P01 Established Surgical Skills Not A Pre-requisite For Robotic Surgery Performance In Medical Students

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Introduction/Objectives: This study aims to measure the performance of medical students in performing tasks using robotic surgery consoles and assess the relevance of instruction in task performance.

Materials, Casuistry and Methods: 59 Clinical-Year and 30 Preclinical Medical Students took part in the study, and were randomized via coin-toss into instruction- and non-instruction groups.

Both groups were shown orientation videos introducing the dVSS system and its basic operations, as well as a video demonstrating the figure-of-8 stitch performed via open suturing. The instruction group was further shown a video of the suture performed via the dVSS console, using a picture-in-picture layout.

Students performed the figure-of-8 stitch on a suture pad via open and robotic suturing and their time-to-completion was measured.

Results/Discussion: 13 preclinical (43.3%) and 31 clinical-year (52.5%) students were randomized into the instruction groups. There was no statistically significant difference in gender between both groups in the preclinical (p=0.961) and clinical years (p=0.098).

In preclinical students, mean time to open task completion in instruction vs noninstruction groups was 204±93s (~3.5min) vs 193±89s (~3min) (p=0.711), while mean time to robotic task completion was 325±121s (~6min) vs 348±144s (~5.5min) (p=0.853). In clinical-year students, mean time to open task completion was 97±48s (~1.5min) vs 77±27s (~1.5min) (p=0.085), while mean time to robotic task completion was 323±104s (~4.5min) vs 282±103s (~5.5min) (p=0.077).

Open task completion was significantly faster in clinical-year students.

Conclusion: Video demonstration and instruction did not significantly improve performance. Experience in open suturing did not translate to quicker robotic task completion. This suggests that delaying robotic surgical exposure may confer little or no added benefit to the robotic surgical learning curve, and that early hands-on robotics exposure is a viable approach to efficient surgeon training.

P02 Introduction Of Robotic Surgery Is Associated With Lower Patient Bill Sizes

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Introduction/ Objectives: Cost is often cited as one of the major barriers to patients accessing robotic surgery. We aim to demonstrate that this is a temporary barrier and that as programs become more efficient, robotic surgery actually results in cost savings to the patient.

Materials, Casuistry and Methods: We retrospectively collected data from 2008- 2017. All open and robotic surgeries performed for endometrial cancers were considered. We analysed the trend of the number of cases done per annum, as well as the average bill size incurred by the patients for both open and robotic surgeries.

Results/Discussion: There was a steady increase in the number to robotic hysterectomies performed over the 10 year period reviewed. As the program became more efficient and the number of robotic surgeries for endometrial cancer per year increased, the total bill size decreased.

Conclusion: As robotic surgical programs gain efficiency, the cost to the patient of having minimally invasive surgery in the form of robotic surgery decreases. OT efficiency, reduced hospital stay, and increased volumes all helped to make robotic surgery more cost effective than open surgery for endometrial cancer.

P03 **Sentinel Lymph Node Mapping Using Indocyanine Green In Robotic Surgery For The Treatment Of Endometrial Cancer And Early-staged Cervical Cancer**

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Introduction/Objectives: To evaluate the validity of sentinel lymph node (SLN) mapping with cervical indocyanine green (ICG) injection in patients with endometrial cancer and early-staged cervical cancer who have undergone a pelvic and para-aortic lymphadenectomy after SLN mapping.

Materials, Casuistry and Methods: We performed a retrospective analysis of patients with endometrial cancer and early-staged (<IIb) cervical cancer undergoing a primary robotic surgery with SLN mapping using ICG followed by a systematic pelvic and para-aortic lymphadenectomy from February 2015 to June 2018. Identified SLNs were excised and evaluated by frozen section. All patients underwent preoperative computed tomography (CT), magnetic resonance imaging (MRI), and positron emission tomography-CT (PET-CT). Patients' demographics, detection rate of SLN, and histopathological results were collected. Positive predictive value (PPV), negative predictive value (NPV), sensitivity, and specificity were calculated and compared between SLN mapping and the imaging modalities.

