Competency, Proficiency, and the Next Generation of Skills Training and Assessment Curricula Using Simulators

Richard M. Satava, MD

NOTES: Issues and Technical Details With Introduction of NOTES Into a Small General Surgery Residency Program • Pick from JSLS

Michael S. Kavic, MD
Brian Mirza, MD
Walter Horne, DVM
Jesse B. Moskowitz, MD

Enterotomy and Mortality Rates of Laparoscopic Incisional and Ventral Hernia Repair: A Review of the Literature • Pick from JSLS

Karl Andrew LeBlanc, MD, MBA
Melvin Joseph Elieson, MD
James M. Corder III, MD

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Advancing Smooth Surgery
Competency, Proficiency, and the Next Generation of Skills Training and Assessment Curricula Using Simulators

Richard M. Satava, MD

With the origins of objective assessment of psychomotor skills for surgical residents by leaders like Richard Reznick et al. and Gerald Fried et al. in the 1990s, the foundation of the revolution in teaching surgical procedures was introduced. Initially, and to a greater extent still today, the assessment is of basic tasks and simple procedures; the more complicated full surgical procedures await further advances in the technology of simulators as well as assessment tools. Nevertheless, enormous progress has been made in quantifying performance, and validation has been successful not only for the laboratory, but Seymour et al. and others have also validated that virtual reality training in the laboratory translates into improved performance in the operating theater.

As with all scientific research, when the scientific evidence supports a new approach, the next step is incorporation into practice. Because of the validation, there is now a requirement for simulation-based training with objective assessment to be part of the skills training of surgeons. The Accreditation Council on Graduate Medical Education (ACGME), the Residency Review Committee (RRC), the Association of Program Directors in Surgery (APDS), the American College of Surgeons (ACS), and American Board of Surgery (ABS) have worked hard to reach consensus, establish, and adopt the 6 areas of competency that all residents must achieve (Table 1). Although certain areas of skills training are well validated, some areas like communication skills and professionalism are still being developed.

Now that the areas for competency have been agreed upon, the difficult task begins of developing the curricula that will support the training and assessment of these skills. One of the major benefits of the development of curricula is that this forms the beginning of the standardization of skills training. Once again, the ACS, ABS, and APDS have united to develop the skills curricula. As of September 2008, the required curriculum for the first 20 basic skills and simple procedures has been

### Table 1
**The Six Competencies**

| 1. Knowledge |
| 2. Patient care |
| 3. Interpersonal and communication skills |
| 4. Professionalism |
| 5. Practice-based learning and improvement |
| 6. Systems-based practice |

### Table 2
**The Phases of Surgical Curriculum Development**

| Phase 1 | Basic skills |
| Phase 2 | Surgical procedures |
| Phase 3 | Team training |

### Table 3
**The 20 Basic Surgical Skills Curricula**

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released (Table 2). This has completed Phase 1 of curriculum development; Phases 2 and 3 will be developed over the next 2 years (Table 3). All surgical residency training programs are now required to have these fundamental skills-training curricula with assessment of the outcomes; what has not been mandated is the manner in which the training and assessment will occur. This provides the training program directors some latitude for presenting the training. However, this also leaves a gap in achieving a uniform curriculum on a national basis (see below).

In preparation for the establishment of curricula, the ACS has developed a certification process for a skills-training center. These ACS Accredited Education Institutes (ACS-AEI) will form the nucleus of cooperation in bringing a standardization to the training and assessment process. The initial steps have been to develop the criterion for an ACS-AEI, an application process, a survey instrument, the teams of surveyors to evaluate the applicant training centers, an evaluation methodology, and the certification award process. This has all been accomplished between 2005 and today. Surveys have been conducted, and now 18 ACS-AEI centers have been certified.

In May 2007, the first meeting of the ACS-AEI centers occurred to establish the Consortium of ACS-AEI. The goals are to establish shared, uniform resources (databases, learning management software, networking, etc), to evaluate the ACS-APDS curricula with the intent of adopting a common implementation of the curricula, to develop uniform outcomes for the curricula, and to develop a research agenda to further the scientific pursuit of education, training, and assessment (Table 4). This will allow the ACS-AEIs to become regional resources for disseminating information throughout the region, to provide a resource to “train the trainers” for other institutions in their region, and to provide resident (student and surgeons) training for those institutions that do not have their own training centers and still need to meet the ACGME and RRC requirements.

The types of training and assessment that the centers will address must be comprehensive and include students, residents, and practicing surgeons. The purposes include initial assessment of fundamental abilities (aptitude), basic skills and established procedures, new procedures (for both students and established surgeons), maintenance of certification (MoC), retraining (or re-entry training) of skills after absence from performing surgery, and when necessary, remediation (Table 5).

The new directions for the ACS-AEI will be in (1) forming networks of centers to integrate and collaborate; (2) establishing a research agenda in application and validation of new training and assessment methods; (3) performing multicenter trials of new procedures and techniques (such as NOTES); (4) developing/evaluation of new simulators and curricula with their appropriate outcomes and assessment tools; and (5) distributing (over the Internet) all of the above information.

The challenge is enormous, but the opportunities are even more exciting than ever. We are in a complete revolution in surgical education. If history
serves us well, such a revolution occurs only once every hundred years, as evidenced by the fact that the last revolution began in 1908 with the Flexner Report. Whatever is established during these next 10 years is likely to endure for the next century.

The opinions or assertions contained herein are the private views of the author(s) and are not to be construed as official, or as reflecting the views of the Departments of the Army, Navy, or Air Force, the Defense Advanced Research Projects Agency, or the Department of Defense.

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References

FROM THE 16TH SLS ANNUAL MEETING AND ENDO EXPO 2007, SAN FRANCISCO, CALIFORNIA, SEPTEMBER 5–8, 2007

The Responsibility of the Surgeon in the New Health Care System

Presented by Thomas Russell, MD, Executive Director of the American College of Surgeons

The US Health Care System is big, complex, fragmented, and expensive, said Dr Russell. It will be a pivotal issue in the 2008 presidential election. Problems with the system involve inconsistent quality, excessive costs, and limited access to care, plus the growing number of uninsured and pending workforce shortages. One main problem is that the current system is not aligned around outcomes and what is best for the patient. The future will have increased regulatory forces, cultural changes, and advances in technology, such as electronic medical records. Surgeons of the future will need to focus on the value they offer patients and their outcomes and quality of reporting. Surgery is being redefined.

Now images are being used rather than exploratory laparotomy. Surgeons must be able to use radiology and other imaging equipment. Surgery is becoming manipulation of tissue rather than just cutting of tissue. Because of these changes, surgeons will need to participate in quality indicators, make certain that there is true value in each procedure to avoid waste, and be adept in using electronic medical records. The American College of Surgeons is working to improve surgical care regarding issues of structure, process of care, and outcomes. Thus, the National Surgical Quality Improvement Program, initiated by the College, will help surgeons to measure the value of their care.
What Have We Learned About Laparoscopic Hernia Repairs? Lawrence C. Biskin, MD

After approximately 15 years of performing laparoscopic hernia repairs, improvements with techniques and advancements in technology have provided alternative and better approaches to the repair of all types of hernias.

The laparoscopic repair of inguinal hernias in experienced hands has proven to be better than the open repair with regard to post-operative pain, recurrences, and overall recovery. Although there is a monetary loss to the surgeon, the ability to repair concomitant umbilical hernias (approx. 15%), and contra lateral inguinal hernias (approx. 25%) is a tremendous advantage to the patient by adding only a few minutes to the operative procedure without a significant increase in recovery time.

Although the TEP repair is a quicker and ultimately better operation (peritoneum not violated) the TAPP approach provides better recognition of the posterior anatomy allowing a safe and smooth transition to the TEP repair. Familiarity with the TAPP prepares the surgeon for the occasional (2%) conversion from TEP. Recurrent posterior repaired hernias or patients with prior prostate or bladder operations can be repaired by the TAPP technique and should not be attempted with the TEP.

The laparoscopic technique should not be utilized only for bilateral and recurrent hernias since they are more difficult repairs and account for a small percentage of the hernia operations performed on average by a surgeon. It has been well documented that the complication and recurrence rate is much higher with surgeons who do only the occasional laparoscopic hernioplasty.

Sports/stress hernias (“athletic pubalgia”) can be approached laparoscopically and allow close inspection of the myopectineal orifice and other areas. Hernias and cord lipomas that were not appreciated on clinical evaluation can be identified during the operation. Reinforcement of the posterior pelvic floor with mesh not only repairs the hernias but has also been shown to support injured muscle and tendons, providing a lattice for repair.

Despite claims made by many companies, pore size, thickness, softness, type of weave or component make-up of mesh have not been definitely shown to improve the ultimate recovery or outcome of the repair. Certain types of mesh have proven to be disastrous for many patients and these have been, or will be, withdrawn from the market.

Tissue separating meshes or mesh that has a non-adherent side should help diminish adherons to the mesh allowing safe re-entrance into the pre-peritoneal space after a TAPP/TEP procedure for future urologic or vascular access. This type of mesh should also be routinely utilized for laparoscopic ventral hernia repairs.

The adoption rate for laparoscopic ventral hernioplasties has been much quicker than the TAPP or TEP since it is technically and anatomically similar to the open repair. Adhesiolysis is the most ominous part of the operation and sharp dissection using hemolocks for hemostasis should eliminate occult intestinal burns and unrecognized bowel injuries. The surgeon should have a very low threshold to return to the operating room with any patient demonstrating signs of sepsis. Recurrence after laparoscopic ventral herniaplasties should be minimal when the mesh is overlapping the defect by at least five centimeters and fixation of the mesh is done with transabdominal sutures as well as tacks. Pain after laparoscopic inguinal hernioplasty is minimal or non-existent, however pain after laparoscopic ventral hernioplasty can be worse than the pain following open technique. Using and minimizing different types of tacks or anchors, injecting local anesthetics, tying loose transfixation sutures, and inserting pain pumps or epidural catheters have given inconsistent results in reducing post-operative pain. Extended hospital stays and sometimes large amounts of analgesics may be required initially to control patient discomfort.

The benefits of a lower recurrence and wound complication rate along with the ability to identify and repair multiple abdominal wall defects, including difficult parastomal hernias, will eventually make their operation the standard of care. As the demand for these advanced procedures increases, the number of surgical hernia specialists will continue to evolve.
NOTES: Issues and Technical Details With Introduction of NOTES Into a Small General Surgery Residency Program

Michael S. Kavic, MD, Brian Mirza, MD, Walter Horne, DVM, Jesse B. Moskowitz, MD

INTRODUCTION

An unprecedented revolution occurred in general surgery with Reddick and Olsen’s, McKernan and Saye’s, (and others) introduction of laparoscopic cholecystectomy in the United States in 1988. Since that time, many operative interventions in the abdominal and thoracic cavity have been adapted to a laparoscopic approach. Less invasive methods of diagnosis and therapy have been applied to a wide variety of diseases. It has become apparent that minimally invasive surgery has been associated with faster recovery, earlier return to full activity, less suppression of the immune system, and fewer adhesions. In addition, most would agree that the small incisions of laparoscopic surgery are associated with a more cosmetic outcome than is possible with open laparotomy.

A similar revolution has quietly been going on in the field of flexible intraluminal endoscopy. Initially, endoscopic evaluation of the GI tract was one of diagnosis and very limited therapy. However, endoscopic biopsy and the snaring of polyps was a marked advance over previous methods of management, which often involved open exploration. Intervventional endoscopists have recently broadened the indications for endoscopic therapeutic manipulation, and there seems to be a convergence of the once separate paths of endoscopy and gastrointestinal surgery. Endoscopists now perform procedures once solely reserved for the gastrointestinal surgeon.

Further convergence of the gastrointestinal interventionist and GI tract surgeon may involve a melding of the endoscopic and laparoscopic experience. Natural orifice transluminal endoscopic surgery (NOTES) offers the potential to utilize the expertise of gastroenterologists and surgeons to develop a new, more minimally invasive approach to intercavitary operative intervention. There are no abdominal incisions with NOTES. Access to the peritoneal cavity is gained by transgressing a hollow viscus, which may include the stomach, colon, vagina, or urinary bladder. The elimination of abdominal incisions may lessen return to full activity, lessen up-regulation of the immune response, reduce abdominal wall incisional hernias, and improve cosmesis of the operative procedure. In addition, there may be benefits to be gained from not transgressing a scarred or obese abdominal wall and avoiding the necessity of incurring a surgical wound in the presence of abdominal wall infection.

Leaders of the American Society of Gastrointestinal Endoscopy (ASGE) and the Society of American Gastrointestinal and Endoscopic Surgeons (SAGES) formed a working group called the Natural Orifice Surgery Consortium for Assessment and Research (NOSCAR) of which the senior author is a member. NOSCAR identified challenges that NOTES practitioners would have to address before NOTES could be addressed in clinical practice.
The challenges or potential barriers to NOTES adoption in clinical practice include:

- Access to the peritoneal cavity
- Gastric (intestinal) closure
- Prevention of infection
- Development of a suturing device
- Development of an anastomotic (nonsuturing) device
- Development of a multitasking platform to accomplish procedures
- Control of intraperitoneal hemorrhage
- Management of iatrogenic intraperitoneal complications
- Physiologic untoward events
- Compression syndromes
- Training other providers

Several studies have now demonstrated that NOTES can be performed. But, there is a question of whether NOTES procedures can be performed safely. Also, specific issues exist that concern the NOTES practitioner regarding secure closure of the translumenal access site and development of endoscopic instrumentation suitable for surgical procedures.

With the above in mind, the authors determined to explore NOTES technology and determine whether now is the time to introduce this concept into a small general surgery residency program.

METHODS

Approval for this project was obtained from the Northeastern Ohio Universities College of Medicine and Pharmacy (NEOUCOM/COP) IACUC (Institutional Animal Care and Use Committee). St. Elizabeth Health Center (SEHC) is one of several major teaching facilities for NEOUCOM, a medical school comprising a consortium of 3 state universities in northeast Ohio. All animal laboratory experiments were conducted in the NEOUCOM/COP Comparative Medicine Unit.

From January 2007 through July 2007 at approximately monthly intervals, a large animal laboratory session was conducted at NEOUCOM/COP to study NOTES intervention.

Five female mixed breed farm swine were selected for the experimental model because of their size and close approximation of human anatomy. The swine varied in weight from 37 kg to 42.1 kg. Animals were fasted for 24 hours before the laboratory procedure, but allowed water ad libitum. Swine were preanesthetized with Telazol administered intramuscularly at a dose of approximately 6.6 mg/kg and atropine at a dose of 0.04 mg/kg. Animals were subsequently intubated, and anesthesia was maintained with isoflurane delivered at 1% to 2% of inspired gas (pure oxygen). Animals were ventilated at a rate of 10 breaths per minute using a tidal volume of approximately 11 mg/kg and an inspiratory ratio of 1:2.

Endoscopic equipment was supplied by the Fujinon Corporation (Omiya, Japan) and consisted of a 0.8-cm Fujinon EVE endoscope with one working channel and an irrigation/suction channel. The control module was set for 12:00 orientation. Surgical images were captured on a 512 MB memory card and saved in JPEG format.

A Karl Storz (Tuttlingen, Germany) laparoscope, insufflator, light source, and display were used for laparoscopic monitoring of the NOTES procedure and also used for a “hybrid” (NOTES and laparoscopic techniques) intervention. Five-mm trocars and cannula were used for laparoscopic visualization of NOTES maneuvers.

A commercial US Endoscopy (Mentor, OH) esophageal overtube (19.5 mm OD, 50 cm length) for human use was initially used to facilitate repeat passage of the endoscope. This overtube was found to lack sufficient length for NOTES studies in a large animal model. Clear plastic tubing 5/8" in
diameter was substituted for the US Endoscopy overtube and cut to 70 cm to 80 cm lengths depending on animal size and anatomy. The proximal obturator of the US Endoscopy tube was taped to the longer clear plastic tube to prevent egress of insufflated air and GI content.

A Jorgensen 24 Fr veterinary oral gastric tube (ID 14 Fr, OD 23 Fr, length 76 cm) (Jorgensen Laboratories, Loveland, CO) was used to decompress the stomach. In our swine model, the oral gastric tube served as a guide for overtube passage. A long suture was affixed to the proximal end of the oral gastric tube and secured distally to a long, straightened coat hanger. Once it was determined to pass the overtube, the straightened coat hanger was passed through the overtube. The overtube was advanced over the oral gastric tube, and the oral gastric tube was removed by withdrawing the long suture that had been previously attached to its proximal end.

Chlorhexidine solution diluted to 0.5% was used to wash and cleanse the oropharynx (130 mL) and stomach (200 mL). Each site was washed and suctioned 3 times during the preoperative preparation. Aerobic and anaerobic cultures were taken after preparation.

