Poster #10

Outcomes of robotic-assisted versus abdominal radical hysterectomy for early stage cervical cancer

M.H. Vetter[a], S. Smrz[b], K. Bixel[c]. [a]*The Ohio State University, James Cancer Hospital, Columbus, OH, USA,* [b]*The Ohio State University, Columbus, OH, USA,* [c]*The Ohio State University Medical Center, Columbus, OH, USA*

Objectives: A recent trial demonstrated that minimally invasive radical hysterectomy for early stage cervical cancer was associated with poorer oncologic outcomes when compared to open abdominal radical hysterectomy. However, in this study almost 85% of patients randomized to the MIS approach underwent laparoscopy while only 15.6% had robotic-assisted surgery. We sought to determine if outcomes after robot-assisted radical hysterectomy were comparable to those after open radical hysterectomy.

Methods: This was a retrospective review of patients with stage IA1 with lymphovascular space invasion, IA2, or IB1 cervical cancer with a histologic subtype of squamous cell carcinoma, adenocarcinoma or adenosquamous carcinoma undergoing open or robotic-assisted radical hysterectomy at a single institution from 2010 to 2017. Categorical data were compared with Chi-square and Fisher's exact test while continuous variables were analyzed using independent t-tests. Overall survival (OS) and progression free survival (PFS) were evaluated by the Kaplan-Meier method and log-rank tests.

Results: A total of 177 patients were included in the analysis with 76 patients undergoing open surgery and 101 patients undergoing robotic-assisted surgery. Overall, the mean age of the patients was 44.8 years old. Most patients (88.7%) had stage IB1 disease. There were no differences between the cohorts in clinical stage, histologic subtypes, depth of invasion, grade, lymphovascular space invasion, presence of positive margins or the presence of pelvic lymph node involvement. There was a higher rate of intraoperative complications in the open surgery group ($p<.0001$) primarily due to hemorrhage > 500 cc. However, there were no difference in immediate or delayed post-operative complications. Receipt of adjuvant therapy was also similar between the cohorts.

There was no significant difference in recurrence rates between the cohorts ($p=.091$) with an odds ratio of recurrence of 2.974 [95% CI, 0.800-11.060] or odds ratio of death (0.740 [95% CI, .206-2.652]). There was a trend towards a decreased PFS in the robotic-approach through statistical significance was not achieved ($p=.070$; Figure A). Median PFS was not met. There were no differences in DSS or OS between the cohorts (Figures B and C) and again median survival was not met for either cohort. A majority of patients in both cohorts received no adjuvant therapy (58% in both cohorts). The most commonly utilized adjuvant therapy was chemoradiation (28% in both groups).

Conclusions: In the cohort, there were no significant differences in oncologic outcomes in robotic-assisted versus open radical hysterectomy for treatment of early-stage cervical cancer. This suggests that the robotic approach is a valid surgical option in appropriate patients. We look to further validate our findings in a large, multi-institutional retrospective cohort.

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Poster #11

Examining the utility of magnetic resonance imaging compared with physical exam in cervical cancer staging

S.E. Jordan[a], C. Maliakal[a], M.P. Schlumbrecht[a], L. Quintero[b], J.M. Pearson[a], A.H. Wolfson[a], R.P. Castillo-Acosta[c], B.M. Slomovitz[a], L. Portelance[a], M. Huang[c]. [a]*University of Miami Sylvester Comprehensive Cancer Center, Miami, FL, USA,* [b]*New York Medical College, Valhalla, NY, USA,* [c]*University of Miami, Sylvester Cancer Center, Miami, FL, USA*

Objectives: In an age of increasing scrutiny over the utilization of healthcare resources, it is imperative to judiciously select diagnostic modalities. Our practice setting includes a diverse, multi-racial population at a safety net hospital (SNH) and a university-based cancer center (CC). Our objective was to determine if use of pelvic magnetic resonance imaging (MRI) versus exam under anesthesia (EUA) as primary staging modality was associated with recurrence risk and recurrence free survival (RFS).

Methods: An institutional database of cervical cancer patients treated within either the SNH or CC from December 2012 to September 2017 were included. Demographic data were analyzed using Chi-squared or Fisher's exact test. Logistic regression was used to determine associations between clinical variables and recurrence. Cox proportional hazards models were used to determine associations with clinical variables and RFS. IRB approval was obtained and $p<0.05$ was considered statistically significant.

Results: The cohort included 102 patients; 62 patients treated at the SNH and 40 patients at the CC. The population was 96.8% and 82.5% non-white at the SNH and the CC, respectively, with over half of the population at each hospital being Hispanic. 88.7% of SNH and 100% of CC patients were advanced stage (nonsurgical) at diagnosis. Only 16.6% of SNH patients underwent pelvic MRI compared with 70% of CC patients ($p<0.001$) EUA was performed in 51.6% of SNH patients and in 20% of CC patients ($p=0.001$). 14 (23%) patients recurred at the SNH compared with 11 (28%) at the CC ($p=0.57$). Recurrence was not associated with EUA (OR 2.00, $p=0.14$) or MRI (OR 0.74 $p=0.53$). Advanced stage (III or IV) at diagnosis was the only variable associated with RFS (HR 3.02, $p=0.02$). Use of pelvic MRI (HR 1.14, $p=0.76$) and EUA (HR 0.78, $p=0.55$) had no association with RFS.

Conclusions: In our population, the modality used to complete a patient's primary evaluation was not associated with recurrence risk or RFS. Our results suggest that treatment delays may be avoidable by forgoing pelvic MRI at diagnosis without adversely affecting outcomes.

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Poster #12

Pathologic upstaging due to tumor size is associated with worse oncologic outcomes in patients with stage 1B1 cervical cancer

S. Smrz[a], M.H. Vetter[b], K. Bixel[c]. [a]*The Ohio State University, Columbus, OH, USA,* [b]*The Ohio State University, James Cancer Hospital, Columbus, OH, USA,* [c]*The Ohio State University Medical Center, Columbus, OH, USA*

Objectives: Clinical and pathologic staging of cervical cancer are discrepant in approximately 30% of patients with IBI cervical cancer. We aim to estimate the rate of discordance between clinical and pathologic tumor size and to determine the impact on oncologic outcomes.

Methods: This is a retrospective review of patients with stage IBI cervical cancer undergoing radical hysterectomy between 2010-2017 at a large academic institution. Demographic, clinical characteristics, pathologic findings and oncologic outcomes were extracted from the medical record. Patients with incomplete data were excluded. The primary outcome was the rate of pathologic upstaging with respect to tumor size (clinical exam <4cm, pathologic tumor size >4cm). Secondary outcomes included rate of recurrence, progression free survival, and overall survival.

Results: 128 patients were included. 36 patients (28.1%) had a pathologic tumor size ≥50% larger than what was noted on clinical exam. Pathologic upstaging was seen 22.7% (n=29) of patients. Upstaged patients were more likely to have adenosquamous