Results/Discussion: A total of 39 patients were included (21, endometrial cancer; 18, cervical cancer). Cervical injection of ICG resulted in overall SLN detection rates of 84.6%. SLN was identified bilaterally in 53.8% and unilaterally in 30.8%. The difference of SLN detection rate between cervical and endometrial cancer patients was not significant. 10.3% of the patients had positive result on frozen biopsy of SLN. Overall, 15.4% of the patients had pelvic and/or para-aortic lymph node metastases on final pathology. Comparing with the final diagnosis on LN metastasis, SLN detection with frozen biopsy resulted in PPV, NPV, sensitivity, and specificity of 100%, 93.5%, 66.7% and 100%, respectively. However, SLN detection without frozen biopsy showed very low PPV (17.6%) and specificity (15.2%). CT and MRI showed lower sensitivity (16.7%) and NPV (86.8%) compared to SLN detection with frozen biopsy, while the PET-CT showed comparable results; sensitivity (50.0%), NPV (91.4%).

Conclusion: SLN detection using cervical ICG injection with frozen biopsy in cervical and endometrial cancer is an effective and reliable method, as evident from higher sensitivity and NPV compared to the other imaging modalities including PET-CT, although the results of SLN detection without frozen biopsy was not sufficient. Although it has promising results in SLN mapping, randomized studies, with larger patient samples, are needed.

P04 **Robotic Single-Site Versus Multiport Radical Hysterectomy In Early Stage Cervical Cancer: An Analysis Of 107 Cases At A Single Institution**

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Introduction/ Objectives: The purpose of this study was to compare surgical outcomes and cost of robotic single-site radical hysterectomy (RSSRH) versus robotic multiport radical hysterectomy (RMPRH) with pelvic lymph node dissection in early stage cervical cancer.

Materials, Casuistry and Methods: This is a retrospective study. The patients with early stage cervical cancer who underwent radical hysterectomy using the da Vinci Si Surgical System (Intuitive Surgical, Sunnyvale, CA) were collected between November 2011 and July 2017 in Keimyung University, Dong San Hospital, Daegu, Korea.

Results/ Discussion: 24 patients underwent RSSRH with pelvic lymph node dissection (PLND) and 83 patients were managed with RMPRH with PLND for early stage cervical cancer in the same institute with the same surgical team. No significant differences were found in basic characteristics of the patients. Intraoperative outcomes also were similar except for the operation time. Total operative time of RSSRH was statistically shorter compared to RMPRH: 195.0 minutes in RMPRH and 170.0 in RSSRH, respectively (p=0.011). On the other hand, there was a significant difference in the postoperative outcomes between the two groups. The length of hospital stay was significantly shorter in RSSRH than that of RMPRH (6.0 days versus 11.0 days, p

Conclusion: The RSSRH appears to be a feasible and safe approach with surgical outcomes that are not significantly different from the RMPRH. The RSSRH showed advantages over RMPRH in the most of

parameters except lymph node retrieval. Further randomized trials are necessary to determine whether robotic single-site techniques truly offer any advantages

P05 Lack Of Haptic Feedback Is Replaced By Visual Sense During Robot-assisted Laparoscopic Myomectomy In Multiple Intramural Myomas Cases With Tiny Nodules

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Introduction/Objectives: In reproductive ages, there are many women who have several uterine myomas with abnormal uterine bleeding, low abdominal discomfort, and at times infertility. There are three types of surgical approach to perform myomectomy such as robotic-assisted, laparoscopic, or abdominal myomectomy. Nowadays, patients want to receive minimally invasive surgeries even though they have multiple and huge myomas or deep seated tiny myomas to avoid postoperative pain. We have some limitations with those myomecto

