Conclusions: MIS for interval cytoreduction of advanced ovarian cancer after neoadjuvant chemotherapy is a reasonable approach and offers the benefits of shorter hospital stay, less blood loss and need for transfusions, and fewer postoperative complications without apparently sacrificing long-term disease outcomes.

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319 - Poster Session
Laparoscopic retroperitoneal therapeutic pelvic to infrarenal lymphadenectomy

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Objectives: To report on the safety, feasibility, and surgicopathologic outcomes of a laparoscopic retroperitoneal approach for aortic (inframesenteric [IM] and infrarenal [IR]) lymphadenectomy in early-stage gynecologic cancers.
Methods: We conducted a chart review of 76 patients who underwent comprehensive laparoscopic retroperitoneal lymphadenectomy from the ureter up to the inferior mesenteric artery (IM) and then up to the renal veins (IR). All also underwent pelvic lymphadenectomy from the deep circumflex ileac vein crossing over the external ileac artery to the ureter crossing the common ileac artery (pelvic): 4 by retroperitoneal approach and 72 by transperitoneal approach. Fifty-one patients had clinical stage I or II endometrial carcinoma; 21 had clinically early peritoneal, tubal, or ovarian carcinoma; and 4 had early cervical carcinoma.
Results: The mean age was 57 years (range, 31–77 years), and mean body mass index (BMI) was 26 (range, 19–39). Mean duration of entire surgery, including hysterectomy, was 238 min (range, 146–406 min). Mean estimated blood loss for each entire procedure was 210 mL (range, 25–1500 mL), requiring a mean of 0 transfusions (range, 0–3). Mean hospital stay was 1 day (range, 1–5 days). The mean node yields were: pelvic 14 (range, 1–36), IM 13 (range, 3–31), IR 14 (range, 1–36), and total from all basins 49 (range, 20–90). Nodal metastases were found in 22% of pelvic, 21% of IM, and 17% of IR node basins. Overall, 31% of patients had positive nodes that affected their postoperative therapeutic decisions. Complications included two conversions to laparotomy for high blood loss and failure to complete and one transection of the left renal artery with saphenous vein interposition by laparotomy. The retroperitoneal approach showed no learning curve, and nodal yields remained high, even in patients with BMIs up to 39.
Conclusions: Comprehensive laparoscopic pelvic and retroperitoneal IM and IR aortic lymphadenectomy for early gynecologic carcinoma is safe and readily feasible and may affect staging and treatment decisions in one third of patients. A retroperitoneal approach may be easier to learn and be more effective for larger patients.

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320 - Poster Session
Clinical outcomes of hysterectomies for benign and malignant etiologies using the NSQIP database

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Objectives: To obtain current clinical outcomes of hysterectomy procedures performed for gynecologic malignancies (group M) and those with benign etiologies (group B) utilizing the National Surgical Quality Improvement Program (NSQIP) Participant Use Data File (PUF).
Methods: The PUF containing information on hysterectomies performed from January 2008 to December 2012 was divided by International Classification of Diseases (ICD)-9 codes into group M or B. Within each group, Current Procedural Terminology (CPT) codes were used to compare clinical outcomes by type of hysterectomy reported. Data were collected prospectively by trained nurses and represented a minimum of 10% of the surgical volume from 211 hospitals in 2008, 237 in 2009, 258 in 2010, 315 in 2011, and 374 in 2012. Cases were excluded for ineligible ICD-9 codes (7114) and CPT codes (4078), resulting in 56,820 cases available for analysis, of which 49,249 were assigned to group B and 7571 to group M by ICD-9 coding. The adverse outcomes evaluated included return to operating room (ROR), unplanned readmissions (URA), wound complications (WC), venous thromboembolism (VTE), sepsis (S), blood transfusion (BT), and urinary tract infection (UTI). The adverse outcomes included a 30-day postsurgical follow-up.
Results: The overall rate of any complication was 9.1% for Group B and 21.0% for Group M. In group B, the lowest complication rate of 5.64% was for laparoscopic supracervical hysterectomy <250 g and the highest rate of 13.3% was for total abdominal hysterectomy (TAH). TAH accounted for 16,068 cases (29.4%), with the average rate of complications for Group B of 1.92% ROR, 3.73% URA, 4.47% WC, 0.65% VTE, 0.91% S, 5.09% BT, and 2.45% UTI. In contrast, the average complication rate for Group M for TAH was 3.10% ROR, 8.03% URA, 7.31% WC, 2.97% VTE, 3.94% S, 26.0% BT, and 3.85% UTI. The rate for any complication was 32.4% for Group M.
Conclusions: NSQIP PUF provides large-scale data on the most current outcomes. This study represents a robust analysis of 30-day morbidity and mortality by type of hysterectomy performed on women in the United States, which was prospectively collected by a reliable method.

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321 - Poster Session
Fluorescent illumination of the genitourinary tract in laparoscopic surgery: A novel in vivo imaging technique

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Objectives: The number of laparoscopic hysterectomies (LH) performed in the 2000s rose sharply, but even in the hands of experienced laparoscopic surgeons, LH are associated with increased iatrogenic ureteral injury. Placement of ureteral stents is one current strategy used to identify ureters, but it is nonspecific and carries additional risks to the patient. With intravenous injection of the near-infrared (NIR) dye IRDye800CW-CA®, we hypothesize that the ureter can be fully visualized laparoscopically.
Methods: Three adult female pigs weighing 29–36 kg were given a 30-, 60-, or 120-μg/kg systemic injection of IRDye800CW-CA. The United States Food and Drug Administration (FDA)-approved laparoscopic NIR system (Pinpoint) was used to image the ureters and bladder every 10 min for 60 min after injection. Images were captured in one view and overlay view. Image J software was used to quantify absolute fluorescence and signal-to-background ratio (SBR) for the intraoperative images. Mean fluorescence values from bladder, ureteral, uterine, colonic, and abdominal wall regions were recorded and averaged across animals for each tissue at every time point.
Results: The ureters were clearly identified in all pigs at each dose, with peak intensity reached by 30 min and maintained until 60 min. The 60-μg/kg dose was determined to be optimal, with values for the