patterns of care, and outcomes were compared between centers performing ≥80% of hysterectomies by MIS (high MIS) and centers not meeting this quality metric (low MIS). Bivariable tests were used to examine associations.

**Results:** 510 hospitals treated 20,671 women with EC; 283 (55%) were high MIS hospitals. Annual hospital volume was similar with a median of 54 patients per hospital for both high and low MIS hospitals. In high MIS hospitals, patients were more likely to be white race (88% v 83%), have private insurance (53% v 49%), and have a median household income >$38,000/yr (88% v 83%, all p<0.001). These patients were more likely to have stage 1 disease (84% v 82% p=0.002) and endometrioid histology (79% v 76% p<0.001). In high MIS hospitals, MIS was more often performed robotically (80% v 71%) and conversion to laparotomy was less common (1.5% v 3.2%, all p<0.001). Patients treated at high MIS hospitals were more likely to have lymph node assessment (76% v 69%), to have a same or next day discharge (77% vs 59%), and less likely to have an unplanned 30-day hospital readmission (1.8% v 2.9%, all p<0.001).

**Conclusions:** Achieving an 80% hospital-level rate of MIS for EC is feasible; 55% of identified hospitals met this target in 2015. Patients treated at high MIS centers had shorter lengths of stay, lower rates of readmission, higher rates of lymph node assessment, and were more likely to undergo a robotic procedure. An MIS rate of 80% for surgical management of EC is feasible and associated with other hospital-level measurements of high-quality care.

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## Poster #37

## Aromatase inhibitor use, side-effects and discontinuation rates in gynecologic oncology patients

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**Objectives:** Aromatase inhibitors (AI) are being prescribed with increasing frequency for gynecologic oncology patients. In breast cancer, 50-80% of patients experience AI side-effects leading to a 24% discontinuation rate. In contrast, little is known about AI use in gynecologic cancers. We therefore sought to determine the frequency and duration of AI use, frequency of AI side-effects, and the reason for discontinuation in gynecologic oncology patients. We hypothesized that despite frequent side-effects in these women, discontinuation rates would be low due to the severity of the cancer diagnosis.

**Methods:** This is a retrospective chart review (IRB#HUM00152085). All endometrial/uterine/ovarian gynecologic cancer patient charts at our institution from 1998 to 2018 were screened for AI use with an electronic medical record search engine (EMERSE) with the search terms Aromasin/exemestane, Arimidex/anastrozole, Femara/letrozole. Patient charts with an AI identified were individually reviewed and data abstracted, including gynecologic cancer type, stage, prior cancer treatments, body mass index, prevalence of AI side-effects before and during AI therapy, length of AI treatment, medications used in conjunction with AI treatment, and reason for AI discontinuation.

**Results:** A total of 3,294 patients had the queried cancers, of which 312 patients had an AI listed in their chart. Upon chart review, 146 women received AI therapy specifically for their gynecologic cancer, including 68 for ovarian cancer (46.6%) and 78 for uterine/endometrial cancer (53.4%). The majority (71.9%) of patients had advanced stage disease. The initially prescribed AI was letrozole for 74 patients (50.7%), anastrozole for 65 patients (44.5%), and exemestane for 7 patients (4.8%). Seventy-nine patients (54.1%) noted significant side-effects within the first three visits after starting AI therapy. The most common side-effects were arthralgias or joint pain (29.5%), hot flashes (25.3%), new/worsening fatigue (16.4%), muscle or joint stiffness (8.2%), and myalgias (6.8%). The mean duration of therapy was 14.7 months (range 1-130 months, standard deviation 19.3 months). Among women who have discontinued AI therapy, the most common reason was disease progression (87 patients, 87.9%), while five women (5.1%) discontinued due to intolerable medication side-effects and seven women (7%) discontinued for other reasons.

**Conclusions:** Aromatase inhibitor therapy for gynecologic cancers is frequently associated with musculoskeletal side-effects, but rarely leads to treatment discontinuation. Arthralgias, hot flashes, fatigue, and myalgias were the most common adverse symptoms experienced with AI treatment. Given our findings, future directions include the development of interventions to address these symptoms, with the goal of improving quality of life for these patients.

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## Poster #38

## Intraoperative assessment of bowel anastomosis at the time of debulking surgery for gynecologic malignancies to reduce temporary bowel diversion

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**Objectives:** In previously published research we demonstrated that use of strict criteria for temporary diversion decreases the risk of anastomotic leak (AL) at the time of rectosigmoid resection (RSR). Our next objective is to reduce the need for temporary bowel diversion after RSR by incorporating intraoperative assessment of bowel perfusion while maintaining low rate of anastomotic leak (AL).

**Methods:** This was a prospective quality improvement project in patients undergoing RSR during debulking surgery for ovarian cancer between November 2016 and May 2018. All patients underwent intraoperative fluorescent imaging to enhance the assessment of perfusion at the anastomotic site: the site of anastomosis was altered in cases of poor perfusion. Criteria for temporary bowel diversion were as follows: 1. Preoperative albumin ≤3.0g/dL, 2. Prior pelvic radiation, 3. Anastomosis (AS) ≤6cm from the anal verge, 4. Leak at the time of proctoscopy and revision not possible. Anastomotic leak and diversion rates were compared to the prior cohort in which multiple large bowel resections required diversion and no intraoperative imaging was performed.

**Results:** Thirty-three patients underwent RSR during study period. Protocol compliance was excellent with 32/33 (97%) of patients undergoing intraoperative fluorescent imaging and 28/33 (84.8%) having a documented leak test. The rate of temporary diversion was decreased 31% when compared to the prior protocol, though small numbers reduced statistical power (27.3% vs. 39.1%, p=0.271). Importantly, we observed no postoperative AL compared to 2/64 (3.1%) historically (P=0.546). Indications for diversion in the current study were: prior radiation (n=2), failed leak test (n=1), and low anastomosis <6 cm (n=5). (If patients with prior history of radiation were excluded, the rate of diversion was 22%). In comparison, the most common indication for temporary diversion in the prior cohort was more than one large bowel resection and surgeon preference.

**Conclusions:** Strict criteria for use of temporary bowel diversion can reduce the rate of AL: when combined with our prior study we have only experienced 2 AL in the past 97 RSR cases. By incorporating intraoperative fluorescence imaging to assess AL perfusion we have significantly reduced our diversion rate without increasing AL rate.

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