Materials, Casuistry and Methods: A 30 year old woman had menorrhagia and back pain for 1~2years. Pelvic ultrasound and magnetic resonance imaging(MRI) revealed the uterus to measure 12.8×9.7 cm, with several intramural myoma having a maximum diameter of 8.4 cm, almost 30 tiny myoma nodules less than 1cm, and adnexal mass. The patient received robotic multi-site myomectomy with right ovarian cystectomy and adhesiolysis. A 30-year-old woman had dysmenorrhea, and prolonged menstruation with no previous abdominal history. Pelvic ultrasound and MRI revealed the uterus, which measured 7.90×5.44 cm, with several intramural and subserosal myoma (3.71cm in maximum diameter) and tiny 28 myoma nodules less than 1cm. The patient received robotic multi-site myomectomy.

Conclusion: Using more magnification of robotic endoscopes, we can develop visual sense instead of palpation during the operation and then lack of haptic feedback is replaced by visual sense. We can remove smaller myomas less than 1cm, or deep seated myomas or myoma located under myomectomy site after fine hemostasis of cutting surfaces with more magnification. It seems like visual sense which surgeon can detect buried myoma by knocking the uterine wall with robotic instruments. In conclusion, lack of haptic feedback is replaced by more developed visual sense during robot myomectomy of multiple tiny intramural myomas and we can perform the robotic surgery much more effectively even in complicated cases.

P06 Comparisons Study; First 20 Single-site And Multi-port Robotic Staging Surgery In Endometrial Cancer

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Introduction/Objectives: We tried to compare the surgical outcomes of single-site (SS) and multi-port (MP) robotic staging surgery in endometrial cancer.

Materials, Casuistry and Methods: First 20 cases of single-site and multiport robotic staging surgery in endometrial cancer were retrospectively reviewed. Intraoperative docking & console time and surgical outcomes were compared.

Results/Discussion: Mean age of SS and MP robotic surgeries were 52.4 and 53.0 year old, respectively. Docking time between two groups were not different (5 vs. 7 min) but console time were significantly different (SS 120 vs MP 153 min). Nineteen paraaortic lymphadenectomy were performed in MP group but only 9 paraaortic lymphadenectomy in SS group.

Final pathology showed 15 IA, 3 IB, 1 IIIC1, and 1 IIIC2 in SS group, and 5 IA, 6 IB, 4 II, 2 IIIC1, 2 IIIC2, 1 IV in MP group. More patients in MP group were treated adjuvant radiation therapy (3 vs. 14). EBL and number of harvested lymph nodes were less in SS group (68 vs. 113 cc, 16 vs. 32) but day of hospital stay were shorter in SS group (1.1 vs. 1.7 days).

Conclusion: Compared to MP robotic surgery, application of SS robotic staging surgery in endometrial cancer was applied to the patients with early stage and simple procedures. Prospective direct comparison studies are needed to define the role of SS robotic surgery in gynecologic malignancy.

P07 **A Retrospective Case-control Analysis Of Robotic Single-site And Multiport Supracervical Hysterectomy For Benign Gynecological Diseases**

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Introduction/Objectives: To share our experience of transition from multiport to single-site robotic surgery for benign gynecological conditions as well as to assess the selection criteria of candidates for robotic single-site supracervical hysterectomy (RSSH).

Materials, Casuistry and Methods: A retrospective review was conducted on patients undergoing robotic supracervical hysterectomy by a single surgeon in a single university-affiliated teaching hospital between June 2014 and December 2017. Patients who underwent additional procedures along with supracervical hysterectomy and who had unexpectant corpus malignancy proved pathologically were excluded from comparisons of surgical outcomes and complications between patients undergoing RSSH and robotic multiport supracervical hysterectomy (RMSH).