Boston Scientific (Natick, MA) Glidewires, 450 cm in length and 0.035” in diameter, were used to guide passage of endoscopic instruments and dilators. Boston Scientific microvvasive C-R-E balloon dilators were capable of dilating the gastric track 10 mm to 12 mm in diameter. Lubrication of all channels was secured with sterile water or saline. Water-soluble gel was used to lubricate the overtube.

Boston Scientific provided biopsy forceps and endoscopic clips.

“Safe tract” passage of a spinal needle with attached syringe was used to rule out the presence of a hollow viscus anterior to the anterior gastric wall. Anterior abdominal pressure with a 20 mL syringe barrel was used to help determine endoscopic ori-

entation within the gastric lumen. Pressure was maintained to help orient the operator to the anterior surface of the stomach. A mound of stomach mucosa was produced with anterior abdominal wall pressure and helped provide a “target” for the needle knife. In addition, abdominal wall/stomach pressure provided counterresistance for advancement of the needle knife and application of electrosurgical energy.

An overtube was used to guide the needle knife to the target site on the anterior gastric wall. The overtube supplies necessary rigidity for the flexible endoscope to appropriately address the stomach wall. A Boston Scientific needle knife was used to perform all gastrotomies. After safe tract maneuvers suggested that no visera intervened between the anterior abdominal wall and stomach, a mound of gastric mucosa was developed as described above. Under direct visualization of the gastric mound by the endoscopist, the endoscope, made rigid at its distal end by the overtube, was guided to the gastric mound (Figure 1). Contact was then made with the gastric mound. Electrosurgical energy was supplied to the needle knife, and the needle knife wire and knife body were thrust through the gastric wall. Immediately prior to gastric wall penetration, electrical surgical power was discontinued and the needle knife wire withdrawn. Failure to perform this maneuver in a precise fashion can cause inadvertent injury to the anterior abdominal wall, mesentery, intestine, or viscera (Figure 2).

A 450-cm glidewire was then advanced through the needle knife (Figure 3). It is important to have sufficient length of glidewire to enable passage of endoscopic instruments. A dilating balloon was

(continued from page 10)

ative work of the leading pioneers. Attempts at visualizing the contents of the abdominal/pelvic cavity were made approximately 1000 years ago, as reported by the Arabian physician Abukasim (986-1013 AD).24 However, the details of this apparently primitive attempt are not clear.

In 1901, Kelling made the first attempt to inspect the peritoneal cavity with insufflation. He called it “Kooliskopie.” He report-
ed the abdominal organs were much smaller than normal. That was because he created a very high pneumoperitoneum pres-
sure of 50 mm Hg to 60 mm Hg and once even 100 mm Hg. He used air to distend the peritoneum.25

In 1910, Jacobaeus from Stockholm coined the term laparoscopy. He did not use pneumoperitoneum because most of his patients had ascites.26 In 1927, Korbsch sug-
gested the use of carbon dioxide (CO2) instead of air at a pressure >15 cm H2O. Unlike air, which contains about 79% nitro-
gen, CO2 is readily absorbed within the body.27

In 1937, Ruddock published his series of 2500 laparoscopic sterilizations. He designed his own telescope, trocar, and pneumoperitoneum nee-
dle.28 His contemporary, Hope, suggested the use of laparoscopy in the evaluation of ectopic pregnancies.29

In 1944, Decker and (continued on page 13)
then exchanged over the glidewire and the gastrotomy site dilated to 12 mm (Figure 4).

The endoscope was advanced through the dilated gastrotomy site and intraabdominal endoscopic examination was performed (Figure 5). At this point, it is important to monitor intraabdominal pneumoperitoneum to avoid excessive abdominal pressures. A 5-mm trocar and cannula were effective in monitoring intraabdominal pressure and evacuation of pneumoperitoneum as required.

It was noted that during prolonged periods of gastric insufflation, air passed through the pylorus and distended the entire small bowel. Dilatation of the small bowel from this cause limited intraabdominal examination and could hamper endoscopic intraabdominal procedures. A pyloric obturator using a human baby nipple and plastic skirt was fashioned, but proved to be difficult to pass down the confines of an overtube (Figures 6 and 7). Further work to develop an appropriate obturator is ongoing in our lab.

Solid organ biopsy was performed during our studies along with attempted endoscopic clip closure of the gastrotomy site and simulated appendectomy (fallopian tube model). (Figure 8).

RESULTS

Preprocedure placement of an oral gastric tube (Jorgensen 24 Fr, Jorgensen Laboratories, Loveland, CO) was useful in decompressing the stomach. In addition, placement of an oral gastric tube facilitated passage of the overtube. Use of an overtube in this animal model reduced operator-induced trauma to the oral pharynx and esophagus and reduced the potential for transporting oralpharyngeal bacteria into the abdominal cavity.

Chlorhexidine solution (0.5%) wash of the oral pharynx and stomach was efficient in cleansing these areas and providing asepsis. No aerobic or anaerobic organisms were retrieved on culture.

In the 5 animals studied, 4 had normal swine anatomy. Gastric perforation with a needle knife and dilation of the gastrotomy tract was accomplished in these animals (#1 – 4). Intraabdominal exploration with the flexible endoscope was similarly successful.

Animal #5, however, had extensive adhesions in the epigastrium and left upper quadrant. These adhesions were of undetermined origin. In this animal, adhesions hindered adequate abdominal access and visualization. There was extensive distortion of intraabdominal anatomy. The spleen was tethered to the greater curvature of the stomach. Because the spleen was also fixed to the mid epigastrium, inadvertent injury to the spleen occurred with passage of the needle knife, glidewire, and endoscope.

A steep learning curve was encountered with the initial laboratory experiments. Four to 5 hours were required in the initial studies to gain endoscopic access to the intraabdominal cavity. Because of the lengthy time required to actually perform NOTES maneuvers, the authors learned to withhold anesthetizing animals until all members of the team were present and all instruments checked and made ready. With practice and experience, time to gain intraabdominal endoscopic access was reduced to less than one hour.

“Safe tract” proved to be a useful maneuver. It was, however, not foolproof in our experience. Other techniques such as ultrasound or CT would facilitate the determination of intraabdominal visceral relationships. Palpation on the anterior abdominal wall after endoscopic access to the stomach and gastric insufflation helped orient the operator to the anterior stomach wall and provided a “target” (gas-
tric mound) for penetration by the needle knife. Additionally, the resistance afforded by anterior abdominal/stomach wall pressure enabled the operator to more easily thrust the needle knife through the gastric wall.

However, the supposed midgastric position of gastrotomy was frequently inaccurate. Most of our gastrotomies were sited closer to the GE junction than anticipated.

Intraabdominal orientation of the gastroscope proved to be difficult. To visualize the liver and gallbladder, the endoscope had to be “Jed” back upon itself. This maneuver caused several authors to feel as if they were operating “over their shoulders.” Electronic image inversion (conversion to a familiar 12:00 o’clock orientation) reduced this problem.

The presence of one endoscopic operating channel precluded all but the most simple of diagnostic and therapeutic procedures. Two channels would have allowed for grasping a target tissue, fixing it, and performing other maneuvers (cutting, coagulation, biopsy, and others) through the second channel. A limitation of this setup, however, would be the small amount of distance between the 2 channels hindering appropriate triangulation of the instruments. Most of the time, the 2 channels would require that endoscopic instruments be passed just about parallel with one another making manipulation at the target site difficult. “Sword fighting,” as noted when laparoscopic trocars are spaced close together, would result between the instruments. A potential solution to this problem would be the development of articulating endoscopic instruments that could appose one another with a reasonable degree of separation.

Secure closure of the gastrotomy site is relatively straightforward if a PEG device is used. However, this type of closure is limited by subsequent fixation of the stomach to the undersurface of the abdominal wall and formation of adhesions. The stomach being fixed to the anterior abdominal wall would compromise future NOTES procedures.

Interestingly, the endoscopic clip applicer used to close the gastrotomy site was found to be difficult to manipulate. The clips are approved for hemostasis of mucosal and submucosal defects <3 mm, bleeding ulcers, polyps <1.5 mm in diameter, and securing colonic diverticula. They are also approved as a supplementary method to close GI track lumen perforations <20 mm that can be treated conservatively. In our hands, it was difficult to place the endoscopic clips with accuracy in relationship to the gastrotomy site. In addition, it was difficult to manipulate ends of the endoscopic clips on the gastrotomy site to oppose one side of the gastrotomy incision to the other (Figures 9 and 10).

During the course of our studies, several glidewires and endoscopic instruments were used
more than once. We found that it was very important to lubricate all channels used to pass instruments with the appropriate agent, water-soluble gel or liquid. The close tolerances of endoscopic instruments and operating channels mandated that generous lubrication be used and that the operating channels be kept as straight as possible to facilitate instrument passage.

Because of the unanticipated steep and prolonged learning curve, all animals were euthanized at the conclusion of the NOTES procedure while still under anesthesia. Subsequent necropsy revealed the soundness of this decision as many relationships, particularly orientation and spatial relationships, became apparent only after open exploration of the abdominal cavity and 3-dimensional visualization.

**DISCUSSION**

Despite the long, steep learning curve, difficulties with operative orientation, and inadequate instrumentation, this laboratory study was found to be instructive and useful in introducing the concept of NOTES intervention to a small general surgery residency program. There were several lessons learned, many of which have been articulated by the early NOSCAR enthusiasts.\(^\text{15}\)

Perhaps the most important lesson relearned was that the initiation of a NOTES program requires the special skills and experience of both surgeons and therapeutic endoscopists. Each group has particular expertise specific to that specialty, and this combined expertise is necessary for the successful development of transluminal, intercavity surgery.

The matter of endoscopic orientation was an issue from the very first. It was interesting to find that palpation of the anterior abdominal wall and safe tract maneuvers resulted in the anterior stomach wall appearing in many positions other than a 12:00 o’clock orientation. Orientation was further challenged when the endoscope was J’ed to look back at the liver and gallbladder from an anterior gastrostomy site. In this position, the 12:00 o’clock and 6:00 o’clock positions were frequently reversed, and it was difficult to torque the endoscope around to right matters. Future instrument development should incorporate endoscopic electronic readjustment capability to “normalize” the visual field for proper triangulation of operative or diagnostic interventions.

Chlorhexidine (0.5%) wash of the oral pharynx and stomach after intubation appeared to be successful in removing particulate matter and providing an aseptic state. Although aerobic and anaerobic cultures of these areas were negative after cleansing, it will be necessary for animal survival studies to show whether dislodgement of bacteria from the oral pharynx during passage of endoscopic instruments is a factor of clinical significance.

The nonsurvival mode of the animal study benefited the development of our NOTES skill. There is a long and steep learning curve for NOTES methodology. By performing an immediate necropsy, we were able to correlate endoscopic impressions with actual anatomic reality.

We found that an in situ oral gastric tube served as an excellent guide for passage of the overtube. Because of the short commercial overtures available, we utilized commonly available thin-walled clear plastic tubing of 5/8” diameter cut to a length of 70 cm to 80 cm. An overtube of clear plastic was of value in subsequent passage(s) of the endoscope because esophageal and gastric anatomy could be identified through the clear plastic wall. The gastroesophageal junction, an important anatomic landmark and reference point, was easily identified through the overtube. However, we found that an overtube in the porcine, large animal model must be

(continued from page 13)

appendicectomy. One of the reviewers questioned the ethical aspect of this procedure.\(^\text{64}\)

In 1965, Muhe of Boblingen, Germany, performed the first laparoscopic cholecystectomy. The German Surgical Society rejected Muhe in 1966 after he reported his pioneering operation; the society considered the operation unethical. Because he was ahead of his time, he received their highest award in 1992.\(^\text{65}\) In 1989, Harry Reich of Pennsylvania, USA, reported the first laparoscopic hysterectomy, a procedure that had new concepts and dimensions;\(^\text{66,67}\) but, again, it was not well received in its infancy especially by those physicians who could not perform the operation. And we have just heard the story of the struggle of our good friend Professor Harry Hasson and his excellent technique of open laparoscopy\(^\text{68}\) and many other patents that have now been proudly adopted and practiced worldwide by many high-profile endoscopic surgeons.

The invention of a rod lens optical system by Hopkins in 1959 and the addition of fiberoptic light transmission by Starz in 1960 have been vital for modern endoscopy. Similarly, an important milestone in laparoscopy was the development of a video computer chip in 1987 that allowed magnification and projection of images onto television screens.\(^\text{39,40}\)

In 1987, Nezhat et al.\(^\text{41}\)
at least 70 cm long to assist in positioning and stabilizing the endoscope for gastric procedures.

The use of an overtube allows for repeated passage of the endoscope with minimal potential for injury to the oral pharynx and esophagus. In addition, there is a decreased risk of dislocating bacteria from the oral cavity and oral pharynx to the operative site(s). It was necessary to secure the open end of the improvised overtube with the obturator available on commercial overtubes. The makeshift obturator prevented efflux of insufflated air and gastric content (Figure 11).

Our improvised overtube was stiff and had a small amount of curve inherent in the plastic material (Figure 11). These qualities augmented our ability to direct the endoscope to a target site and to stabilize it during thrusting and retraction maneuvers. In effect, the overtube stiffened the flexible tip of the distal endoscope and allowed us to have more control when thrusting and manipulating endoscopic instruments was necessary. However, a “soft” tip applied to the distal end of the overtube will help prevent unnecessary trauma to the gastric wall.

During the course of our exercises, we consistently performed the gastrotomy puncture closer to the GE junction than anticipated. The more proximal position of the gastrotomy incision suggested the use of a longer overtube and positioning safe track pressure in a more caudal site on the abdominal wall (between the third and fourth nipple) to the right of the midline.

Besides helping orient our team to endoscopic findings, postprocedure necropsy revealed needle knife superficial injuries to the anterior abdominal wall, mesentry, and small bowel that might have been missed if the animal had been allowed to survive the initial procedure.

We also observed that concurrent 2-mm or 5-mm laparoscopic surveillance was an aid to selecting a gastrotomy site and monitoring passage of the glidewire and endoscope. It was our impression that laparoscopic visualization improved the ease and safety of gastric wall penetration and intraabdominal visceral manipulation. Laparoscopic surveillance, initiated by the Hasson technique, may also aid in safe passage of the endoscope through the stomach wall in those patients suspected of having abdominal adhesions. The addition of small 1-mm or 2-mm laparoscopic ports can allow for laparoscopic instrument introduction to assist NOTES procedures in a “hybrid” manner.

Retroflexion of the endoscope introduced through a gastrotomy site caused difficulty with targeting and triangulating an organ in the upper abdomen. In many instances, it was difficult to obtain proper image orientation and perform subsequent instrument manipulation. Because of these challenges, it may be more advantageous to perform NOTES procedures in the upper abdomen by accessing the abdominal cavity from a more caudal site in the colon, vagina, or urinary bladder.

Interestingly, the development of pneumoperitoneum after hollow viscus penetration may improve safety and deter glidewire or endoscopic instrument injury to intraabdominal content by increasing the distance from the stomach gastrootomy site to these structures.

**DISCUSSION**

Our study suggests that NOTES intervention is a
feasible and appropriate “next step” in the evolution of minimally invasive surgical access. There was, however, a long and steep learning curve for our team. We conclude that any investigation of NOTES should involve a multidisciplinary approach with experienced laparoendoscopic surgeons and interventional gastroenterologists collaborating together. These investigations should begin in a controlled, laboratory environment before procedures are attempted on human patients. Finally, we conclude that NOTES investigation is beneficial for a small general surgery residency program to stimulate creativity, explore the limits of technology, gain insight into the design and use of improved NOTES surgical instrumentation, and improve the diffusion of surgical knowledge.


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Partial support for this project was obtained through a grant from the SEHC Department of Medical Research.

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FROM THE 16TH SLS ANNUAL MEETING AND ENDO EXPO 2007, SAN FRANCISCO, CALIFORNIA, SEPTEMBER 5-8, 2007

Minimally Invasive Repair of Congenital Diaphragmatic Hernias: a Review of Our Experience

Sohail R. Shah, MD, Jessica Wishnew, Katherine Barsness, MD, Barbara A. Gaines, MD, Douglas A. Potoka, MD, George K. Gottes, MD, Timothy D. Kane, MD

Objective: Minimally invasive techniques continue to expand in pediatric surgery. In this study, we describe our institution’s experience with minimally invasive repair of congenital diaphragmatic hernias. Radical prostatectomy.

Methods: We reviewed all cases of congenital diaphragmatic hernia at a tertiary-care pediatric hospital since 2001 with an initial attempt at minimally invasive repair.

