46%) of these patients were referred by REI after being found to have endometrial pathology while undergoing work-up for infertility. Patient age ranged from 24 to 38, and BMI ranged from 32 to 60 (median 40). At the completion of the study, 11 patients had a complete response (85%) and 2 had progressed from AEH to Grade 1 EC (15%). Both of these patients underwent hysterectomy—one had Stage 1a Grade 1 endometroid EC and the other had AEH on final pathology. Patients were followed on average for 2.5 years following completion of treatment, and in this period 1 patient had a successful pregnancy. Three patients kept their LNG-IUD past 12 months and decided to delay childbearing in order to focus on improving their own health.

Conclusions: Our multimodal protocol combining a LNG-IUD, GnRH agonist, aromatase inhibitor, and metformin is highly effective in the treatment of AEH and Grade 1-2 EC in obese reproductive age women desiring fertility sparing management, when compared to the existing literature. While our multimodal protocol does facilitate uterine preservation, the women in our study likely face significant issues with fertility beyond their endometrial pathology, and the long-term fertility outcomes of these patients have yet to be determined.

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Poster #17

Lymph node micrometastases in endometrial cancer: Treatment patterns and prognosis

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Objectives: Sentinel lymph node (SLN) mapping has recently emerged as a surgical technique with a high degree of accuracy in detecting metastases and is emerging as a replacement to full lymphadenectomy in the staging of endometrial cancer. Data from breast cancer suggest that small tumor deposits, including micrometasases (MM) and isolated tumor cells (ITCs) may have a negative impact on survival as compared to node negative cases. However, there is limited data regarding the clinical significance of MM and ITCs in endometrial cancer. The objectives of this study were to determine the incidence of lymph node MM and ITCs in stage IIIC endometrial cancer and to compare survival outcomes.

Methods: We identified all patients with stage IIIC endometrial cancer who had undergone a hysterectomy, bilateral salpingo-oophorectomy and lymphadenectomy from 2010 to 2017. Demographic, clinicopathologic, treatment and outcome data were collected through the Magee Tumor registry. MMs were defined as tumor within a lymph node measuring > 0.2mm but < 2.0mm, and ITCs were defined as tumor within a lymph node measuring 0.2mm. Data were compared using descriptive statistics, including t-tests, chi-square, and fisher exact, as applicable survival analyses was performed using Kaplan-Meier and Cox proportional hazard methods. All tests were two-tailed with threshold significance level set at $p<0.05$.

Results: Of the 152 patients identified, 101 (66.4%) had IIIC1 disease and 51 (33.6%) had stage IIIC2 disease. Mean age at diagnosis was 62 (37-85), and patients had a mean BMI of 32.3 (18.0-59.4). A majority