Results/Discussion: Between June 2014 and December 2017, we accomplished 26 RSSH and 57 RMSH. There was no conversion, intraoperative complication, and readmission within 30 days after surgery. In RSSH, the mean uterine weight was 264.6 grams with the mean docking time of 15.8 minutes, the mean console time of 61.1 minutes and the mean operative time of 140.3 minutes. In comparison to the RMSH group, the percentage of overweight/obese patients was lower ($p = 0.018$) and the uterine size was smaller ($p < 0.001$) with adenomyosis diagnosed more frequently ($p = 0.002$) in the RSSH group. While the operative time in the RSSH group was significantly shorter ($p = 0.002$), the RSSH group took longer time in docking ($p < 0.001$) and comparable time in console ($p = 0.254$). In view of chronological change, docking time and console time in the RMSH group remained steady, whereas steep decreases were observed in the RSSH group. The intraoperative blood loss and hemoglobin drop were comparable. The length of hospital stay was significantly shorter in the RSSH group ($p = 0.005$).

Conclusion: Transition from multiport to single-site surgery can be smooth for a surgical team experienced in the conventional multiport robotic system. RSSH is safe and feasible in properly selected patients.

P008 **Transferability Of Traditional Laparoscopic Skills To Robotic-assisted Laparoscopic Skills – A Pilot Study In Setting Up Standardized Robotic Training And Assessment For Urology Residents In Singapore**

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Introduction/Objectives: Robotic surgical platform (Da Vinci Surgical System) is commonly used in urologic surgeries. However, unlike traditional laparoscopic skills, in which there are well established training program and assessments such as E-BLUS and Fundamentals of Laparoscopic Surgery (FLS), there is no such program for robotic laparoscopic training. In this study, we aim to assess the transferability of traditional laparoscopic skills to robotic-assisted laparoscopic skills amongst urology residents.

Materials, Casuistry and Methods: We recruited urology residents and experts in minimally-invasive surgeries. All participants were required to complete Da Vinci Si online training module and all residents underwent basic hands-on training in the Da Vinci Si system. Thirteen subjects agreed to take part in this study. They were asked to perform three FLS tasks: peg transfer, pattern cutting and intracorporeal suturing on both laparoscopic surgery platform (LFP) and robotic surgery platform (RSP). Residents were randomized to start with either LFP first or RSP first. Mean completion times were calculated for each task on both platforms. Statistical analysis was performed with unpaired student's t-test, and p.

Results/Discussion: Using the robotic surgical platform, residents in the LFP first group (n=6) completed the three tasks faster than their counterparts in the RSP first group (n=5). Mean time to complete the tasks in the robotic surgery platform between LFP first group versus RSP first group were: 94.0s versus 132.3s, p=0.0067 (for peg transfer), 142.0s versus 177.2s, p=0.15 (for pattern cutting), and 117.2s versus 157.7s, p=0.003 (for

intracorporeal suturing). Residents in both the LFP first group and the RSP first group performed intracorporeal suturing better in the robotic surgical platform than the traditional laparoscopic platform (p=0.0027 and p=0.0026 respectively). The minimally-invasive experts (n=2) performed the three tasks faster with the robotic surgical platform compared to the traditional laparoscopic platform.

Conclusion: Amongst urology residents, initial experience and skills acquired in traditional laparoscopic platform confer benefits for performing similar tasks in robotic surgical platform. The use of robotic surgical platform gives significant advantage in performing complex task such as intracorporeal suturing. From this study, we proposed that urology residents should have sufficient exposure and training in traditional laparoscopic surgeries prior to embarking on robotic-assisted laparoscopic surgeries.

P009 Confirmation Of Antegrade DJ Stent Placement In Robotic Surgery – Firefly To The Rescue
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Introduction/Objectives: Antegrade placement of Double J stents(DJ STENT) is common after renal pelvis/upper ureteric surgery viz. robotic assisted laparoscopic pyeloplasty(RALP), ureteroureterostomy(RALU) etc. However confirmation of distal end in the the bladder is always fraught with difficulties. Some of the described ways to confirm are, C-ARM and image confirmation, (difficult with the ROBOT docked, clamping of bladder catheter and looking for reflux of urine from the proximal end, instillation of methylene blue.