Results: Seventeen children underwent attempted minimally invasive repair for congenital diaphragmatic hernia (12 Bochdalek and 5 Morgagni). Children ranged from 1 day to 6 years of age (mean, 17±25 months) and weighed 2.57 kg to 21 kg (mean, 8.36±5.70) at the time of surgery. All 5 Morgagni hernias were successfully repaired laparoscopically. Of the 12 Bochdalek hernias, 2 were successfully repaired laparoscopically, and 6 were repaired thoracoscopically. The only right-sided hernia defect was initially approached thoracoscopically but converted to laparotomy, while 2 other Bochdalek hernias were successfully repaired by thoracoscopy with mini-thoracotomy for lateral stitch placement. Only 1 patient required a patch, which was performed by thoracotomy after thoracoscopic bowel reduction and finding of a very large diaphragmatic defect. No deaths and only 1 recurrent hernia developed (follow-up, 1 week to 5 years). Six neonates (age range, 1 day to 14 days) had Bochdalek hernias and underwent an initial attempt at thoracoscopic repair. Three underwent thoracoscopic repair alone (1 developed the aforementioned recurrence); 2 underwent thoracoscopy with mini-thoracotomy or thoracotomy, respectively. One required conversion to laparotomy due to oxygen desaturation.

Conclusion: Congenital diaphragmatic hernias can be managed successfully by thoracoscopy or laparoscopy, depending on the type of hernia and patient age.
16th SLS Annual Meeting and Endo Expo 2007 in Review

Gustavo Stringel, MD

The city of San Francisco was a great venue for the 16th Society of Laparoscopic Surgeons (SLS) Annual Meeting and Endo Expo 2007. This beautiful and welcoming city, a place where visitors leave their hearts, is great for meetings. Transportation to San Francisco was convenient with 2 major airports, the San Francisco and the Oakland International airports. The Hotel Hyatt Regency Embarcadero provided a great venue for the meeting. It is strategically located in downtown San Francisco, and the accommodations were comfortable with spacious rooms. The hotel overlooked the San Francisco Bay and the spectacular Bay Bridge. I personally recommend using public transportation from the airport to the hotel; the train is convenient and inexpensive.

The masters classes were well attended and interesting. Suturing continues to be a skill that is sought out by most laparoscopic surgeons; the suturing class was very well received.

The Society's recent innovation of designing your own program schedule allows for flexibility. This new system allows the surgeon to tailor the classes to his or her particular needs. Surgeons attending future SLS meetings are advised to take advantage of this interesting didactic option.

The opening ceremony started with the rhythmic percussion of drums played by a Chinese troupe of street dancers with their traditional costumes, including the prominent role of the dragon.

The honorary chairman Mark Erian, MD, delivered a very interesting presentation titled “The Society of Laparoendoscopic Surgeons and the Future of Endoscopic Surgery Worldwide.” SLS' honorary chairman Yan Liu, MD, talked about “The Economy and Culture of Shanghai and Its Development in Endoscopic Surgery in Gynecology.”

The presidential address by Dr Harrith M. Hasson, MD, was the highlight of the evening. Dr Hasson is world renowned for his innovations and contributions to the field of laparoscopy.

The Best of Laparoscopy Updates was provided by Dr Howard Winfield from the urology committee and Dr Maurice Chung of the abdominal pain and adhesions committee.

This year, SLS had the honor of having Dr Thomas Russell, the current director of the American College of Surgeons, as their keynote speaker.

SLS continues to strive to provide multidisciplinary service to our members as illustrated by the multidisciplinary plenary sessions. The presentations included improving practice performance, safety, quality, pay for performance, transparency, and the financial aspects of surgical care. A highlight of this session was the presentation by Dr Thomas J. Fogarty, a well-known and respected innovator, whose talk “Bringing Your Surgical Idea to Reality” was inspiring. This session was well complemented by the presentation of Mr Mike Henson and Mr John Savarese about the commercial and business aspect of inventions.

The poster session was well represented in San Francisco with excellent posters from around the world.

The concurrent scientific sessions continue to be one of the strengths of SLS. We had very interesting presentations from many countries, and most laparoscopic specialties were represented. We had a plethora of impressive scientific presentations. We continue to experience progressive improvement in the scientific and forum presentations, not only in their clinical validity, but also in the extraordinary audiovisual quality.

The SLS group event of the evening in 2007 was a visit to the Conservatory of Flowers. The evening was very interesting.

The live telesurgery session could not be delivered in the usual format. This challenge presented the opportunity for SLS leadership to innovate, and the result was a new format currently known as “virtual telesurgery.” This format allowed for the audience to watch a previously recorded unedited video as if it were live. The surgeons performing the procedure were actually present at the annual meeting, and they acted as monitors of the session. Many of the attendees actually believed that the session was live. SLS may utilize this innovation in a similar or modified format in the future.

Dr Ralph Clayman introduced our Excel award recipient, Dr Elspeth M. McDougall, who delivered an excellent lecture titled “The Future of Surgery is Education.”

The Annual Meeting and Endo Expo concluded with a sit down breakfast with spouses and guests. The keynote speaker was John Kenagy, MD, MBA, who talked about “Adaptive Innovation.” Dr Richard Satava was the director of the future technology session titled “The Edge of Innovation in Surgery, Space, and Business.” Dr Timothy Broderick talked about the NEEMO Mission, and Dr Joseph Bruner about “Fetal Surgery.”

The closing ceremony ended this wonderful meeting with the passing of the presidential gavel from Dr Harrith Hasson to our new president Dr William E. Kelley, Jr.

It was with sadness that we saw the conclusion of this great educational and social event. We are now preparing ourselves and looking forward to the next Annual Meeting in Chicago. SLS is preparing an excellent educational and social program.

See you in Chicago!
Enterototomy and Mortality Rates of Laparoscopic Incisional and Ventral Hernia Repair: a Review of the Literature

Karl Andrew LeBlanc, MD, MBA, Melvin Joseph Elieson, MD, James M. Corder III, MD

INTRODUCTION

The use of the laparoscopic technique to repair incisional and ventral hernias (LIVH) has increased significantly throughout the world. The outcomes of LIVH repair have generally been shown to be superior to the open method of hernia repair. This is particularly true of open hernia repairs performed without mesh. As with all surgical interventions, certain risks can be disastrous if they occur. One such associated disaster is that of an enterotomy. The incidence of this complication has been reported to be from 0% to 14%. The current published data were reviewed to determine the incidence of enterotomies during laparoscopic incisional and ventral hernia repair and its associated mortality rate.

Little has been published to date to aid in the decision-making process when bowel injury occurs during LIVH repair. The rational concern of placing a prosthetic biomaterial into a contaminated field following bowel injury leads many surgeons to perform a compromised operation—opting to perform an open primary sutured hernia repair that has a significantly higher recurrence rate to avoid the risk of having an infected prosthetic biomaterial with its associated sequelae. The current published literature was also reviewed to ascertain the experience of surgeons and the results encountered when an enterotomy occurred.

METHODS

A literature search was conducted using the PubMed and Medline indices. Articles that involved laparoscopic incisional and ventral hernia repair were identified. Of those identified, case series with more than 50 patients in a series were included. Studies that compared open and laparoscopic techniques were also included to determine whether a true difference existed in the rates of bowel injury between the 2 approaches. Only the most recent article of any single author was included if it appeared that the series was reported earlier with the same patient cohorts. Retrospective, prospective, and randomized studies were all evaluated with the same methodology.

For the purposes of this research, an enterotomy was defined as a transmural injury that required suture closure, either laparoscopically or via a laparotomy. Nonsignificant serosal injuries were not considered an enterotomy for this study. An analysis was made to address the total number of patients who actually underwent the laparoscopic operation, including those who were converted to an open operation if an enterotomy occurred. Those who were converted for some other reason were not included in the totals to obtain a more accurate determination of the true incidence of this event. These were then divided into those that were recognized and those that were missed at the original operation. The repair of both the enterotomy and the hernia was also evaluated. Finally, the mortality related to the operation itself was recorded.

RESULTS

The results as shown in Table 1*−30 and include all studies that were identified as defined above. The
comparative series are relatively easily identified from those of Holzman and those that follow his series in Table 1*. These generally had a smaller patient sample than the series preceding them. It is interesting to note that of the 21 published non-comparative series, only 5 of them reported no enterotomies. Only 2 of these 5 had an experience that exceeded 100 patients. The 13 comparative series, in contrast, had 6 series that experienced an enterotomy. It should be noted that the average number of patients included in these latter comparative series was only 39 patients.

The incidence of incidental enterotomy in 3925 laparoscopic incisional and ventral hernia repairs was determined to be 1.78%. It was further determined that 82% of these injuries will be noted at the time of the operation, representing an incidence of 1.50% of the total number of patients. The more critical fact is that an enterotomy will not be recognized 18% of the time that it occurs. The overall incidence of unrecognized enterotomy is 0.33% in over 3900 patients. Unfortunately, this devastating complication (recognized or unrecognized) will result in the death of 2.8% of patients in which it occurs. It is somewhat reassuring to note, however, that the overall mortality of this procedure is only 0.05% in these series. Given the fact that many of these patients have had multiple prior procedures and comorbidities, this is a very low rate.

The management of recognized enterotomies and the method of hernia repair following the recognition of an enterotomy were also examined (Table 2*). Several of the articles were unclear as to the management of enterotomies (ie, conversion to laparotomy or laparoscopic repair) or the method of hernia repair following enterotomy. Therefore, Table 2* lists only those studies in which these could be determined. It is somewhat surprising that only 43% of the cases listed in Table 2* were converted to an open method to facilitate repair of the intestinal injury. The subsequent method of hernia repair was not always influenced by a conversion to a laparotomy. In 3 instances, an intestinal injury was repaired with the open method, then the intestine was returned to the abdominal cavity and the hernia was repaired laparoscopically as planned either immediately or after an interval delay. A frequent factor used to determine whether to proceed with repair of the hernia with a laparoscopically placed prosthesis following bowel injury was the presence or absence of gross spillage of intestinal contents. If there was minimal to no contamination, the hernia repair was performed as planned.

Large bowel injury represented 672 or 8.3% of these intestinal injuries. Of these 6 colonic injuries, 4 of these were repaired primarily, and the hernia repair was completed as planned. One of the 2 other colonic injuries was converted to laparotomy for repair of the colotomy and hernia. The sixth injury was unrecognized initially and was later treated with laparotomy, ileostomy, and patch removal with primary hernia repair (this hernia repair later failed in the follow-up period).

Definitive laparoscopic hernia repair, following repair of enterotomy (whether repaired laparoscopically or open) was delayed 16% of the time. Most commonly, this delay was between 3 days to 14 days, although it was as long as several months in a few instances. None of the articles offered evidence to support the interval of time delayed before hernia repair.

The unrecognized enterotomy is the most problematic event during this procedure. As noted earlier, this will occur in 18% of these injuries, representing an incidence of 0.33% in total number of patients at risk (Table 1*). The detection of this complication can be difficult, but it is usually noted on either the first or second postoperative day and based upon clinical suspicion, sometimes tachycardia alone. Occasionally, a computed tomographic (CT) scan was used to confirm the diagnosis. Generally, not unexpectedly, the management was laparotomy, repair of the injury, and removal of the prosthetic biomaterial. Even immediate recognition of a bowel injury and prompt repair during the initial operation did not always prevent further problems. Two series (ie, Berger and Ramshaw) had one

In essence, clinicians learned from their mistakes as well as the mistakes of their colleagues in different specialties of medicine. They all had great obstacles to overcome; nevertheless, they rose to the challenge and proved that success is an
ongoing journey.

At this time, clinicians and patients are cashing in on the benefits of the work of our predecessors. However, today’s challenges are by no means simple. Training and quality assurance are important issues.\textsuperscript{2,3} The surgeon must pass through a learning curve to acquire and maintain new skills and special expertise, and to avoid, recognize, and manage complications of advanced endoscopic surgery.\textsuperscript{4} In fact, the learning process has to be closely tied to a vigorous system of quality assurance. A balance has to be struck between the ethical obligations to benefit patients while avoiding harm and the professional expectation of continued learning; and this has to be maintained and expanded as long as surgical practice continues so that surgeons will be able to successfully follow the ever-moving horizon of endoscopic surgery.

The development and continuous progression of endoscopic surgery is a cumulative effort of internists, gynecologists, urologists, and surgeons alike. Hence, multidisciplinary minimally invasive surgery societies, notably the Society of Laparoscopic Surgeons, play a leading role in the 21st century.

**References**

Available online

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The comparison studies revealed enterotomies in both the open and laparoscopic patients (Table 3*). As in Table 2*, only those series that incurred an injury are listed. The numbers in the individual cells of the table indicate whether the enterotomy occurred via the open method and whether it was recognized or not. In other words, Holzman had only one enterotomy. This occurred in the laparoscopic group, therefore under “lap” and “recognized” the “1/1” indicates that he only had one and it was recognized. Under “lap” and “unrecognized”, the “0/0” indicates that zero of the one enterotomies were unrecognized. He did not have a recognized or unrecognized enterotomy in the open group; therefore, “0/0” is indicated for each. The other series follow this same pattern. Overall, in these comparative series, the incidence of recognized enterotomy was 1.0% for the open procedure and 1.9% for the laparoscopic method. The unrecognized injuries occurred in 0.2% and 0.9% of the cases, respectively. As shown in the table, little difference existed in the percentage of enterotomies that were recognized and unrecognized in all of the comparative series based on the method of repair (eg, 83% vs 67% and 17% vs 33%). There were more in the laparoscopic group, but there was no statistical difference between the incidence of either the recognized or the unrecognized injuries between these 2 methods (P=0.44, Fisher’s exact test). The only death in these series, however, occurred following an unrecognized laparoscopic enterotomy.\textsuperscript{10}

**DISCUSSION**

The original intent of this literature review was to establish the true incidence of enterotomy and its associated outcomes during the laparoscopic repair of incisional and ventral hernias. As shown in the data, this occurred in 1.78% of 3925 cases. Surgeon experience did not influence the rate of enterotomy, as expected. Some of the smaller series had the lowest rate of enterotomy. This would indicate that the statistical probability of enterotomy increases with larger numbers of patients. This inversely proportional complication rate with surgeon experience might be due in part to the fact that the more experienced surgeons will likely attempt to manage more difficult patients thereby increasing the risk of this occurrence. The comparative series had relatively more enterotomies. This is likely due to the fact that these were early in the experience of the surgeons. Therefore, not surprisingly, inexperience probably plays a significant role in this complication as well. Consequently, surgeon experience may play a role in these procedures in the early stages of the learning curve but may not be as important with greater numbers of cases as these will undoubtedly be more difficult. In other words, this risk is always present and unavoidable but for potentially different reasons.

As anticipated, the small bowel proved to be the most frequently affected organ and was the site of injury 92% of the time. The method chosen to repair either the colon or small intestine was generally determined by the extent of the injury and the skill level of the surgeon. If one were proficient in performing a laparoscopic repair of the affected organ, then proceeding laparoscopically would be prudent. If not, then the obvious course should be to perform a laparotomy to repair the injury. Regardless of the method of enterotomy repair, only 2 patients in a single series had any adverse outcomes subsequent to concomitant laparoscopic hernia repair.\textsuperscript{10} However, in both of these patients, the subsequent complications were not related to proceeding with repair of the hernia. Rather, one repair leaked postoperatively and the other was repaired open but had a second unrecognized injury to the small intestine that was initially missed laparoscopically and still missed following conversion to open. Therefore, if an enterotomy is recognized, either colonic or small bowel, and a sound repair can be effected either open or laparoscopically, these data suggest that the
prosthetic repair of the hernia can safely proceed as intended. This, of course, would be contingent on the lack of any significant contamination. However, the small number of cases in these series makes such a firm statement difficult. Caution must be exercised if this course of action is taken. On the other hand, if significant contamination does exist, the repair can either be performed by the open tissue repair method at the initial operation or laparoscopically with the placement of a prosthetic biomaterial after delaying for several days. No scientific basis has been offered for the chosen number of days delayed before hernia repair following enterotomy with contamination. The usual time frame reported was generally within one week. The patient should probably be maintained on antibiotics during that time; however, there was only brief discussion regarding this recommendation in the literature.17 We have preferred to wait just 3 days to 4 days to return to the operating theater to avoid the development of dense intestinal adhesions. In the few cases that this has been done, no adverse sequelae developed.

Most active laparoscopic surgeons hold the opinion that a colonic injury poses a threat of infection too great to proceed with placement of a prosthetic biomaterial to repair the hernia. However, in those series in which a recognized colonic injury occurred, some were repaired primarily with concomitant hernia repair as planned.10,12,17 Others, however, chose to repair the colonic injury and performed either a primary tissue repair or a delayed laparoscopic repair of the hernia.10,17 Based on these data, it may be permissible to repair the hernia with a prosthesis even in the presence of a colonic injury if an antimicrobial-impregnated prosthesis is used. However, as with small intestinal injuries, one must be certain that no contamination exists. But as noted earlier, more study in this area is warranted before any strong recommendations can be made regarding this approach, because only a small number of these patients heretofore have been reported.

