Objectives: Patient selection for primary radical surgery is paramount to avoid the use of adjuvant radiation treatment and its associated adverse effects in cervical cancer. The use of preoperative imaging could help identify those best suited for surgery versus primary radiation; however, no standard of care has been identified. We aim to describe the false negative rate and false positive rate of preoperative imaging at a single institution prior to radical surgery for cervical cancer.

Methods: A retrospective chart review of all patients who underwent radical hysterectomy for early-stage cervical cancer from 1/2010 – 12/2017 at a single tertiary care center was performed. Patient demographics and clinicopathologic information, including imaging, surgery, adjuvant treatment and disease outcomes, were recorded from electronic records. Descriptive statistics were used.

Results: One hundred and nine patients were identified who underwent preoperative imaging. Ninety-four (86%) had no suspicion for metastatic disease, and 15 (14%) had suspicion for metastatic disease on preoperative imaging. Of these 94, 19 (20%) had a false negative study with metastatic disease identified on final surgical pathology with 18 (95%) receiving imaging within 6 weeks of surgery. Regarding imaging modality, 68% (13/19) had PET/CT; 26% (5/19) had an MRI; and one patient had a PET/CT and diagnostic CT. Of the 19 who had false negative imaging, disease was found to be in the pelvic lymph nodes in 11 patients (58%), parametria in 7 (37%), vaginal extension in 3 (16%), and uterine extension in 3 (16%). Sixty-three percent (12/19) underwent conization prior to surgery. Only 1 of these 12 patients (8%) had a tumor >2cm on cone specimen. Only 1 (8%) had positive lympho-vascular space invasion on cone.

Of the 15 with possible metastatic disease on imaging, (60%) had a false positive study with no metastatic disease identified on final surgical pathology.

Conclusions: Preoperative imaging is a commonly utilized tool to help identify cervical cancer patients who are optimal candidates for radical surgery. In this sample, the false negative rate of preoperative imaging was 20%. Further study is needed to explore preoperative testing that may more accurately identify patients who are optimal surgical candidates for cervical cancer treatment.

Poster #6
Rates of ovarian micrometastasis in cervical adenocarcinoma

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Objectives: Rates of ovarian metastases in patients with early stage cervical adenocarcinoma have been reported to be as high as 5% leading to some practitioners to advocate for oophorectomy (BSO) at time of hysterectomy. It is unclear if visual inspection can be used to determine if a BSO is necessary given that no study has differentiated between gross versus microscopic involvement. Our goal is to examine the rates of micro-metastatic disease in cervical adenocarcinoma.

Methods: Patients with a diagnosis of early stage cervical adenocarcinoma who underwent surgical resection between 2007-2016 at a single institution were identified and patient medical records were retrospectively reviewed. Ovarian micro-metastasis was defined as presence of cancer in clinically negative ovaries without contiguous disease. Patient demographics, pathology, treatment, and follow-up information were collected. Logistic regression was performed to assess for predictors of micro-metastatic disease. Survival analysis was performed using Kaplan Meier method utilizing log rank test to determine significance.

Results: Of 271 cases assessed for eligibility, 132 cases were included. The stage distribution for 1A, 1B and IIA were 25.4%, 72.3% and 2.3%, respectively. Median patient age was 44 (range 25-87), with 75% of patients being age 51 or less, and 10% of patients being 33 years old or younger. Almost half (47.7%) of patients were current or former smokers, average BMI was 26.7 (range 16-45), 7.6% had known HTN, 6% had documented heart disease and 3.8% had DM. The rate of ovarian metastasis was 1.5% (2/132). Of the ovarian metastasis, one of the cases had grossly abnormal ovaries at time of surgery, leaving only one (1/132) identified case of micrometastatic disease to the ovary. The case of micrometastatic disease had associated LVSI, but no stromal or parametrial involvement, and was node negative. Statistical analysis was limited by the few numbers of metastatic cases, but univariate analysis found gross appearance (p=0.015), LVSI (p=0.046) and corpus invasion (p=0.031) to be significantly associated with ovarian metastatic disease. Median overall survival (OS) for patients who underwent oophorectomy was 158 months (range 9-330) with 79.7% of patients alive without evidence of disease at last follow-up. This data was compared to a cohort of 43 patients where ovaries had been conserved. The median OS for this group was not statistically significantly different at 97.5 months (range 12-250) (p= 0.83) with 88.4% alive without evidence of disease.

Conclusions: This is the first report of the rate of micro-metastatic disease involving the ovaries in cervical adenocarcinomas. This rate was found to be very low at <1% and given that the rate of predisposing factors for osteoporosis and heart disease was high, visual inspection can be considered when deciding if a BSO is appropriate at the time of surgery.

Poster #7
Highlighting disparities among cervical cancer patients receiving brachytherapy – A National Cancer Database study

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Objectives: Cervical cancer outcomes remain disparate among racial and socio-economic groups. Access to radiation therapy, especially brachytherapy, is critical in the treatment of cervical cancer patients. The aim of this study is to determine if racial minorities and those with sub-optimal insurance receive brachytherapy at the same rate as Non-Hispanic White and privately insured counterparts.

Methods: The National Cancer Database, from 2004 to 2015, includes 53,273 cervical cancer patients who received radiation during their treatment. Of these patients, 25,223 have complete data. A univariate analysis using chi-squared was used to determine covariate association with brachytherapy. A multivariable logistic regression model was used to determine the effect of race/ethnicity (Non-Hispanic White, Non-Hispanic Black, Hispanic, Asian, other) and insurance (private, government, uninsured) on rates of brachytherapy.

Results: Compared to Non-Hispanic White patients, Hispanics are significantly less likely to receive brachytherapy (P = 0.029). However, Hispanic and Asian patients receive brachytherapy at similar rates to their white counterparts. Compared to patients with private insurance, those who are uninsured (P < 0.001) are less likely to receive brachytherapy.

Conclusions: This study reveals that racial disparities exist for those that receive brachytherapy. Patients that are uninsured or have Medicaid or Medicare insurance also do not receive brachytherapy at the same rate as those with private insurance. These data indicate