Materials, Casuistry and Methods: Patients who underwent RALP/U requiring antegrade DJ stenting were studied. All patients had a foleys per-urethral catheter inserted at the beginning of surgery routinely. Just before the insertion of the DJ STENT, Indocyanine Green(ICG) mixed with saline was introduced into the bladder in a sterile fashion to fill about ½ to 2/3 of bladder volume. The DJ stent was inserted and under firely reflux of easily identifiable brilliant fluorescent green material was looked for. Free flow of fluorescent material from DJ confirmed bladder placement.

Results/Discussion: The greatest fear of antegrade DJ stent placement is migration or inappropriate distal stent position in distal ureter. While many procedures have been described, when simple reflux of urine or coloured material is looked for errors are noted if there has been any saline introduced to check VUJ patency or the lightness of the coloured material. Use of C-ARM is very difficult when the robot is docked and finding of misplaced DJ stent after undocking defeats the purpose. Cystoscopy also mandates requirement of additional equipment and technical difficulty in rigid scopy in the oblique position with a docked robot or additional requirement of a flexible scope which may not be available in pediatric sizes. The method described in this article avoids many of the drawbacks with virtually guaranteed confirmation with a minimal additional cost of less than 20$ (RS.1500) being the cost of ICG.

Conclusion: Use of firefly technology with intravesical ICG is an elegant easy and safe way to identify the correct distal placement of an antegrade Double J Stent placement in the baladder.

P010 Robotic Assisted Bladder Sparing Pelvic Exenterations For Locally Advanced Rectal Cancers – A Single Centre Early Experience
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Introduction/Objectives: Up to 10% of rectal cancers are locally advanced and frequently involve adjacent organs. En-bloc resection is key to achieving clear resection margins (CR), with CRM the most important predictor in the risk of local recurrence. Historically, pelvic exenteration for locally advanced rectal cancer involving prostate has been performed via open surgery. Robotic pelvic exenterations offer the benefit of minimal invasive surgery while allowing better pelvic visualisation and dissection for bladder pr.

Materials, Casuistry and Methods: Three cases with locally advanced rectal cancers are presented. The da Vinci S robotic system was used. All three cases were performed fully robotically at Tan Tock Seng Hospital by colorectal and urological teams. Robotic console was docked at left oblique position for abdominal phase and redocked to between the patient's legs for pelvic phase.

Results/Discussion: We present 3 cases of robot assisted pelvic exenterations for locally advanced rectal cancer. The first case is a 67-year-old male with a low rectal tumour 3cm from the anal verge involving the prostate gland. He underwent neoadjuvant (NA) chemoradiotherapy followed by robotic abdominoperineal resection and en-bloc prostatectomy. He is currently disease free. Our second case is a 66-year-old male with a low rectal tumour 3cm from the anal verge involving the prostate and bilateral seminal vesicles (SV). He underwent NA chemoradiotherapy and subsequent robot assisted ultra-low anterior resection (AR) with coloanal anastomosis and en-bloc prostatectomy. He is currently undergoing adjuvant chemotherapy. Our third case is a 57-year-old male with a metachronous rectal tumour in the rectovesical pouch inseparable from the anterior mid rectum and prostate and bilateral SV. He underwent robot assisted ultra-low AR with en-bloc prostatectomy. Bladder neck margin reveal cauterized tumour cells at the bladder neck margin, and therefore he underwent subsequent total cystectomy and creation of ileal conduit. Histology revealed no residual tumour.

Conclusion: Robot assisted bladder sparing pelvic exenteration can be safely performed in patient with locally advanced rectal cancer with acceptable surgical outcome while preserving the benefits of minimally invasive surgery.