Of the 34 intestinal repairs performed in association with a prosthetic hernia repair, whether repaired open or laparoscopically, only 2 patients experienced adverse consequences (Tables 2 and 3).10,14 Although even one anastomotic failure might be considered too many, it is somewhat comforting that a failure rate of 6%, as seen in these case series is within the range of expectation of such an intestinal repair. Unfortunately, one of these injuries resulted in the death of the patient.10 There were, however, no adverse consequences (ie, mesh infection) related to concomitant hernia repair with a prosthetic biomaterial in any patient.

The only other death in these series was the result of an unrecognized enterotomy.50 The causes of both deaths in these series were similar in that both patients experienced leakage of bowel content postoperatively. It can be said that the major cause of death following this procedure will be a consequence of enterotomy, whether it be colonic or small intestine, recognized or unrecognized. The mortality rate of this procedure (0.05%) is quite near that of other laparoscopic procedures, such as cholecystectomy. However, when an enterotomy does occur, the mortality increases to 2.8%. The mortality of a recognized enterotomy is 1.7% (1/59); however, the mortality rate of an unrecognized enterotomy is 7.7% (1/13), 4 and 1/2 times higher. Although this injury cannot be avoided in all cases, the surgeon should perform an inspection of the intestine and abdominal cavity following adhesiolysis and again upon completion of the herniorrhaphy in an effort to identify any missed injuries.

The comparative series did show that enterotomy will occur with both techniques and that some will be missed even with the open method. In these series, the only mortality was in the laparoscopic group. Due to the low rate of this event, a larger number of patients is needed to draw a firm conclusion as to the difference in the death rates between these 2 techniques.

We would be remiss if we did not acknowledge the fact that there are probably a few, or possibly, many deaths that are unreported subsequent to an unrecognized enterotomy during this procedure. There
are undoubtedly numerous surgeons with varying degrees of experience that have not reported their personal series in the literature. Therefore, the true rate of enterotomy and mortality probably exists at a higher level than this literature review reports. The results of this analysis should serve to provide the reader with a synopsis of the currently published data upon which to base surgical decision-making. Although careful technique will not avoid all complications, vigilance and early identification of unrecognized enterotomies will minimize fatal results.

A thorough review of the current literature has revealed that the occurrence of an injury to the intestine during laparoscopic incisional and ventral hernia stands at 1.78%. Should this occur, the hernia repair could be completed laparoscopically (or open) with the use of a prosthetic biomaterial. The use of an antimicrobial impregnated product and systemic antibiotics is recommended. The overall mortality of patients undergoing this procedure is 0.05%. If an enterotomy occurs, the mortality increases to 2.8%. A recognized enterotomy is associated with a mortality rate of 1.7%, but an unrecognized enterotomy is associated with a rate of 7.7%. As always, careful and skillful technique should be performed. Despite excellent surgical skill, vast experience, and careful dissection, laparoscopic incisional and ventral hernia repair carries with it the risk of morbidity and mortality.


Minimally Invasive Surgery Institute, Baton Rouge, Louisiana, USA (all authors).

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References
Available online through www.SLS.org

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**JOURNAL WATCH: OBG MANAGEMENT**

Major Vascular Injury During Laparoscopy: Pearls to Cope. Milad M. April 2008:62-68 • This surgical techniques article presents a case of “Trocar Insertion, Then a Bleed” in a 29-year-old multiparous patient undergoing diagnostic laparoscopy. Milad notes that gynecologic laparoscopy has a rate of major complication similar to that of laparotomy and a higher rate of major vascular injury. How to avert and handle this type of injury is further discussed with Milad detailing (including diagrams) the following 5 pearls:

(1) Pay attention to subtlety, starting at the preop visit; consider the patient’s height, weight, BMI, and surgical history.

(2) Don’t undervalue that ounce of prevention: select an entry technique wisely, tips to facilitate entry, no single trocar is fail-safe.

(3) Don’t be the king or queen of denial. A major vascular injury should immediately be suspected when a retroperitoneal hematoma or brisk bleeding is visualized.

(4) No man is an island. Get help when you need it.

(5) Identify, secure, and control the site of injury: laparoscopy is usually not an option, a vertical skin incision is best, control the bleeding, repair the laceration.

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**JOURNAL WATCH: OUTPATIENT SURGERY MAGAZINE**

A Better Way to Predict Operative Risk. Ahmad I. October 2007:98-100 • The author points out that the ASA Physical Status Classification System is being used in ways it was never intended including determining patient operative risk. In this anesthesia alert, Milad presents a simple scale based on clinical data as well as personal clinical experience. The scale comes from quantifying three categories of information from the patient’s chart and was applied to 5604 patients throughout 2006. Results of the study indicated that the scale is accurate.
Future Technology Session: The Edge of Innovation in Surgery, Space, and Business

Surgery in Space: NEEMO Mission
Presented by Timothy Broderick, MD

Astronaut-physicians are being trained for space travel by performing surgery in extreme environments. The more extreme environment increases the risk and severity of injury. Small animal surgeries are already being performed during space flight to validate whether surgery is possible in flight. Computer-based surgical simulation is being used also in micro-gravity surgery, which actually improves visualization, and robotic surgery in micro-gravity can be more stable than robotic surgery in earth’s gravity.

The Aquarius, the only underwater sea lab in the world, was developed to simulate the environment on the moon so that NASA extreme environment mission operations (NEEMO) could be undertaken. On one NEEMO mission, a physician in Canadian, directed surgery being performed on the underwater Aquarius.

NEEMO 7 tested how by using telehealth, a non-surgeon or nonphysician can do surgery with a telementor far away. A laparoscopic cholecystectomy was performed as well as if a physician had done it; however, vascular surgery was not. Telementoring facilitates expert care at distances. A problem is secondary latency, which can be overcome via technique and technology. NEEMO 7 demonstrated that surgeons perform surgery better than nonsurgeons do, and therefore, surgeons should be taken on missions into space.

NEEMO 9 looked at telemedicine and telesurgery. Simulated knee ultrasound and arthroscopy were successfully performed despite the lunar latency. Telementer, telementee, and communication protocols can overcome latency. Another NEEMO finding is that in vivo robots could improve care in extreme environments. Robotic telesurgery was demonstrated in the Aquarius with a physician in Canadian operating the robot underwater.

NEEMO XII used 2 robots to perform telesurgical ultrasound under the guidance of a Veress needle with the physician in Tennessee.

Keynote Address: Adaptive Innovation
Presented by John Kenagy, MD, MBA

John Kenagy, MD, a vascular surgeon broke his neck. “Despite the system, said Kenagy, “I had good outcomes.” The system got in the way; but, the good outcome was because of people going the extra mile. He is walking, talking, and has no impaired movements. However, he cannot practice surgery, so he went into management. He helps managers find solutions. It is important to understand that future success is based on one’s ability to adapt to a changing environment, said Kenagy. Current organizations will stall or block adaptive change. According to Clayton Christensen, it is almost impossible for established companies to be innovative. When an industry transforms, it starts at the low end, not the high end. But it is difficult for management leaders to make the leap from the high end to the low end. Toyota is so successful because it is “designed to adapt.” How can a company become adaptive? What is adaptive design? It is adaptive innovation and Toyota combined. First, establish an operational framework that fosters high performance and innovation focused on the patient. Second, eliminate ambiguity, assumptions, workarounds, and tradeoffs. Third, develop every person’s skills, knowledge, creativity, and problem-solving ability. Fourth, embrace the team. And fifth, make inquiries if things aren’t working smoothly. Key points to remember are the following: senior management must decide where it wants to be; realize that advice of experts is usually useless; discover the adaptive spectrum of opportunity; inventory what you’re doing and rebalance your opportunities; execute your intentions; and the role of management needs to be revitalized. Adaptive units always outperform others. “It is not the strongest who survive,” said Kenagy, “but the most adaptable.”

(continued on page 24)
The types of fetal surgeries being performed are growing. The first in utero surgery was bladder open fetal surgery for lower urinary tract obstruction (LUTO). Liver surgery has been performed, as has congenital high airway obstruction (CHAOS) surgery. PLUG, plug the lung until it grows, is a new method for treating congenital diaphragmatic hernias. A flexible endoscope is inserted in the mouth of the fetus, and a balloon is passed through the throat then expanded to open the lungs. The balloon is popped and the baby expels it. Congenital cystic adenomatoid malformation (of the lung) (CCAM) surgery is also being performed; however, sometimes the fetuses die before they heal. Sacrococcygeal teratoma, congenital germ cell tumor arising from the presacral area, surgery is being performed too, but it has a mortality rate of 30% to 50% because it is difficult to occlude vessels to prevent huge blood loss when the tumor is resected and it is hard to tell where the tumor ends and the fetus begins. Intrauterine therapy has also been performed for nonlethal disorders, such as spina bifida. The da Vinci robot has been used in the sheep model for intrauterine surgery, with all robotic surgeries being performed satisfactorily. Although fetal surgery is promising, it is not without problems. For example, all pregnancies need to be performed by cesarian delivery because of the port holes, the working space is small, it is difficult to work in a gas or liquid environment, fetal positioning, port size, and membrane damage.
CONFERENCE FEATURES
Sept 17, 2008 Six intensive half and full-day Master’s Classes including a special lunch lecture, How to Prepare for the Coming of Simulation Certification, and the Simulation Practice Center

Sept 18–19, 2008 Two new Multidisciplinary Plenary Sessions directed by those at the zenith of minimally invasive surgery: “Multidisciplinary Approach to Adhesions” and “Pay for Performance (P4P)”

Sept 18–19, 2008 Over 200 cutting edge scientific presentations including Laparoscopy Updates

Sept 18, 2008 New this year, two Specialty Break-out Concurrent Sessions on gynecology and urology specific topics will be featured: “Hysterectomy Debate: With or Without Removing the Cervix or Ovaries” and “Treatment Strategies for the Small Renal Mass”


Sept 20, 2008 Brace yourself for a vision of the future. Directed by Richard Satava, MD, and featuring an exciting keynote speaker, the Breakfast and Future Technology Session, “Beyond Human Control,” promises to inspire all interested in the future of the medicine.

ENDO EXPO 2008
Over 50 exhibitors will provide on-going presentations about not only the innovations of the year but also the latest ideas and technological developments to aid surgeons in the operating room

IMPORTANT DEADLINES
July 17, 2008 Online registration deadline for $100 SLS member discount
August 22, 2008 Last day to register at discounted room rates at the Hyatt Regency McCormick Place

VISA INFORMATION
International attendees, please apply for your visa now. If you need a written invitation, please visit www.SLS.org or email Conferences@SLS.org. Additional visa information is available at www.unitedstatesvisas.gov

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EMAIL: CONFERENCES@SLS.ORG

REGISTER ONLINE WWW.SLS.ORG
**Agenda-at-a-Glance**

**TUESDAY, SEPTEMBER 16, 2008**
3:00 pm – 6:00 pm  **MASTER’S CLASSES REGISTRATION**

**WEDNESDAY, SEPTEMBER 17, 2008 • Pre-Conference Master’s Classes**
7:00 am – 9:00 am  **MASTER’S CLASSES REGISTRATION** / Complimentary Coffee & Bakery Items  *Mark’s Classes Attendees Only*
9:00 am – 4:30 pm  **CONCURRENT MASTER’S CLASSES** *(See pages 27-28 for course descriptions)*
12:00 pm – 1:00 pm  Lunch for Master’s Class Attendees with Lecture: How to Prepare for the Coming of Simulation Certification
12:00 pm – 6:00 pm  **CONFERENCE REGISTRATION**
5:00 pm – 6:30 pm  **OPENING CEREMONY** Welcome, Presidential Address, Honorary Chair Presentations
6:30 pm – 8:30 pm  **SPECIAL EVENT: WELCOME RECEPTION AND OPENING OF EXHIBIT HALL**

**THURSDAY, SEPTEMBER 18, 2008 • Day 1 Annual Meeting and Endo Expo 2008**
6:30 am – 5:00 pm  **CONFERENCE REGISTRATION**
7:00 am – 2:00 pm  Exhibits Open
7:30 am – 4:30 pm  Poster Gallery Open
7:30 am – 8:30 am  **General Session Best of Laparoscopy Updates.** Key Laparoscopy Updates presented by SLS Specialty Interest Group Committee Members highlighting the newest developments and future expectations of surgical and diagnostic procedures.
8:30 am – 10:00 am  **Multidisciplinary Plenary Session (Gynecology, General Surgery, Urology)**  **MULTIDISCIPLINARY APPROACH TO ADHESIONS** *(See page 29 for description)*
10:00 am – 10:30 am  Refreshment Break / Visit Exhibits / Special Presentation by Exhibitor
10:30 am – 11:30 am  **Specialty Break-Out Concurrent Session (Gynecology)**  **HYSTERECTOMY DEBATE: WITH OR WITHOUT REMOVING THE CERVIX OR OVARIAN** *(See page 29 for description)*
10:30 am – 11:30 am  **Specialty Break-Out Concurrent Session (Urology)**  **TREATMENT STRATEGIES FOR THE SMALL RENAL MASS** *(See page 29 for description)*
11:30 am – 12:30 pm  **POSTER TOWNHALL: ORAL POSTER PRESENTATIONS**
12:30 pm – 1:45 pm  Complimentary Light Snacks and Refreshments Available in Exhibit Hall / Visit Exhibits / Special Presentations by Exhibitors
1:45 pm – 5:30 pm  **CONCURRENT SCIENTIFIC SESSIONS** Over 200 Scientific Presentations *(See pages 30-32 for preliminary listing)*
2:00 pm – 4:00 pm  Complimentary Coffee Available in Designated Areas
6:30 pm – 9:00 pm  **SPECIAL EVENT: SLS GROUP EVENT** at Adler Planetarium and Astronomy Museum with Featured Speaker Astronaut Dave R. Williams, MD  *(See page 28 for more about this special event. Ticket required)*

**FRIDAY, SEPTEMBER 19, 2008 • Day 2 Annual Meeting and Endo Expo 2008**
6:30 am – 5:00 pm  **CONFERENCE REGISTRATION**
7:00 am – 7:30 am  Complimentary Coffee and Bakery Items in Exhibit Hall / Special Presentation by Exhibitor
7:00 am – 2:00 pm  Exhibits Open
7:00 am – 4:30 pm  Poster Gallery Open
7:30 am – 8:30 am  **Multidisciplinary Plenary Session (Gynecology, General Surgery, Urology)**  **PAY FOR PERFORMANCE (P4P)** *(See page 29 for description)*
8:30 am – 11:30 am  **TWO LIVE TELESURGERIES** from Houston, Texas
10:30 am – 11:00 am  Complimentary Light Snacks and Refreshments Available in Exhibit Hall During Live TeleSurgery Session
11:30 am – 12:30 pm  Complimentary Light Snacks and Refreshments in Exhibit Hall / Visit Exhibits / Special Presentations by Exhibitors
12:00 pm – 12:30 pm  **New Product Presentations by Exhibitors in Exhibit Hall**
12:30 pm – 12:45 pm  **BEST POSTER AWARDS AND RESIDENT AWARD-WINNING PAPER PRESENTATIONS**
12:45 pm – 1:45 pm  **SPECIAL EVENT: EXCEL AWARD LECTURE AND PRESENTATION** *(Read more about the award and this year’s recipient, Harrith M. Hasson, MD on page 27)*
1:45 pm – 5:30 pm  **CONCURRENT SCIENTIFIC SESSIONS:** Over 200 Scientific Presentations including Laparoscopy Updates presented by SLS members and colleagues from around the world. *(See pages 30-32 for preliminary listing)*
2:00 pm – 4:00 pm  Refreshment Break Available in Designated Areas

**SATURDAY, SEPTEMBER 20, 2008 • Day 3 Annual Meeting and Endo Expo 2008**
7:00 am – 11:15 am  **CONFERENCE REGISTRATION**
7:30 am – 9:00 am  **SPECIAL EVENT: BREAKFAST WITH KEYNOTE SPEAKER** *(See pages 1 and 33 for more about this special event.)*
9:00 am – 10:30 am  **Future Technology Session BEYOND HUMAN CONTROL**
10:30 am – 10:45 am  Closing Ceremony and Passing of the Presidential Gavel
10:45 am – 11:15 am  **SLS Business Meeting** – All SLS Members are Encouraged to Attend
CONFERENCE EDUCATIONAL METHODS AND ATTENDEES OBJECTIVES

The 17th SLS Annual Meeting and Endo Expo 2008 employs a variety of educational formats including topical general sessions, the presentation of scientific papers, open forums, posters, and original videos offered in small specialty-specific breakout sessions, and informal gatherings of participants and expert faculty. The increasing complexity of minimally invasive diagnostics and therapy requires a continuous educational process. The exchange of knowledge and expertise among the physicians taking part in this conference contributes to the continuation of excellence in minimally invasive surgery.

