## Abstract #3

### Multimodal perioperative pain protocol for Gynecologic Oncology laparotomy reduces length of hospital stay

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**Objectives:** Our primary objective was to evaluate the impact of a multimodal perioperative pain regimen on length of hospital stay for patients undergoing laparotomy with a gynecologic oncologist.
**Methods:** We compared 52 patients who underwent laparotomy with a gynecologic oncologist at a single institution in 2017-2018 after implementation of a multimodal perioperative pain regimen to a historic cohort of 94 patients (2016-2017). The multimodal pain regimen included pre and post-operative administration of oral acetaminophen, gabapentin, and celecoxib, in addition to standard narcotics and optional epidural analgesia. Demographic, surgical, and post-operative data were collected. Linear regression models were used to determine factors associated with length of stay.
**Results:** On multivariable analysis, bowel resection, stage, surgery length, age and group (pre vs. post pain protocol implementation) were retained as significant independent predictors of length of stay. Patients undergoing gynecologic oncology laparotomy prior to the implementation of the pain protocol had a length of stay 1.26 times longer than patients undergoing laparotomy during the post-implementation period ($p<0.01$). oFr the more complex surgical patients who received the multimodal pain regimen (those with stage II-IV disease who underwent bowel resection), this translated into a reduction in length of hospital stay of 1.73 days when compared to the matched cohort. There was a significant reduction in average pain scale score on post-operative day zero from 4.49 to 3.63 ($p=0.02$) and an overall reduction of morphine equivalents used between the two groups on post-operative days 0-2, although this did not reach statistical significance. Adverse outcomes between groups, including ileus, delirium, renal failure and re-admission, were similar.
**Conclusions:** Implementation of a multimodal perioperative pain regimen in patients undergoing gynecologic oncology laparotomy was associated with a significant reduction of length of hospital stay and improved pain scores without increased complications. Even in the absence of a complete Enhanced Recovery in Surgery Protocol, a multimodal perioperative pain regimen has the potential to shorten hospital stay and improve patient perceived pain.

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## Abstract #4

### Noninvasive negative pressure wound therapy decreases postoperative complication rates and hospital stays in Gynecologic Oncology patients

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**Objectives:** To evaluate the utility of noninvasive negative pressure wound therapy (NNPWT) in overweight (BMI 25-29.9) and obese women (>30) undergoing midline laparotomy for gynecologic oncology procedures.
**Methods:** An IRB-approved retrospective chart review was conducted for all gynecologic oncology patients at two institutions who underwent a midline-vertical laparotomy from September 2012 to December 2017. The control group of patients included those who received routine abdominal bandages from September 2012 - September 2016, and the treatment group included those who received NNPWT from October 2016 to December 2017 after their purchase by the hospitals. A total of 232 charts were reviewed. Patients with a BMI <25 were excluded, yielding a total sample size of 192.The following outcome variables were analyzed: 30-day wound infection rates, 30-day hospital readmission rates, reoperation within 30-days, wound separation, dehiscence, wound collection rates and length of hospital stay. Demographic characteristics including number of previous surgeries, diabetic status, age, race, and body mass index were also analyzed. Statistical analysis was performed with SPSS. A p-value of 0.05 was used to indicate statistical significance. Outcome variables were analyzed using 2-tailed Student t-tests.
**Results:** There were no significant differences in demographics between the control and treatment groups. Thirty day wound infection rates were found to be significantly lower in the treatment group (9.7% vs 0, $p=0.01$). Wound dehiscence rates were significantly decreased in the treatment group (3.75% vs 0, $p=0.01$), as well as wound collection rates (18% vs 5.4%, $p=0.01$). Length of hospital stay was decreased significantly from 9 days to 5.6 ($p=0.01$). However, rates of readmission, reoperation, and wound separation were similar between the two groups.
**Conclusions:** The use of NNPWT in overweight and obese gynecologic oncology patients leads to improved postoperative wound outcomes and shorter hospital stays, and potentially decreases the overall costs and increases patient satisfaction. This initial data warrants further evaluation with a randomized controlled trial.

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## Abstract #5

### Assessing the risk of empty lymph node packets in patients undergoing sentinel lymph node mapping for endometrial cancer using indocyanine green dye

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**Objectives:** To determine whether the rate of sentinel lymph node (SLN) packets that do not yield a lymph node on pathological analysis ("empty packet dissection") changes with increasing surgeon experience in the setting of patients undergoing minimally invasive hysterectomy and SLN mapping using indocyanine green dye (ICG) for endometrial cancer (EC).
**Methods:** All patients undergoing SLN mapping at the time of minimally invasive hysterectomy for EC or complex atypical hyperplasia (CAH) were identified between 2013 and 2017 at our institution. Six surgeons' experience with SLN mapping using ICG and rate of empty packet dissections were evaluated using a logistic regression model analysis.
**Results:** In total, 236 patients undergoing SLN mapping using ICG dye for either EC (85%) or CAH (15%) were identified from a prospectively maintained database. When examining all six surgeons together, the percentage of empty packet dissections decreased with increasing number of procedures performed. Each additional procedure was associated with a 3.6% reduction in the odds of an empty packet SLN dissection. After adjusting for individual surgeons, each additional procedure was associated with a 4.9% reduction in the odds of an empty packet. Therefore, the expected odds of an empty packet after 10 additional procedures decreased by 40.1% (95% CI: 12.4% to 58.6%). Figure 1 illustrates the relationship between the cumulative empty packet rate and number of procedures performed for all surgeons. Similar results were seen after additional adjustment for patient age and BMI, and the addition of these two covariates did not contribute significantly to the model (Likelihood ratio test: $X2 = 2.75$, $p = 0.25$).