P011 **The "Better Prostatectomy Best Practice Care Project": The First Peri-Operative Pathway With Evidence-Based Best Practices For Robot-assisted Laparoscopic Prostatectomy In Singapore**

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Introduction/Objectives: Collaborating with Geisinger Medical Centre, 16 evidence-based best practice elements (BPEs) involving the perioperative care of prostate cancer patients undergoing robot-assisted laparoscopic prostatectomy (RALP) were established and hardwired into the electronic clinical record system at Tan Tock Seng Hospital with the aim to deliver optimal patient care.

Materials, Casuistry and Methods: Chart review by two independent clinicians was performed for each of the 16 BPEs, beginning at the initial visit where patients were listed for RALP, through to the first post-operative clinic visit. The historical pre-pathway cohort from March 2014 to June 2016 (n=121) was compared to the post-pathway cohort from June 2016 to January 2018 (n=125). 3 patients were excluded due to other concurrent robotic procedures or confidential records. Factors predictive for good compliance were evaluated using logistic regression models. Compliance to using the electronic RALP listing form, which documents attaining 9 BPEs, was specifically analyzed.

Results/Discussion: There were 119 pre-pathway (49%) and 124 post-pathway (51%) patients. Five BPEs (biopsy-proven histological diagnosis; estimation of recurrence risk using pre-operative variables; pelvic CT or MRI to exclude nodal disease if cT3, PSA>20 or Gleason>6; bone scan for metastases if symptomatic or PSA>20 or Gleason≥8; pre-operative type and screen) achieved 100% compliance throughout. All 11 other BPEs showed improved compliance post-pathway implementation, of which 7 showed statistically significant improvement (Table 1). Residents completed listing visit forms as frequently as Attending Physicians (74. 4% vs. 81. 3%, p=0.38). Pathway use is a significant predictor for perfect compliance to all BPEs (OR 20.8, 95% CI: 7.2-59.9, p.

Conclusion: By applying an American-based acute episodic best practice-based care model to the local context, we have successfully increased the compliance of best practice elements in patients undergoing RALP in Singapore.

P012 **Robotic Muscle Aponeurotic Rectus Plication**

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Introduction/Objectives: The author presents his more than 30years experience in treating rectus diastasis by muscle aponeurotic abdominal wall plication in both open method and subcutenouscopic method. In 1991, he develops a research project to adapt endoscopic method to the subcutaneous tissue for performing rectus plication through minimal incision. In 2015, he designed special retractors and pioneered the use of daVinc robotics system to perform muscle aponeurotic rectus plication gasless.

Materials, Casuistry and Methods: Since 1989 the author is working on a new concept of performing recti plication in the patient who is presenting with small and medium abdominal wall deformities like ventral and umbilicus hernia and rectus diastasis by using the previous existing c- section scar. In 1991, he developed a set of instruments to adapt video surgery to the subcutaneous territory.

With 25 yrs experience and more than 300 cases of muscle aponeurotic subcutaneous endoscopy rectus plication with successful results. In 2014, we foresee that the possibilities of using the da Vinci surgical system to facilitate the surgical procedure. Due to the well-known features of the da Vinci system, it makes much easier to perform the stitching comparing to endoscopic methods. We designed some special retractors to tenting the dermoadipose flap creating a gasless optical cavity in between the muscle aponeurotic abdominal wall and the subcutaneous tissue. The method that we used is 2 layers of stitching .the first layer is done using interruptive stitch about 1 cm distance apart using 00 Mononylon suture followed by a continuous suture with v-lock absorbable suture. The whole procedure is performed through 3 small incisions- 2 cm incision at the pubic area made for the robotic scope, x2 0.7cm incision at the bikini line which is 18 cm apart are made for the robotic arm, a Y shaped incision is made inside the umbilicus.

Results/Discussion: Robotic muscle aponeurotic plication is essentially the same as the endoscopic muscle aponeurotic plication. The only difference is only the use of different surgical equipment. The plication material and the method used are the same. The more than 300 cases of endoscopic muscle aponeurotic muscle plication and so far 13 cases of robotic muscle aponeurotic plication are presenting with satisfactory results with a minimal rate of complication and leaving inconspicuous scars.