Upon completion of the conference, participants will be able to:

- Increase comprehension of the basic and fundamental principles of laparoscopic, endoscopic, and minimally invasive techniques, enhancing the participant’s understanding of these techniques;
- Understand the recent advances in laparoscopic, endoscopic and minimally invasive techniques;
- Determine the appropriate use of laparoscopic, endoscopic and minimally invasive equipment as part of a treatment plan in the care of patients;
- Comprehend the developing technologies that will be available in the future to enhance the standard of patient care; and
- Acquire educational information within the physician’s specialty, which will enhance their professional development and patient care.

#1 Master’s Class in the Prevention and Management of Laparoscopic and Endoscopic Surgical Complications

9:00am-12:30pm

FACULTY
Raymond J. Lanzafame, MD, MBA, Director
Ceana Neshat, MD, Co-Director
Lawrence C. Biskin, MD
Carl J. Levinson, MD
Howard N. Winfield, MD

AGENDA
- Introduction / Disastrous Case
- Detailed Anatomy of Selected Anatomic Sites, Based on Audience Pre-course Questionnaire
- Case Videos and Discussions
- Selected Video Cases / Disasters / Highlights selected by Faculty
- Questions and Answers

#2 Master’s Class in New Insight in Treatment of Abdominal and Pelvic Pain for General Surgeons, Gynecologists, and Urologists - Jointly with the International Pelvic Pain Society (IPPS)

1:00pm-4:30pm

FACULTY
Harry Reich, MD, Director
Maurice K. Chung, MD, Co-Director
James F. Carter, MD
Fred Howard, MD
John E. Morrison, Jr., MD
Alfredo Nieves, MD

AGENDA
- Chronic Pelvic Pain Data of US Endometriosis, Adenomyosis, VVS, Medical and Surgical Treatment for VVS
- Examining CPP Patients
- GU-Interstitial Cystitis Dx and Tx New Insight in Treating CPP
- General Surgeons View Point of Abdominal Pelvic Pain Including Adhesion, Hernias, Bowel Obstruction.
- Pelvic Tension Myofascial Syndrome
- Trigger Point Injections, Back Mouse
- Pudendal Neuropathy and Neurology
- New Development in Diagnosing Pelvic Congestion Syndrome
- Surgical Treatment of Endometriosis

#3 Master’s Class Hands-On Course on Laparoscopic Suturing in the “Vertical Zone”

8:00am-4:30pm

FACULTY
Charles H. Koh, MD, Director
David M. Boruta, II, MD
Jeremy M. Carver, SA
Tommaso Falcone, MD
Keith Issacson, MD
John E. Morrison, Jr., MD

AGENDA
- Introduction, Orientation and Description of Lab Process
- Pre-Test: Intracorporeal Knot Tying.
- Lecture: Ergonomics, Theory, Construct Validity of the Vertical Zone Technique Intracorporeal Suturing with “Smiley” Needle Technique
- Lab I: Ipsilateral Suturing from the Right or Left Drills, Intracorporeal Suturing with “Smiley” Needle Technique.
- Lecture: Needle Introduction, Expert knotting, Continuous Suturing, Cinch Knot
- Lab II: Expert knotting, Continuous Suturing and Cinch Knot
- Lecture: Applications in Gynecology, Urology and General Surgery Including Managing Complications by Suturing
- Lab III: Review Expert knotting: Continuous Suturing and Knotting; Cinch Knot
- Post Test: Intracorporeal Knot Tying.

SPECIAL EVENT

Friday, Sept.19, 2008 / 12:45pm-1:45pm

Recipient: Harrith M. Hasson, MD, presents Evaluating Surgical Performance

Established in 1991, the Excel Award has been presented to 23 surgeons deemed by the SLS Advisory Board to have made outstanding contributions to laparoscopy, endoscopy, and minimally invasive surgery. These outstanding surgeons are from various specialties and various nationalities.

Dr Harrith Hasson received his Medical degree from Ein Shams University Cairo, Egypt. He completed his residency at St. John’s Episcopal Hospital, Brooklyn, New York. He also completed his OB/GYN residency at Presbyterian St. Lukes and West Suburban Hospitals in Chicago.

EXCEL AWARD PRESENTATION AND LECTURE

Dr. Hasson served as Chairman of OB/GYN at Grant Hospital in Chicago (currently Lincoln Park Hospital) from 1981-1995. Following his term at Grant Hospital, he served as Chairman at Weiss Hospital in Chicago from 1996-2003.

Dr Hasson served as Assistant Professor at Northwestern University, Associate Professor at Rush University, and Clinical Professor at University of Chicago. Currently he serves as voluntary Associate Professor at University of New Mexico. Dr Hasson has published and lectured extensively on intruterine contraception, laparoscopic surgery, and simulation. He currently serves on the editorial and advisory board of several Journals. He founded the Society for the Advancement of Contraception (SAC), and served as trustee and president of the AAGL and the SLS. Currently, Dr Hasson serves as the Immediate Past President of SLS.

Dr Hasson retired from practice in 2003 to devote his time to developing laparoscopic simulators and teaching. In 2004, he founded RealSim Systems, a company dedicated to developing laparoscopic surgical simulators. Dr Hasson holds 52 patents in medical devices and has developed the technique and instrumentation of open laparoscopy for which he received several awards. He is currently dedicated to replacing the current system of evaluating laparoscopic technical skills and operative performance on the basis of subjective evaluations with one based on objective measures and to enable doctors to achieve technical proficiency in laparoscopic surgery through simulation training. He currently writes, lectures on surgical simulation and assessment of core competency in laparoscopic surgery.
#4 Master’s Class on Robotic Laparoscopic Surgery Jointly with the Minimally Invasive Robotic Surgery Association (MIRA)
9:00am-4:30pm

FACULTY
William E. Kelley, Jr., MD, Director
Santiago Horgan, MD, Co-Director
Arnold Advincula, MD
Horacio Asbun, MD
Arnold Byer, MD
Elspeth M. McDougall, MD
Farr Nezhat, MD
Joseph Petelin, MD
Leela Prasad, MD
Richard M. Satava, MD
Gregory Zagaja, MD

AGENDA
• Telerobotic Foregut and Bariatric Surgery
• Telerobotic Colorectal Surgery
• Telerobotic Gyn Surgery: Benign Disease
• Telerobotic Gyn Surgery for Malignancy
• Telerobotic GU Surgery: Benign Disease
• Telerobotic GU Surgery for Malignancy
• MIRA Update
• Hands-on Simulation Lab for Robotics
• Telerobotic Pancreatosobiliary Surgery
• Telerobotic Vascular and Cardiac Surgery
• Mobile Teleconferencing with a Robot Over the Internet
• The Future of Surgical Robotics

Master’s Class Lunch with Lecture: How to Prepare for the Coming of Simulation Certification
12:00pm-1:00pm

FACULTY
Richard M. Satava, MD, Director
Robert Sweet, MD, Co-Director
Ajit Sachdeva, MD

#5 Master’s Class Multidisciplinary Approach to Gynecologic Endoscopic Surgery Jointly with the American Association of Gynecologic Laparoscopists (AAGL)
8:45am-4:30pm

FACULTY
Ceana Nezhat, MD, Director
Farr Nezhat, MD, Co-Director
Massaki Andou, MD, PhD
Tommaso Falcone, MD
Keith Isaacson, MD
Grace Janik, MD
William E. Kelley, Jr., MD
Charles Miller, MD
Camran Nezhat, MD
Harry Reich, MD
Howard M. Winfield, MD
Robert Zurawin, MD

AGENDA
• Intra- and Retroperitoneal Anatomy, Safe Abdominal Entry and Complications
• Office Hysteroscopy: Now and the Future
• GI Complications
• Total Hysterectomy For Severe Endometriosis, Why Supracervical Is Not the Best Choice
• Current and Prospective Anti-Adhesive Measures
• Endometriosis, Ovulation Induction, and Cancer: Is There Any Correlation?
• Simulation Lab
• Radical Surgery for Malignancy
• Update On Energy Sources, Tissue, and Vessel Sealing Devices
• New Technologies and Advancements of MIS in the Management of Myomas
• Endometriosis: Multi-Organ, Multidisciplinary—Bowel, Bladder, and Ureter
• Urologic Complications
• Pearls of Suturing: How to Become Efficient in 2 Hours
• Role of Future Technology and Robotics
• Video Session: to Do and Not to Do

#6 Master’s Class in Laparoscopic General Surgery Jointly with the Society of Gastrointestinal Endoscopic Surgeons (SAGES)
8:00am-4:30pm

FACULTY
Michael S. Kavic, MD, Director
W. Peter Geis, MD, Co-Director
Phillip P. Shaddock, MD, Co-Director
Paul G. Currence, II, MD
Morris Franklin, Jr., MD
B. Todd Heniford, MD
John Morrison, Jr., MD
Joseph Petelin, MD

AGENDA
• Maintenance of Competency: FLS
• Thriving in a General Surgery Practice
• Prosthetics in Hernia Repair
• Ventral Hernia Repair
• Single Access Port Surgery
• Gastroesophageal Procedures
• Colorectal Procedures
• Solid Organ Surgery
• Surgical Simulation Experience

SPECIAL EVENT
SLS EVENING WITH FACULTY AT ADLER PLANETARIUM AND ASTRONOMY MUSEUM
Thursday, Sept. 18, 2008
6:30pm-9:00pm
Special Guest Speaker: Dave R. Williams, MD
Join SLS in Exploring Space at the Adler Planetarium and Astronomy Museum with special guest speaker, astronaut Dave R. Williams, MD, directly from NASA. A veteran of two space flights, STS-90 in 1998 and STS-118 in 2007, Dave Williams has logged over 687 hours in space including 3 spacewalks (EVAs) totaling 17 hours and 47 minutes. He served as the manager of the Missions and Space Medicine Group within the Canadian Astronaut Program; and through his participation in the joint NASA-NOAA (National Oceanic and Atmospheric Administration) NEEMO 1 mission, Williams became the first Canadian to have lived and worked in space and in the ocean.
Max Adler founded the Adler Planetarium & Astronomy Museum in 1930, recognizing the complementary roles of a planetarium and astronomical artifacts. Adler purchased a collection of about 500 astronomical, navigational, and mathematical instruments from Anton Mensing in the Netherlands. Housed in the Adler’s Webster Institute for the History of Astronomy, the Scientific Instrument Collection contains about 2000 instruments and models from the 12th through the 20th centuries. It is the largest collection of such material in the Western Hemisphere and one of the most significant in the world.
Other featured exhibits will include the Solar System, Atwood Sphere, the Milky Way Galaxy and a new permanent exhibit Shoot for the Moon. This new permanent exhibition highlights the exciting stories of space exploration and America’s bold plans to return to the Moon. The exhibition begins with “A Journey with Jim Lovell,” featuring the fully-restored Gemini 12 spacecraft and the Lovell Collection of personal space artifacts.
After guests have enjoyed a tour of the exhibits, the group will adjourn to the Galileo’s Café for dinner with an unforgettable view of the Chicago skyline, and the keynote presentation.

28 LAPAROSCOPY TODAY
Multidisciplinary Approach to Adhesions
Thursday, September 18, 2008
8:30am-10:00am

Adhesion formation is part of the normal healing process and has been observed in 90-100% of all abdominal surgeries. Adhesions are a clinically relevant problem with the potential for significant morbidity for the patient. Postsurgical intraabdominal adhesions account for 70% of acute intestinal obstructions and are frequently responsible for chronic abdominal pain and infertility. Mechanical injury to the peritoneum, peritoneal ischemia, manipulation, exposure to foreign materials including powder, gloves and prosthetic materials; and inflammatory diseases and processes have been demonstrated to cause adhesions. This plenary session will discuss the etiology, biology, management and prevention of adhesions and their related complications from a multidisciplinary perspective and with emphasis on strategies for the minimally invasive surgeon. Current clinical approaches will be stressed and correlated with new solutions on the horizon from promising clinical and basic research. An interactive panel discussion with audience participation will conclude the session and highlight strategies for success.

FACULTY AND PRESENTATIONS
Raymond J. Lanzafame, MD, MBA, Director: Prosthetics, Synthetics and Biologicals: Notes from the Laboratory
Charles H. Koh, MD, Co-Director: Abdominal and Pelvic Adhesion, the GYN Perspective
Phillip Shadduck, MD: Adhesions in the Abdomen, the General Surgeon’s Dilemma
Kathleen Rodgers, MD: New Strategies in Prevention and Management of Adhesions: The Research Perspective

Pay for Performance (P4P)
Friday, September 19, 2008
7:30am-8:30am

Health Care has seen a growing emphasis on Quality, Safety and Performance in recent years. There have been efforts by healthcare groups like the AMA and The Institute of Medicine to define quality in health care as, “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes that are consistent with current professional knowledge.” The delivery of high quality care has been centered on health outcomes and the expectations of patients and other customers of healthcare. Quality, Safety and Performance are an integral part of the new culture of healthcare. Traditionally the blame has been placed on the individual for the lack of quality and safety that caused the error. The new culture of safety analyses systems that are conducive to poor quality; system failures are identified as opportunities to improve safety and quality.

Pay for performance systems link compensation to measures of work quality or goals. At the present time, Medicare pays providers for services delivered, regardless of the quality of care. Medicare has various pay-for-performance (P4P) initiatives in offices, clinics and hospitals, seeking to improve quality and avoid unnecessary health care costs. The Centers for Medicare and Medicaid Services (CMS) have several demonstration projects underway offering compensation for improvements. There is no question that Pay for Performance is here to stay. At the present time the government, health insurance companies and other private organizations are actively developing Pay for Performance models. It is important for Surgeons to learn and understand this system and its possible impact on their practice.

The new changes in healthcare have created financial pressures on hospitals. The previously lucrative surgical services are now facing financial challenges. The costs of materials and services continue to increase while the reimbursement for services has remained the same or in many cases has decreased. Many institutions have resorted to increase their volume of patients, while others tried to increase the number of lucrative cases. The institutions that have survived have implemented effective changes through improved processes to increase their efficiency and lower their costs.

FACULTY AND PRESENTATIONS
Gustavo Stringel, MD, Director: Safety, Quality and Improving Operating Room Performance
Raymond J. Lanzafame, MD, MBA, Co-Director: Financial Aspects of Surgical Care. Past, Present and Future
Alex Gandasas, MD: Pay for Performance and Transparency

GYN • Hysterectomy Debate: With or Without Removing the Cervix or Ovaries
Thursday, September 18, 2008
10:30am-11:30am

There have been controversies regarding advantages and disadvantages of Total Hysterectomy versus Subtotal or Supracervical Hysterectomies. Pros and cons of Total Laparoscopic Hysterectomy will be discussed by experienced surgeons. Preservation or removal of the ovaries at the time of hysterectomy has been challenged recently due to its possible advantages even after menopause. The risks and benefits of ovarian preservation will be discussed.

FACULTY AND PRESENTATIONS
Farr Nezhat, MD, Director: Oophorectomy at the Time of Hysterectomy: Pros & Cons
Tommaso Falcone, MD, Co-Director: Why Total Hysterectomy and Not Supracervical Hysterectomy?
Charles Miller, MD: Why Supracervical Hysterectomy and Not Total Hysterectomy?

URO • Treatment Strategies for the Small Renal Mass
Thursday, September 18, 2008
10:30am-11:30am

Laparoscopic Radical Nephrectomy remains the “new” gold standard for treatment of the renal mass, yet evidence exists for good outcomes with less invasive treatment strategies with smaller renal lesions. This session will present data for such alternative treatment strategies and will present progress on cutting-edge training strategies to help overcome the learning curve of advanced laparoscopic skills in renal surgery.

FACULTY AND PRESENTATIONS
Robert M. Sweet, MD, Director: Development of a VR Training Module for Lap Renal Skills
Kyle J. Anderson, MD, Co-Director: Radiofrequency Ablation
Arieh L. Shalhav, MD: Lap Partial Nephrectomy
Robert Uzzo, MD: Active Surveillance
Presented by SLS Special Interest Group Committees
Abdominal / Pelvic Pain / Adhesions: Ceana Nezhat, MD, Update to Adhesion Reduction
Bariatrics: Dana Portenier, MD
Core Competencies: Gustavo Stringel, MD, Core Competencies and the American Board of Surgery
Fibroids / Abdominal Uterine Bleeding: Herbert Goldfarb, MD, Laparoscopic Myomectomy Revisited
General Surgery: Tahar Benhidjeb, MD (NESA), Innovative Endoscopic Thyroid Surgery
Multidisciplinary: Michael Stark, MD (NESA), The Future of Abdominal Surgery: Natural Orifice Surgery
Office and Outpatient Laparoscopy: Duncan Turner, MD, Office Cosmetic Procedure
Pediatric: Thomas Landywa, MD, Pediatric Urology
John Meehan, MD, New Advances in Pediatric Minimally Invasive Surgery: the Only Thing that Wants to Be Changed is a Wet Baby
Robert Zurawin, MD, Pediatric Gynecology
Pelvic Reconstructive Surgery / Stress Incontinence: Maurice K. Chung, MD and Steve Minaglia, MD, The Use of Mesh for Stress Incontinence and Pelvic Floor Prolapse
Robotics: Andrew Wright, MD, New Developments in Robotic Surgery
Thoracic: Neil A. Christie, MD, Minimally Invasive Esophagomyotomy

Concurrent Scientific Sessions Thursday, Sept. 18, 2008 & Friday, Sept. 19, 2008
Over 200 Scientific Papers, Open Forum Presentations, Videos, and Posters will be presented by SLS members and colleagues from around the world. Preliminary Listing.