Conclusion: Muscle aponeurotic plication is a time-proven successful method to repair rectus diastasis. The literature is rich in studies comparing different methods and materials and evaluating the efficacy and longevity of muscles aponeurotic muscle plication. Our more than 20 years follow up of our patients telly with the observation of many authors and support our current method.

P013 **Value Driven Outcomes Between Transoral Versus Open Surgical Approaches In Patients With Oropharyngeal Cancer**

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Introduction/Objectives: Transoral robotic surgery (TORS) has revolutionized the surgical treatment of oropharyngeal cancer by eliminating the need for open mandibulotomy approach for surgical access to these tumors. While the perceived benefits are anticipated, a paired comparison of cost effectiveness has not been performed. This study aims to evaluate the cost effectiveness and clinical outcomes between patients receiving either open mandibulotomy versus transoral resection in a single with a tertiary cancer center.

Materials, Casuistry and Methods: Retrospective chart review of all patients with oropharyngeal cancer treated from 2004 to 2018 was performed. Patients who underwent salvage surgery were excluded. Patients' demographics, cancer site and stage, post-operative swallowing and airway function, length of hospital stay, and complication rates were compared in both cohorts. Additionally, absolute total cost (prior to insurance or government subsidies) of these 2 treatment approaches were compared to determine the cost effectiveness of each approach.

Results/Discussion: 11 patients underwent open approach and 20 (17 TORS and 3 without the robot) underwent trans-oral surgery (TOS) for oropharyngeal carcinoma. Both groups had similar characteristics including age at diagnosis, gender, tumor subsite and cancer stage.

Patients in the trans-oral group were less likely to require nasogastric tube (NGT) placement (60% vs 100%, p=0.015) and had a shorter mean duration to tube removal and oral feeding (18.8 days vs 74.4 days, p=0.036). They were also less likely to require a post-operative tracheostomy tube placement (65% vs 100%, p)

Conclusion: Trans-oral surgery (TOS) is more cost effective than open approaches in treating patients with oropharyngeal cancer. Patients treated with TOS demonstrated superior functional outcomes and equivalent oncologic results as compared to patients treated using the open approach. From a value driven perspective, the absolute cost of TOS was significantly lower than open approaches. Therefore, TOS for oropharyngeal cancer should be considered the standard of care in the surgical treatment of oropharyngeal cancer.

P014   Learning Curves Of Radical Hysterectomy For Cervical Cancer: Comparison Between Laparoscopy And Robotic System

Seongmin Kim; Ki-Jin Ryu; Sanghoon Lee; Jae-Yun Song; Korea University Medical Center, Korea

Introduction/Objectives: The aim of this study was to compare and determine the feasibility, surgical outcomes, learning curves of robotic radical hysterectomy with lymph node dissection (RRHND) to conventional laparoscopic radical hysterectomy with lymph node dissection (LRHND) performed by a single surgeon, in patients with cervical cancer.

Materials, Casuistry and Methods: Between April 2009 and March 2013, 22 patients underwent LRHND and 19 patients underwent RRHND. Variables such as age, body mass index, International Federation of Gynecology and Obstetrics stage, histological results, number of dissected lymph nodes, operative time, estimated blood loss, days of hospitalization and complications were reviewed. Learning curves of operation time was obtained using cumulative sum (CUSUM) method.

Results/Discussion: Both groups showed similar patient and tumor characteristics(Table 1). In surgical outcome analysis, RRHND (51.8±10.4 minutes) showed longer preparing time than LRHND (42.5±14.1 minutes)(Table 2). In the LRHND group, 8 patients experienced postoperative complications (5 void difficulty, 1 postoperative bleeding, 1 right basal ganglia infarction, 1 fever)(Table 3). On the other hand, in the RRHND group, 4 patients experienced a postoperative complication (2 bleeding, 1 peritonitis, 1 dehiscence of trocar site). Using CUSUM method, the learning curves were obtained by plotting the cumulative sequential differences between each data point and the average operation time, and showed two distinct phases in both type of operations(Figure 1, 2).