GENERAL SURGERY

Prospective Double Blind Randomized Control Study Evaluating the Outcomes of Laparoscopic Cholecystectomy Without Using Energy Source Performed by a Higher Surgical Trainee Versus Consultant, Brij B. Agarwal, MD, Dip in Yoga, FMISA
Single Port Transaxillary Endoscopic Excision of Benign Breast Lumps? Preliminary Results of a Prospective Study, Brij B. Agarwal, MD, Dip Yoga, FMISA
Stapled Hemorrhoidectomy as a Day Care Surgical Procedure in Indian Setup, Prem Narayan Agarwal Prof Dr Med
A Prospective Randomized Controlled Study for Effects of Practice of Yoga on the Patient Reported Outcomes in Day Care Minimally Invasive Surgery Practice, Sneh Agarwal Prof Dr Med
Sutureless Laparoscopic Ventral Hernia Repair in Obese Patients, Ebah El Akkary MD
The Best of Both Worlds: Open Incisional Hernia Repair with Laparoscopic Mesh Underlay, Ebah El Akkary MD
Effective Exercise Habits of the Formerly Obese, Ebah Akkary MD
Laparoscopic Approach for the Treatment of Huge Hiatus Hernia, Mohammad Akilani Dr Med
Study of the Pelvic Floor Muscles & Externus Anal Sphincter and Role of Laparoscopy in Rectal Prolapse, Mahmoud Badawi Prof Dr Med
Interactive Virtual Instructors Plus Virtual Reality Endoscopy Simulations Equals Real-Time, Curriculum-Based, Verbal and Haptic Feedback on Learner Performance, James G. Bitner MD
Face and Construct Validity of a Computer-Based Virtual Reality Simulator for Endoscopic Retrograde Cholangiopancreatography, James G. Bitner MD

Radiographic Diagnosis and Laparoscopic Repair of a Right Parauodenal Hernia: A Video Case Report and Review of the Literature, James G. Bitner IV MD
A New Technique for Totally Intracorporeal Laparoscopic Colorectal Anastomosis using Circular Stapler, Pascal Bucher MD
Single Midline Working Port for TEP Inguinal and Cural Hernia Repair, Pascal Bucher MD
A Call for Raised Awareness and Appropriate Treatment of Symptomatic Gallbladder Disease in the Pediatric Population, Kerrey B. Buser MD
Case Reports: Rock Candy and Spaghetti-O Gallstones; Abtypical Cholelithiasis Presentations, Undetectable by Ultrasound, Identified via Bile Aspirate Analysis, Kerrey B. Buser MD
Sleeve Gastroctomy in a Morbidly Obese Patient with Giant Parasphagephal Hernia, Brian Carmine MD
Prospective Trial to Compare Postoperative Complications and Length of Stay for Open versus Laparoscopic Methods of Enteric Perforation Repair, Jaddeep Singh Chahal MD
Can Harmonic Energy Technology Effectively Seal the Pancreatic Ducts and Prevent Pancreatic Leak? Feasibility Evaluation and Testing in a Survival Porcine Model, Ronald Scott Chamberlain MD
Clinical Dilemma: How to Deal With Rare Congential Gall Bladder Anomalies, Ahsaak Hussain Chandro MBBS, FRCS
Factors Influencing Successful Completion of Laparoscopic Cholecystectomy, Ahsaak Hussain Chandro MBBS, FRCS
Agenesis of Gall Bladder, Ahsaak Hussain Chandro MBBS, FRCS
Right Hepatic Duct Opens Into Cystic Duct, Ahsaak Hussain Chandro MBBS, FRCS
Laparoscopic Lumber Hernia Repair, Keyur A. Chavda MD
Minimal Invasive Approach of the Liver Hydatidosis, Dutta Ciprian MD PhD
Our Experience in the Laparoscopic Resection of Advanced Low Rectal Cancer with Intraoperative Radiotherapy, Ignazio Massimo Cimino Prof Dr Med
Critical Biloma Ten Years After Laparoscopic Cholecystectomy, Benjamin L. Clapp MD
Radiofrequency-assisted Liver Resection in Patients with Hepatocellular Carcinoma and Cirrhosis: Preliminary Results, Giuseppe Curb MD
The Relation of Reduction of Hemst Ring And Recurrence Rate in Laparoscopic Trans-Abdominal Pre-Peritoneal Inguinal Hernia Repair, Zanju Dnjovic MD
Laparoscopic Skill Acquisition from a Novel Simulator Curriculum is Independent of Video Gaming Experience and is Maintained After Training, Andrew J. Duffly MD
Transaxillary Endoscopic Perirenal Approach (TEPA) to Total Thyroidectomy, Trup D. Elia MD
Indications for Laparoscopic Sigmoid Resection and Coloanastomosis in Spinal Cord Injury Patients, Dan Eisenberg MD
Laparoscopic Repair of Post-cesarephagephal Hernial, Thomas Fabian MD
Key Points of the Arterial Vasculization of the Main Body - The Right Importance to a Correct Procedure in All Surgical Atlases, Josel M. M. Ferreira-Coelho Prof Dr Med
The Use of Bioabsorbable Suture line Reinforcement for Circular Stapler (BSG “Seamguard”) in Colorectal Surgery, Morris E. Franklin MD
Total Laparoscopic Right Hemicolectomy with Intra Corporal Anastomosis and Transvaginal Extraction of the Specimen, Morris E. Franklin MD
Low Anterior Resection With Total Mesorectal Excision: The Texas Endosurgery Institute Experience, Morris E. Franklin MD
Laparoscopic Right Hemicolectomy, 15 Years and 411 Patients, Morris E. Franklin MD
Laparoscopic Treatment of Achalasia, The Texas Endosurgery Institute Experience, Morris E. Franklin MD
Laparoscopic versus Robotic Assisted Laparoscopic Roux-en-Y Gastric Bypass: The Da Vinci Pro System Improves Outcomes?, Alberto S. Gallo MD
Robotic Assisted Laparoscopic Repair of Parasphephal Hernia with Mesh and Nissen Fundoplication, Carlos A. Galvan MD
Project REACH: Robotic Expertise Allowing Collaborate Help. A New Paradigm in Post Graduate Surgical Training, Alex Gandhas MD
Laparoscopic Total Colectomy for Polyposis and Ulcerative Colitis with ileorectal Anastomosis, Roberta Gemini Prof Dr Med
Single-Port Laparoscopic Colectomy (eNOTES): Ready for Primetime?, Dan Geisler MD
Laparoscopic Sigmoidectomy with Suture Receptor for Full-thickness Rectal Prolapse, Dan Geisler MD
Laparoscopic Proctosigmoidectomy with Vertical, Double-Stapled Anastomosis, Dan Geisler MD
Laparoscopic Total Proctocolectomy And Ileal-Pouch Anal Anastomosis, Dan Geisler MD
Laparoscopic ileocolostomy in Adult with Malignant ileocolic Intussusception, Dan Geisler MD
Short Term Outcomes after Simultaneous Laparoscopic Adjustable Gastric Banding and Hialt Hernia Repair, Maria V. Gorodner MD
Robotic Surgery Made Cost Efficient!, Monika Hagen Dr Med, MBA
Pure NOTES Repair of Umbilical Hernia in a Human Cadaver, Monika Hagen Dr Med, MBA
Validity Assessment of a Novel “Serious Game” to Train and Assess Laparoscopic Suturing, Usman Jaffer MB BS
Role of Ultrasonic Scalpel in Subfascial Endoscopic Perforator Surgery in Chronic Venous Insufficiency of Lower Limbs, Sukher Kumar Jain MD, FRCS, FRCS
Small Bowel Obstruction after Laparoscopic Roux-en-Y Gastric Bypass, Muhammad A. Jawad MD
Laparoscopic Reversal of Roux-en-Y Gastric Bypass, Muhammad A. Jawad MD
A Novel Technique for Laparoscopic Gastrostomy: A Simple, Safe, and Minimal Invasive Technique, Emad Kandil MD
Improvement of Serum Creatinine Levels in Type 2 Diabetics Following Roux-en-Y Gastric Bypass, Stephen R. Kerr MD
Repair of Hiatal Hernia and Reinforcement with Bovine Percirandium, Kenneth Phillip Kleinpetz MD
Nitinol Based Compression Anastomosis Devices - Is it the Optimal Anatomical Technology?, Doron Kopelman Prof Dr Med
Laparoscopic Nissen Fundoplication: a Correct Choice for GERD Treatment, Sebastiano Lacigliona MD
Laparoscopic Complications in Pancreatic Surgery, Sebastiano Lacigliona MD
RCT to Determine the Need for Prophylactic Antibiotics in Elective Laparoscopic Cholecystectomy, Jade Lee Dr Med
Laparoscopic Surgery in the Obstetric Patient: A Case Series of Thirteen Patients, Szczurek Linda DO
Laparoscopic Sleeve Gastrectomy versus Laparoscopic Roux-en-Y Gastric Bypass: a Case Series, Szczurek Linda DO
Laparoscopic Assisted Percutaneous Gastrostomy Tube Placement: Aidng An Old Technique, Gustavo Lopes DO
Laparoscopic Esophagomyotomy, Minh Loo MD
Minimally Invasive Colorectal Surgery, Minh Loo MD
Jejunal Erosion in Laparoscopic Adjustable Gastric Banding, Yohannes Mathewerok MD
Prognostic Significance Peritoneal Lavage and Laparoscopy in Patients with Gastrointestinal Malignancy, Simsa Makimovic MD PhD
Laparoscopic Cholecystectomy: Our Experiences After 2500 Patients, Simsa Makimovic MD PhD
Thoracoscopic Eculideation of Leptomiyoma, Jeremiah T. Martin MD
A Safe Technique: The Hand-Sewn Laparoscopic Roux-en-Y Gastric Bypass, Lisa H. Martin-Hawver MD
Superiority of Laparoscopic Resection Over Open Surgery for Rectal Cancer, Andre L. Moreira MD
NOTES Roux-en-Y Gastric Bypass in Human Cadavers, Philippe Morel Prof Dr Med
Total Robotic Roux-en-Y Gastric Bypass, Philippe Morel Prof Dr Med
Minimvasive Treatment of the Severe Acute Biliary Pancreatitis, Vincenzo Nerini Prof Dr Med
Thyromectomy by Thoracoscopic Approach: Experience and Outcomes, Vladimir N. Nikishov
Laparoscopic Approach in Abdominal Trauma, Francisco A. Obregon MD
Are Postoperative Doses of Prophylactic Antibiotics Necessary in Laparoscopic Bariatric Surgery?, Alexander Onischenko MD
Unusual Clinical Presentation of Visceral Perforation, Dhaval Patel MD
The Evaluation of Endoscopic Therapy in Acute Biliary Pancreatitis, Haifeng Peng MD
Laparoscopic Reversal of Hartmann’s Procedure, Solero E. Pirata MD
Laparoscopic Roux-en-Y Gastric Bypass in the Setting of Intestinal Malrotation, George A. Poulos DO
From NOTES to Minimally Invasive Surgery: Two Ports Sigmiodectomy, Francois Pugin MD
Laparoscopic Cholecystectomy in Cirrhotic Patients in Tertiary Care Hospital in Pakistan, Shakir Abdul Razzaque Prof Dr Med
Laparoscopic Inguinal Hernia Repair in Liver Transplant Patients-Single Center Experience, Manuel I. Rodriguez-Davallos MD
Laparoscopic Liver Resection: Our Initial Experience and Results, Manuel I. Rodriguez-Davallos MD
Single Incision Laparoscopic Heller Myotomy and Anterior Fundoplication, Shaanb A. Ross MD
Laparoscopic Management of Amyand’s Hernia, Rajinder Kaur Saggi MS FAGES
Laparoscopic Management of Adrenal Tumour, Sukhvinder Singh Saggi
Nerve Sparing TAPP Hemiplasty Feasible and Necessary?, Lukas Sailer MD PhD
Laparoscopic Type IV Hiatal Hernia Repair with Mesh, J. R. Sallamieh MD
Recurrent Incarcerated Suprapubic Incisional Hernia: Laparoscopic Management, Enric E. Salgado MD
Laparoscopic Treatment of Primary Omental Torsion: Case Report and Literature Review, Luis E. Salgado MD
Gallstone: a Stone Too Precious to Be Lost, Tushar Satish Samdani MS, DBN (General Surgery), MRCS
Balloon Retention Facilitates Laparoscopic Transgastric Cystgastostomy, Craig Swafford MD
Laparoscopic Surgery in Patient of Situs Inversus Totalis, Salem Mohammad Sved
Robotic Assisted Iliac Node Dissection for Melanoma, Vijay Tridal MD
Transgastric Endoscopic Bloodless Liver Resection Using Radiofrequency Thermal Energy, an Experimental Study, Konstantinos G. Tsatsis Prof Dr Med
Does Acute Cholecystitis Affect Conversion Rates in Laparoscopic Cholecystectomy?, Ali Uzunoy Prof Dr Med
Laparoscopic Evaluation for Bilateral Hernia in Children, Amir Vejdan Dr Med
The Laparoscopic Assisted Abdominopereitoneal Resection for Lower Rectal Cancer (LAPR) in our Experience, Pietro Venezia Prof Dr Med
Gastro-jejunal Stapling During Natural Orifice Transendoscopic Endoscopic Surgery (NOTES) in Human Cadavers: Material, Techniques and Stapler Modifications, Oliver J. Wagner MD
Unusual Presentation of Choledochal Cyst at the Age 87, Velupillai Wignakumar MD

GYNECOLOGY

Preoperative Parameters of Increased Surgical Risk in Patients with Endometriosis, Ilana B. Azizi MD, MPH
Laparoscopic Vascular Injury Repair, Masaki Andou MD PhD
A Case Report of CO2 Gas Embolism in the Laparoscopic Myomectomy, Yujiaki Asakawa MD PhD
Percut Model for Laparoscopic Salpingostomy and Salpingectomy, Amy Brouch MD
Her Option For Her, Jaswant S. Chadha MD
The Use of Bipolar Energy and Saline in Hysteroscopic Surgery; a Series of 65 Patients, Stefanos Chandakas MD MBA PhD
A Multicentered Series of 850 Daycase Laparoscopic Subtotal Hysterectomies in the UK and Greece: The New Approach to Hysterectomy, Stefanos Chandakas MD MBA PhD
A New Narrow Band Imaging Endoscopic System for the Detection of Surface Pathology including Endometriosis: A Series of 75 Patients, Stefanos Chandakas MD MBA PhD
A Randomized Controlled Study Comparing Two Standardized Closure Methods of Laparoscopic Port Sites, Kai Chen MD
Medico-legal Problems with Advanced Gynaecological Operative Endoscopy, Mark Erian MD
The Presence of Endometriosis Increases the Risk for Myofascial Pain and Pelvic Floor Tension Myalgia in Patients with Chronic Pelvic Pain, Bradford W. Fenton MD PhD
Myosis Revisited, Herbert A. Goldfarb MD
Laparoscopic Assisted Myomectomy Using Mobius Retractor, Herbert A. Goldfarb MD
Laparoscopic Myomectomy for Large Cervical Fibroids- Repair for the Lacerated Endocervical Mucosa, Tomomori Hada MD
Analysis of Operative Indication of TVH and LAH, Tang Jiaisong MD
Clinical Effects of Laparoscopic Collopressus with Round-Infundibulopericolic Ligament in High Grade Prostatectoma, Dong Ho Kim MD
Laparoscopic Collopressus with Round-Infundibulopericolic Ligament in Prostatectoma, Dong Ho Kim MD
Different Approaches to Identifying the Obturator Nerve During Laparoscopic Pelvic Lymphadenectomy, Connie Liu MD
23,600 Cases of Study on the Reforming Open Tropic First-Puncture in Multiple Centers, Haifang Liu MD
Treatment and Survival Analysis of Ovarian Cancer Discovered by Laparoscopy Unexpectedly, Jun Xiao Liu MD
The Effect of Two Kinds of Insufflator with Different Work Principles on Intra-abdominal Pressure of Patients During Gynecological Laparoscopic Operations, Yan Liu MD
The Prognosis of Surgical Treatment Using Laparoscopy in Patients with Endometrial Cancer-The Result of 15 Years’ Follow Up, Yan Liu MD
17,100 Cases of Study on the Modified Open Tropic First-Puncture in Multiple Centers, Yan Liu MD
Five Year Prospective Follow Up of the Results of Roller Ball Endometrial Ablation for Women with Menorrhagia, Atef Mansouni Associate Professor
Laparoscopic Management of Adnexal Tumors, Liselette Metller Prof Dr Med
Retrospective Analysis of Laparoscopic Myomectomy: 750 Cases, Mineto Morita MD
LTH Report for 150 Cases With No Complications with the RUMI System and Koh Cup, Manuel Mota MD
The Result of Laparoscopic Cure of the Ovary Endometriosis, Khuesn Narzuevka MD PhD
Comparison of Robot-Assisted Hysterectomy to Laparoscopic Assisted Hysterectomy, Cezna Nezhat MD
Consistent Outcomes of Laparoscopic Intrapelvic Paraotic Lymphadenectomy Support Incorporation into Fellowship Training Program Curricula, Far Nezhat MD
Robotic Assisted Total Pelvic Exenteration, Farr Nezhat MD
Robotic Assisted Ovarian Transposition and Pre-Treatment Surgical Staging in Cervical Cancer, Farr Nezhat MD
The Comparison of Postoperative Re-adhesion Formation After Previous Laparoscopic and Laparotomic Adhesiolyis for Stage IV Endometriosis, Sung-Tack Oh MD PhD
Comparison of Laparoscopic-assisted Vaginal Hysterectomy with Traditional Hysterectomy in Ombilbarian Hospital (2005 Jan-2007 Dec), Monirae Pourjavadi Professor in OB/GYN
Outcomes of Retropitoneal Uterine Artery Ligation During Laparoscopic Hysterectomy: a Retrospective Review of 419 Cases, Ruchi Pun MD
Comparative Evaluation of Tubal Sterilization by Two Methods: Laparoscopy-flush Clips and Minilaparotomy Pomeroy Technique, Nafisah Saghafl Prof Dr Med