Conclusion: RRHND would be appropriate surgical approach in patients with cervical cancer with favorable outcome of less voiding difficulty. A minimum of 13 cases of robotic radical hysterectomies are required to achieve surgical improvement in the treatment of cervical cancer.

P015   Training Of Robotic-Assisted Radical Prostatectomy, Experiences Of First 100 Cases

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Introduction/Objectives: The apply of robotic-assisted laparoscopic technique is now more and more in Vietnam. The switch from the open surgery and laparoscopy to robot assisted surgery have their own difficult and. We summarize the experiences of our series through 100 prostate cancers treated by robotic-assisted laparoscopic surgery in the Department of Urology, Binh Dan Hospital, from December 2016 to June 2018 to study the training of this procedure.

Materials, Casuistry and Methods: This is a clinical comparative, longitudinal study. 100 patients diagnosed with prostate cancer stage T1 to T3 clinical stage were performed RARP, with and without nerve sparing, localized pelvic lymph node dissection. The compare was based on 5 groups of surgeons, the two phase of 50 first and 50 last cases. Research variables: stage of cancer, pre and postoperative PSA levels, Gleason scores, lymph node metastases, estimated blood losss, surgery time, urinary incontinence, hospital stay and complications.

Results/Discussion: Five surgeons A, B, C, D,E had the number of cases 38,22,18,14 and 6 respectively. The mean age, PSA, stage of cancer were stastistically similar (p> 0.3). The surgery time was 176.81, 274.77, 231.88, 286.92, 272.50 minutes, respectively (p

Conclusion: Through this study of the robotic assited radical prostatectomy, we found that surgery can be performed safely with acceptable complications. Optimal learning curve for surgery time after over 20 cases. Training needs to have a procedure in place to replicate the number of surgeons without compromising the overall outcome.

P016 Robotic Interval Debulking Surgery In Advanced Ovarian Cancer After Neoadjuvant Chemotherapy: A Pilot Study

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Introduction/Objectives: The purpose of this study was to evaluate the feasibility and morbidity of robotic interval debulking Surgery (IDS) in the treatment of advanced ovarian cancer after neoadjuvant chemotherapy (NAC).

Materials, Casuistry and Methods: We performed a retrospective review of robotic approach in patients with pathologically confirmed ovarian cancer who received more than 1 cycles of NAC, from January 2010 to September 2017, at the Yonsei Cancer Hospital. An indication of robotic IDS was normalization of CA-125 value after NAC and follow-up image studies shows at least partial response after NAC.

Results/Discussion: A total of 3 patients were included. The median age was 71 years (range, 44-77 years), median body mass index was 24.5 kg/m2 (range, 20.2-40.4 kg/m2). The median values of CA-125 before NAC and CA-125 before IDS were 1076.3 UI/ml (range, 173.5-3364.9 UI/ml) and 22.3 UI/ml (range, 7.0-29.9 UI/ml), respectively. 2 patients underwent complete debulking surgery with no residual disease and 1 patient optimal debulking surgery (Residual disease <0.5cm). The median operating time was 343 minutes (range, 148-460 minutes), the median blood loss was 50 mL (range, 50-400 mL). There was no major post-operative morbidity. The median length of hospital stay was 8 days (range, 3-92 days). The median follow-up was 13 months (range, 3-21 months). 2 patients are free from recurrence at the time of this report.

Conclusion: Robotic IDS in patients with advanced ovarian cancer after NAC, seems feasible and may decrease the impact of aggressive surgery. Further investigation of robotic IDS in advanced ovarian cancer after NAC is warranted.