GENERAL INFORMATION

CONFERENCE FEES
REGISTRATION DEADLINE: SEPTEMBER 3, 2008
SLS PHYSICIAN MEMBERS REGISTER ONLINE BY JULY 17, 2008 AND SAVE $100

Conference $995
Also includes admission to exhibit hall, welcome reception, 1 ticket to breakfast with keynote speaker, and future technology session

MASTER’S CLASSES
1 half-day class $195
2 half-day classes $295
1 full day class $295

SCHOLARSHIPS TO ANNUAL MEETING
Residents, Fellows-in-Training, Nurses, and Affiliated Medical Personnel are eligible for a $300 scholarship towards the full Conference Registration fee. For details, visit www.SLS.org

ACCREDITATION

The Society of Laparoendoscopic Surgeons (SLS) is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

DESIGNATION

The SLS designates this educational activity for a maximum of 26 AMA PRA Category 1 Credit(s)™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Half-Day Master’s Classes: 3 credits
Full-Day Master’s Classes: 6 credits
17th SLS Annual Meeting, 3 days: 20 credits

Endometrial Ablation for the Treatment of Dysfunctional Uterine Bleeding Using Hysteroscopic Resectoscope, Nafisah Saghafl Prof Dr Med
Scarless (Microlaparoscopic) Prophylactic Oophorectomy with NOTES Technique, Tamer Seckin MD
Profile of Lupron Use in the Community Setting for Pelvic Pain, Sangeeta Srinath MD
Laparoscopic Resection of Cervical Stump, Jonathan Y. Song MD
Laparoscopic Approach for the Large Cervical Leiomyoma, Jonathan Y. Song MD
Laparoscopic Tubal Anastomosis, Jonathan Y. Song MD
Vulvar Hematoma Following Laparoscopic Ovarian Cystectomy?, Mehrnaz Validan Prof Dr Med
Full Thickness Bladder Endometriosis. Bloodless Excision Using Ultracision, Johannes J. van Beek MD MBA
Clinical Comparison of Classic Infrasacral Seem Hysterectomy and Laparoendoscopically Assisted Vaginal Hysterectomy, Shuangqin Wang MD
Fertilecopic Ovarian Drilling: Review of 160 Cases, Antoine A. Watrelot Prof Dr Med
A Case of Recurrent Laryngeal Nerve Paralysis After Laparoscopic Surgery, Takashi Yamaoda MD PhD

ULROLOGY

Robotic Repair of Access-Related Aortic Injury, Ronny Abaza MD
Comparison of Open and Laparoscopic Nephroureterectomies for Managing Upper Urinary Tract Transitional Cell Carcinoma, Muhammad Z. Aslam MRCs
Transperitoneal Pure Laparoscopic Partial Nephrectomy: Previous Abdominal Surgery is not a Contraindication, William J. Badger MD
Laparoscopic Management of Coexisting Calycetal Diverticulum and Pericystic Cyst, William Badger MD

Video Demonstration of Robotic and Laparoscopic Partial Nephrectomy Without Vascular Clamping and Renal Ischemia, Carl Bischoff MD

Comparison of Vascular Clipping and Stapling Techniques for Renal Artery Occlusion During Hand-Assisted Laparoscopic Donor Nephrectomy, James G. Bittner MD

Buttressed, Double-Armed, Crossed Horizontal Mattress Suture Closure After Partial Nephrectomy: A Novel Modification Using Cadaveric Pericardium (with Video), James G. Bittner MD

Comparison of Vascular Clipping and Stapling Techniques for Renal Artery Occlusion During Hand-Assisted Laparoscopic Donor Nephrectomy, James G. Bittner IV MD

Is Sutured Repair Necessary During Laparoscopic Partial Nephrectomy?, Matthew Christman MD

Laparoscopic Versus Percutaneous Renal Cystablation: Single Center Experience and Intermediate-Term Outcomes, Ilhaar H. Derweesh MD

Can Laparoscopic Pyeloplasty Be Considered “Gold Standard” in the Treatment of Ureteral-Felvic Junction Obstruction?, Mario Falsaperla MD

Laparoscopic Ablative Renal Surgery Using Single Kind of Hem-o-Lok Clips for Global Vascular Control, Mario Falsaperla MD

Robotic Pelvic Lymph Node Dissection in Patients Undergoing Radical Cystectomy for Bladder Cancer, Aldrin Joseph R. Gamboa MD

Robotic-Assisted Laparoscopic Radical Cystectomy For Bladder Cancer: An Analysis of Perioperative Surgical Outcomes, Aldrin Joseph R. Gamboa MD

A Case Control Analysis of Robotic-assisted Laparoscopic Varicocelectomy, Josephine Halago-Tamola MD

Are the Complications of PCNL High? (Report of 2800 Cases in Two Referral Training Centers), Mohammad Mehdi Hosseini Prof Dr Med

Comparison of Complete Intracorporeal Construction of an Ileum Neobladder Utilizing Standard Sutured Techniques and Novel Techniques, Gregory W. Hruby BA

Laparoscopic Uretoureterostomy for a Retrocaval Ureter, Hak J. Lee MD

Outcomes of a Robotic Training Program for Community-Based Urologists and Fellows, Hossein Mirheyrad BS

3-Dimensional Visualization During Conventional Laparoscopic and Robotic-Assisted Surgery: a Look Into The Future?, Ravi Munver MD

Does Age Affect the Safety and Efficacy of Lithium Triborate (LBO) Laser Photoselective Vaporization Prostatectomy (PVP)?, Jay B. Page MD

Lithium Triborate (LBO) Laser Photoselective Vaporization Prostatectomy (PVP) for Large Volume Benign Prostatic Hyperplasia (BPH), Jay B. Page MD

Robotic and Laparoscopic Partial Nephrectomy without Vascular Clamping and Renal Ischemia, Sijo J. Parekkattil MD

Decreasing Operative Time with Doppler Identification of Crossing Vessels During Robotic and Laparoscopic Pyeloplasty, Sijo J. Parekkattil MD

Oncologic Significance of Pathologic T2 Positive Surgical Margin in Robotic-Assisted Laparoscopic Prostatectomy, Zamp Patel MD

Early Oncologic Outcomes after Robotic Assisted Laparoscopic Radical Prostatectomy by Dr’Amico Risk Stratification, Zamp Patel MD

The Effect of Erthroprotein on Ischemic Damage in the Canine Kidney, Courtney K. Phillips MD

Intraintestinal Variations in Robotic Prostatectomy Pathologic Outcomes for a Single Surgeon and Team, David Samadi MD

Extending the Robotic Prostatectomy Learning Curve Beyond 750 Cases with a Single Surgical Team, David Samadi MD

Long-term Impact of a Laparoscopic Renal Surgery Mini-Residency on Post Graduate Urologic Practice Patterns, Rosanne Santos BS

Long-term Impact of a Robotic Assisted Laparoscopic Prostatectomy Mini-Residency Training Program on Post-Graduate Urologic Practice Patterns, Rosanne Santos BS

Efficacy and Safety of the Vivostat System for Hemostasis in Laparoscopic Partial Nephrectomy, Luigi Scipio Prof Dr Med

Laparoscopic Adrenalectomy: Anatomic and Technical Considerations, Amanjot Singh Sethi MD

Hand-Assisted and Pure Laparoscopic Nephrectomy: A Quantitative Comparison of Outcomes, Jonathan Silberstein MD

Case-Control Analysis of Pediatric Robotic Pyeloplasty and the Impact of Mechanical Failures, Matthew D. Sorensen MD

Initiation of a Pediatric Robotic Surgery Program and a Case-Control Analysis of Pediatric Ureteral Reimplantation, Matthew D. Sorensen MD

Catheter Free Lithium Triborate (LBO) Laser Photoselective Vaporization Prostatectomy (PVP), Massimilano Spaliviero MD

Efficiency of Lithium Triborate (LBO) Laser Photoselective Vaporization Prostatectomy (PVP): Kinetic Performance Study, Massimilano Spaliviero MD

Does Lithium Triborate (LBO) Laser Photoselective Vaporization Prostatectomy (PVP) Affect Sexual Function?, Massimilano Spaliviero MD

Randomized Prospective Evaluation of the Effect of Patient Positioning on Surgical Outcomes During Laparoscopic Renal and Adrenal Surgery, Chandru P. Sundaram MD

Radiofrequency Ablation of Small Renal Tumor: 2-year Follow-up, Gyung-Tak Sung MD PhD

Short-term Outcomes of Laparoscopic Radical Cystectomy with Extracorporeal Ileal Conduit, Gyung-Tak Sung MD MBA

Towards a VR Laparoscopic Trainer for Nephrectomy: A Unique Collaboration Between the AUJA, Academia and Industry, Robert M. Sweet MD

Robotic-Assisted Laparoscopic Radical Prostatectomy for High Risk Prostate Cancer: Initial Experience And Short-term Outcomes, Jayant Uberoi MD

Decreased Efficiency of Lithium Triborate (LBO) Laser Photoselective Vaporization Prostatectomy (PVP) With Long-Term Sa-Reductase Inhibition Therapy: Is It True?, Carson Wong MD

120 W Lithium Triborate (LBO) Laser Photoselective Vaporization Prostatectomy (PVP) For Symptomatic Benign Prostatic Hyperplasia (BPH), Carson Wong MD

Predispection and Implementation Strategies in Laparoscopic Education, Saleem Zafar MD

Experimental Control of Renovascular Injuries During Laparoscopic Nephrectomy, Saleem Zafar MD

MULTISPECIALTY

Laparoscopic Repair of a Diaphragmatic Injury, Karayocakshu Jacqueline Aluka MD

Laparoscopic Ultra-radical Parametrectomy (Piver type 5), Masakazu Andou MD PhD

A Practical Guide to Teaching Residents Laparoscopic Surgery, Joy Brotherton MD

Cesarean Delivery Increases the Risk for Development of Interstitial Cystitis but not Other Chronic Pelvic Pain Related Diagnoses, Bradford W. Fenton MD PhD

Severe Hypoglycemia After Gastric Bypass, Case Report and Review of Literature, Gloria Henao MD

The New Theory of Carcinogenesis - The Theory of Gene Multiple HIts, Xu Han-You DO

Content and Face Validity of a Cost-Effective Personal Laparoscopic Trainer Designed for at Home Use, Gregory W. Hruby BA

Comparative Study of Single versus Double-Lumen Endotracheal Tube Anesthesia for Needleless Biob Resection, Hyun Koo Kim MD PhD

Hip Arthroscopy for Femoroacetabular Impingement in the Athlete, Dean Matsua MD

Minimally Invasive Surgery Group: Cutting Edge Goes a Cut Above, Dean Matsua MD

Face and Content Validation of a Novel Robotic Virtual Reality Simulation, Amanjot Singh Sethi MD

A Comparison of Conventional and Second Generation Articulating Laparoscopic Instruments, Chandru S. Sandaram MD

Natural Orifice Surgery from the Middle of The World, Daniel A. Tan MD

Multidisciplinary Utilization Patterns of Robotic Technology at an Institution with 6 Da Vinci Surgical Systems: the Impact of Robotic-Assisted Surgery on Surgical Subspecialties, Jayant Uberoi MD

Endoscopic Lithotripsy, Joseph Wyatt MD

Cystoscopic Removal of Transvesical Sling with Holmium Laser, Joseph Wyatt MD

Laparoscopic Excision of Urachal Cyst, Robert G. Yavrouian MD

SPECIAL EVENT: SPouse / GUEST TOUR

A DAY OF MEMORIZING ARCHITECTURAL CHICAGO HISTORY

Friday, September 19, 2008 9:30am-4:00pm

This tour will begin traveling the streets of Chicago towards the Frank Lloyd Wright Museum and Studio located in Oak Park. This extraordinary building was the Wright family residence from 1889 to 1909. Wright began the construction of this house in 1889 shortly after his marriage to Catherine Tobin. The Wright family — Frank and Catherine, and their six children lived here while he developed his architectural practice, creating what became the " Prairie Style" of architecture. The studio annex was completed in 1889, and is one of the most marvelous spaces to be imagined! The reception area, the octagonal designed hanging lights in the drafting room; the presentation library; and much more. After this tour guest will be dropped off at a local Chicago restaurant for a leisurely lunch and then off to First Lady Cruises Chicago’s Architecture Tour. This tour on the river will showcase Chicago’s world renowned city architecture with style, class and comfort aboard an open air and air-conditioned seated ship. You will learn about the architecture and design of over 50 buildings with CAF certified docents/guides. Register online or download and print the PDF registration form and fax to Conferences at 306.667.4123. Do not miss out on a day of mesmerizing architectural Chicago History.
DESTINATION: CHICAGO, ILLINOIS

Chicago is one of the greatest cities in the world. With its beautiful lakefront, incredible architecture and cosmopolitan culture, Chicago attracts millions from around the globe every year. In fact, more people visit Chicago for business than any other destination in the United States. Chicago has been called America’s Best City for Dining. It’s 5,500 restaurants feature everything from prime steakhouses to famous deep-dish pizza and every imaginable ethnic cuisine. The Magnificent Mile, one of the world’s great shopping boulevards, is just steps from downtown hotels, as are chic shops on Oak Street and the historic department stores on State Street. Over 8.5 million visitors enjoy Navy Pier every year, making it the city’s most popular attraction. From Broadway musicals to award-winning drama to hilarious improvisational comedy, Chicago’s 200 theaters offer something for everyone. Incredible live blues and jazz, plus eclectic clubs all over town.

Visit www.choosechicago.com for information on tours, sites, shopping, etc. in the city of Chicago.

ACCOMMODATIONS AND TRAVEL

Hyatt Regency McCormick Place
2233 S. Martin L. King Drive
Chicago, Illinois 60616, USA
Tel: +1-312-567-1234
Fax: +1-312-528-4000
Visit the following online reservation site exclusively for SLS conference attendees: http://mccormick-place.hyatt.com/groupbooking/chiccilap2008

Make your reservations early...

The Hyatt Regency McCormick Place rises 33 stories adjacent to the McCormick Place convention complex. This contemporary hotel welcomes business travelers and conventioners attending numerous events. An enclosed pedestrian skybridge links the hotel to the McCormick Place convention complex. The Hyatt hotel is just a mile from Soldier Field, home of the NFL Chicago Bears, two miles from Downtown Chicago and provides complimentary daily shuttle service to nearby attractions such as Navy Pier, the Magnificent Mile, and several famous museums.

In addition to a staffed business center, the hotel offers 24-hour Internet office with high-speed Internet access. Wireless Internet access is available in public areas. Self-service kiosks in the lobby allow guests to print their boarding passes and check in and out with ease. TV monitors display conference events and times.

Other amenities such as the on-site health club includes a 24-hour fitness center, an indoor lap pool with outdoor sundek, and a sauna. Dining options include a Chicago-style grill and a casual Italian trattoria. A café serves Starbucks coffee, freshly baked pastries, and other fare, while a lounge offers a small-plates menu and signature cocktails.

Hotel Daily Rates: Single / Double $171.00; Triple $242.00; Quads $267.00

These rates are subject to appropriate state, local and occupancy taxes and do not include meals. The SLS room block will be released after August 22, 2008. After this date, rooms will be on a space available basis only at the hotel’s prevailing rates. Conference rates are applicable 3 days before and 1 day after the conference based on availability. In order to qualify for the special rate, you must make reservations by August 22, 2008, and mention that you are attending the “SLS Conference.” Please make reservations early!

FOR NEGOTIATED AIRLINE DISCOUNT RATES contact Steve at The Store For Travel, toll free at 1.800.284.2538. Outside the United States call 305.251.6331. E-mail: so@stt.webmail.com. Please be sure to mention you are attending the SLS conference in Chicago, Illinois.

For those attending the conference who require special assistance (accessibility, dietary, etc.), please contact SLS no later than August 22, 2008, with special requests.

AIRPORTS

Chicago O’Hare International Airport is 17 miles from downtown, and about 45 minutes from the Hyatt.

10000 West O’Hare
Chicago, Illinois 60666
Tel: 773.686.2200
Website: www.ohare.com

Midway Airport is 10 miles from downtown, and about 30 minutes from the Hyatt.

5700 S. Cicero Ave
Chicago, Illinois 60638
Tel: 773.838.0600
Website: www.chicago-mdw.com

For local transportation options, including airport shuttles and taxis, link to the conferences webpage from www.SLS.org.

CANCELLATION POLICY

Full registration fees are refundable if registrant cancels before August 13, 2008. An administrative fee of $150.00 will be deducted from fees for cancellations postmarked on or after August 13, 2008 through August 22, 2008. Refund requests will not be considered after this date, including visa denial refunds. All requests for refunds must be made in writing and received by SLS, attention Flor Tilden, by the appropriate dates. Refunds will be processed within 6 to 8 weeks after the conference.

EXHIBIT HALL EVENTS

WELCOME RECEPTION. Kick off the conference at an informal reception open to all registrants in the Exhibit Hall. Meet old and new friends, and get a preliminary look at the technical exhibits.

SLS CYBER CAFÉ. While away, stay in touch. Check your E-mail, surf the Net, participate in an educational program, or go wireless at the SLS WiFi station. Educational programs will be scheduled throughout the day.

TOP GUN LAPAROSCOPY SHOOT OUT. It’s High Noon—Are You Ready for a Shoot Out? See who’s fastest on the draw-or stitch-in this entertaining, but challenging, training exercise in the use of the non-dominant hand in minimally invasive surgical procedures. Presented by James C. “Butch” Rosser, Jr., MD

SLS INNOVATIONS OF THE YEAR. Come see what and how many new devices have been developed over the past year. The SLS Innovations of the Year will be recognized at the 17th SLS Annual Meeting and Endo Expo 2008. It is not necessary for a company to exhibit or advertise to be eligible for this recognition. SLS encourages all commercial entities to enter their most innovative product for consideration. Contact SLS for details: Tel 305.665.9959, Toll free phone 1.800.446.2659, Fax 305.667.4123, Conferences@SLS.org.

NEW PRODUCT PRESENTATIONS BY EXHIBITORS. New Product Presentations by Exhibitors. SLS invites all exhibitors to share information about new products, technology, and developments during the New Product Presentation Session. Exhibitors who submit new product information will be allowed a one-minute presentation during the mid-day break, Friday, September 19, 2008. Note: each exhibitor will be allowed to present only one product that must have been developed within the past year. Contact SLS for details: Tel 305.665.9959, Toll free 1.800.446.2659, Fax 305.667.4123, Conferences@SLS.org.

SPECIAL PRESENTATIONS BY EXHIBITORS. SLS is pleased to offer this unique opportunity for exhibitors to make a presentation of their choice in the SLS Cyber Café Auditorium, a setting of approximately 30 seats in the central part of the exhibit hall. For more information on this opportunity, visit www.SLS.org or send an email to Exhibit@SLS.org.

SPECIAL EVENT: BREAKFAST AND FUTURE TECHNOLOGY SESSION

BEYOND HUMAN CONTROLS

Saturday, September 20, 2008
7:30am-10:30am
Richard M. Satava, MD, Director
Keynote Speaker Leigh R. Hochberg, MD, PhD, presents Brain-Computer Interfaces: Frontiers in Restorative Neurotechnology
Orlando Portale presents Simulated Reality: Exploring the Virtual Hospital of the Future
Kit Parker, MD, presents Intracellular Surgery—the Next Surgical Frontier

Beyond Human Control. Brace yourself for a vision of the future. Directed by Richard Satava, MD, and featuring an exciting keynote speaker, this session promises to inspire all interested in the future of the medicine.

Tickets are required for accompanying guests. See Registration Form.
DAVOL now offers a hernia mesh combined with a proven absorbable barrier to minimize tissue attachment to the mesh. The absorbable layer is built on a foundation of proven Sepra adhesion barrier technology, supported by 11 years of clinically demonstrated success. Bard Sepramesh IP Composite merges a polypropylene mesh with a hydrogel safety coating, resulting in a permeable hernia repair. Contact Davol, www.davol.com

ARAGON SURGICAL’s LapCap was created to assist with Veress needle insertion in order to avoid multiple insertion attempts, preventing retroperitoneal vascular injuries. After LapCap is placed over the abdomen, the device suction port is used to pull the abdominal wall into its dome through which a 12 or 15 cm needle may be inserted for the creation of pneumoperitoneum. Contact Aragon Surgical, www.aragonSurgical.com

BUFFALO FILTER’s LapEvac is designed to help reduce the risks associated with poor surgical vision, loss of distension, associated with harmful surgical smoke and aerosols. It’s the world’s first disposable, battery powered smoke evacuator that creates a constant closed loop flow to filter and re-circulate gas within the peritoneal cavity. Contact Buffalo Filter, www.buffaloFilter.com

MEGADYNE has introduced a line of reusable suction coagulators with a larger, ergonomic handle to maximize comfort, efficiency, safety and ease of use. MEGADYNE’s suction coagulators are available in French sizes, 8, 10 and 12 and are fully insulated. Hand-controlled versions have a tactile switch. Additional features include easy-to-bend cannula, finger-controlled suction vent, universal suction port that holds 1/4 in or 3/16 inch tubing, and safety holster that complies with AORN electro-surgery safety specifications. Contact MEGADYNE, www.megadyne.com

To help further ease the hand fatigue experienced by many surgeons during electrosurgery procedures, Immersion Medical has added several new modules to its LaparoscopyVR Surgical Simulation System, which features TouchSense haptic hardware and software for realistic tactile feedback and graphical movement of tissue. The Ob/Gyn module includes simulation of ectopic surgical intervention, tubal occlusion, and salpingo-oophorectomy. A Running the Bowel module trains procedural skills commonly needed during trauma, general, OB/Gyn, bariatric, and colon-rectal surgery. CathLabVR for virtual minimally invasive coronary valve replacement provides practice in navigation through the femoral artery or apex of the left ventricle, and use of fluoroscopy, cineangiography, and contrast injection. Suturing and knot tying procedures and needle orientation and driving skills training have also been added. Contact Immersion Medical, www.immersion.com

JLJ Medical Devices Int’l, LLC provides the SeeClear MAX patented laparoscopic smoke evacuation filter system. The device is designed to provide continuous, automatic clearance of smoke and bioaerosols without loss of pneumoperitoneum (no suction is required); maintain visual clarity; and prevent exposure to surgical plume. The SeeClear Max may also reduce procedure time. Contact JLJ Medical Devices Int’l, www.jjmmedicaldevices.com

The Multi-channel Instrument Guide (MIG), produced by LAPSURGICAL, is a J-shaped three-lumen laparoscopic introducer tool that protects and guides the choledochoscope into the cystic duct or CBD during LCBDE. The intrinsic stiffness and adjustable tip angle are designed to be ideal for trans-cystic duct procedures. Working channels provide additional irrigation and instrumentation for choledochotomy. Contact LapSurgical, www.LapSurgical.com

B-K Medical’s 8666 laparoscopic transducer works for a wide range of procedures. The ability to utilize the transducer’s 4-way flexible head in or rigid mode with the New No-Flex attachment, coupled with our integrated biopsy guide, and compatibility with both Steris and Sterrad make this an exceptionally versatile laparoscopic transducer. Contact BK Medical Systems, Inc., www.BKMed.com
WEBSURG.com offers something new for the minimally invasive surgeon every month. So far this year, over 33 new videos have been included; and to assist with better understanding, videos are now being provided with scripts. Two technical chapters, 8 lectures—one recorded as presented live during the NOTES course, and an expert interview with Dr. Gomel. In addition to all this new content, a completely new format, a series of clinical case presentations, debuted in April. Join EATS and gain access to exclusive NOTES content for EATS members.

GOTBARIATRICJOBS.com Go here for the latest bariatric news and positions. Sign up to have details (including sound bites) sent straight to your inbox.

MODERNMEDICINE.com is a one-stop information source for the Advanstar Communications collection of publications including Urology Times, Contemporary Ob/Gyn, Medical Economics, and Drug Topics as well as several other healthcare publications. Use the “Resource Centers” to find all of the publisher's articles in your specialty. Link to free CME resources.

IPEG.org Final program and abstract book for the International Pediatric Endosurgery Group 17th Annual Congress for Endosurgery in Children is available for download.

MEDGADGET.com, the internet journal of emerging medical technologies, is archived by specialty as well as date. Search the archives for news in your area of interest.

OBGYN.net gives site visitors news, interviews, and presentations from the latest ObGyn events as well as tools such as educational tutorials, a conference calendar, and links to the health news headlines. Currently featured in the Laparoscopy and Hysteroscopy section is a video tutorial, "Introduction to Office and Operative Hysteroscopy," a course presented at the AAGL 16th Annual Comprehensive Workshop on Gynecologic Endoscopy for Residents and Fellows.

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www.SLS.org

PAUL ALAN WETTER, MD

The 2 newest features at www.SLS.org (also, www.Laparoscopy.org) are the Scholarly Laparoscopy Search Page and an enhanced Virtual Exhibit Hall.

In case you haven't checked them out, the SLS websites are filled with rich information—info when you need, wherever you need it! For instance, you can use your computer or even your web access cell phone or PDA to read articles using RSS.

Site contents are readily available with open access information from journals, textbooks, and meetings. A quick review gives you the latest pulse on topics from current sources in an easy to use search format, using the powerful Google search engine that is built into the site. Check the SLS sites for information on the hottest topics or search JSLS online for articles pertaining to your research.

The “one-click” Scholarly Laparoscopy Search page makes it easy for you to get the latest info on your topic of choice. This search option has been enhanced to provide a comprehensive search of SLS publications and meeting materials regarding a specific topic.

The freshly remodeled Virtual Exhibit Hall puts information about manufacturers and equipment at your fingertips.

Take the website for a test drive, and let us know what you think!

Here is more about these and other powerful SLS website features.

• The new SLS Scholarly Laparoscopy Search Web Page – providing a simple way to search for information and literature on a wide range of MIS topics. From this page, you can search across many sources by using the subset of MIS search topics by specialty.

• An RSS feed as a key distribution channel to allow one to track the latest and most valuable MIS information and access it using a PDA or cell phone. Go to www.whatisrss.com to learn more about RSS.

• New search engines powered by Google and IngentaConnect for universally accessible and useful information gathering from a variety of medical sources, including journals, textbooks, conferences, forums and blogs.

• Open access downloads of our publications: Journal of the Society of Laparoendoscopic Surgeons and Laparoscopy Today.

• Open access to the SLS Guide: Writing Effectively for MIS Journal Publication, a must read for those interested in publishing.
### Events Presented by the Society of Laparoendoscopic Surgeons

**September 17-20, 2008** 17th SLS Annual Meeting and Endo Expo 2008.  
Hyatt Regency McCormick Place.  
Chicago, Illinois, USA

**February 11-14, 2009** EuroAmerican MultiSpecialty Summit IV Laparoscopy and Minimally Invasive Surgery.  
Disney’s Contemporary Resort.  
Orlando, Florida, USA

**September 9-12, 2009** 18th SLS Annual Meeting and Endo Expo 2009.  
Westin Copley Place.  
Boston, Massachusetts, USA

**February 10-13, 2010** AsianAmerican MultiSpecialty Summit IV Laparoscopy and Minimally Invasive Surgery.  
Hilton Hawaiian Village Beach Resort and Spa.  
Honolulu, Hawaii, USA

### July 2008

**June 30-July 4** Guatemala Congress 2008/ VIII Latin American Congress of Endoscopic Surgery / XI Central America & Panama Surgery Congress / XXXV Guatemalan Surgery Congress. ALACE. FECCAP. Guatemala City, Guatemala

**September 2008**

3-6 AAGL International Congress on Minimally Invasive Gynecology in conjunction with V SOBENGE Brazilian Congress “Endometriosis: Individualized Therapies and Strategies for Prevention.” AAGL and SOBENGE. Rio de Janeiro, Brazil

5-6 ELSA 2008 in conjunction with 11th World Congress of Endoscopic Surgery and 21st Annual Meeting of Japan Society for Endoscopic Surgery. Endoscopic and Laparoscopic Surgeons of Asia (ELSA). Yokohama, Japan

8-11 18th World Congress of IASG. International Association of Surgeons, Gastroenterologists, and Oncologists. Istanbul, Turkey

14-17 XXI Biennial Congress of the International Society of University Colon & Rectal Surgeons. ISUCRS. San Diego, California, USA

17-20 17th SLS Annual Meeting and Endo Expo 2008. Society of Laparoendoscopic Surgeons. Chicago, Illinois, USA

### October 2008

2-5 9th Asian Congress of Urology of the Urological Association of Asia. Urological Association of India. New Delhi, India

9-11 17th ESGE Annual Congress. European Society for Gynaecological Endoscopy. Amsterdam, The Netherlands

9-11 9th Annual Congress of the Asia-Pacific Association of Gynecologic Endoscopy & Minimally Invasive Therapy. APAGE. Seoul, Korea

12-16 ACS 94th Annual Congress. American College of Surgeons. San Francisco, California, USA

16-18 Advanced Course: Videosurgery in Pediatric Urology. IRCAD/EITS. Strasbourg, France

22-25 71st Annual Colon and Rectal Surgery Conference. University of Minnesota Division of Colon and Rectal Surgery. Minneapolis, Minnesota, USA

### November 2008

29-Nov 1 Global Congress of Minimally Invasive Gynecology/AAGL 37th Annual Meeting. American Association of Gynecologic Laparoscopists. AAGL. Las Vegas, Nevada, USA

### December 2008

1-5 Intensive Course in Laparoscopic Surgery (Urological Surgery). IRCAD/EITS. Strasbourg, France

8-12 Intensive Course in Laparoscopic Surgery (General Surgery). IRCAD/EITS. Strasbourg, France

15-17 Advanced Course: Advanced Techniques in Operative Gynecological Endoscopy. IRCAD/EITS. Strasbourg, France

### Journal Watch: Surg Endosc

Natural-orifice Transgastric Endoscopic Peritoneoscopy in Humans: Initial Clinical Trial. Haze JW et al. 2008;22:16-20 • To investigate the feasibility and develop needed techniques and technology for NOTES, the authors conducted a study performing transgastric diagnostic peritoneoscopy. Ten patients underwent diagnostic laparoscopic evaluation of a pancreatic mass, and the findings were recorded by anatomical abdominal quadrant. A second surgeon, blinded to the initial results then performed transgastric peritoneoscopy. Diagnostic findings between the two methods were compared, and the authors concluded that transgastric diagnostic peritoneoscopy is safe and feasible.
What the laparoscopist next door is reading. Or should be.

Are you getting the macro view on minimally invasive? The publications of the Society of Laparoendoscopic Surgeons provide essential multidisciplinary perspective and a far richer cross-reference of experiential knowledge than a single-specialty organization can provide.

Your SLS membership includes our peer-reviewed quarterly, JSLS, Journal of the Society of Laparoendoscopic Surgeons, featuring the latest scientific findings. Plus the semiannual Laparoscopy Today, a forum for the exchange of timely product information, application techniques and ideas from leading experts in minimally invasive therapies.

You’ll also get discounts on our definitive reference volume, Prevention and Management of Laparoendoscopic Surgical Complications, 2nd Edition, and special member savings when you register for our CME programs and massively-informative SLS Annual Meeting & Endo Expo and AsianAmerican and EuroAmerican Multispecialty Summits.

No matter how you slice it, SLS membership can help you slice it … better.

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