

MINIMALLY INVASIVE SURGERY CURRICULUM
SURGERY SIMULATION CENTER
DEPARTMENT OF SURGERY
UNIVERSITY OF MISSISSIPPI MEDICAL CENTER
2004-2005

I- DIDACTIC SESSIONS

1- “LAPAROSCOPY 101”

This is a Laparoscopic Surgery Overview for PGY-I residents. It consists of didactic self-study modules on CD-ROM with Internet-based exam to be completed by March 31, 2005. Residents should log on www.residenteducation.com and sign on using their assigned User ID and Password to complete the test. User IDs and Passwords will be emailed to each resident. CD-ROMs should be returned to the Simulation Center when test is completed.

An additional copy of Laparoscopy 101 is available on a loaner basis to PGY II-V residents who wish to go over it. Residents can obtain the CD-ROM from Susan Gray in the Simulation Center. They do not need to take the on-line test.

2- SELF STUDY CURRICULUM

Residents are expected to review the indications, work-up and technique of certain procedures using the web-based resources as well as the textbook and video library available in the Surgery Simulation Center.

- All residents are strongly encouraged to sign up (free) on www.websurg.com and use this valuable web-based resource.
- A number of textbooks are available in the Center; all of the topics below can be found in “Mastery of Endoscopic and Laparoscopic Surgery” (Eubanks, LWW 1999) and “Surgical Laparoscopy” (Zucker, LWW 2000). In addition, “The Sages Manual: Fundamentals of Laparoscopy and GI Endoscopy” (Scott-Conner, Springer Verlag 1999) is a good quick reference and individual copies are given to all new residents through the book fund.
- All residents are required to turn in, to Susan Gray in the Simulation Center, one relevant article relating to each topic assigned to them along with a Literature Article Analysis Form. All articles and forms are due by the end of the academic year and can be submitted anytime, with at least three turned in by March 31, 2005.

These are the assigned topics:

PGY-II:

- Laparoscopic Appendectomy
- Laparoscopic Cholecystectomy

PGY-III:

- Laparoscopic Ventral Hernia Repair
- Laparoscopic Inguinal Hernia Repair

PGY-IV:

- Laparoscopic Fundoplication
- Laparoscopic Splenectomy
- Laparoscopic Common Bile Duct Exploration

PGY-V:

- Laparoscopic Heller Myotomy
- Laparoscopic Colectomy
- Laparoscopic Gastric Bypass

II- LAPAROSCOPY SIMULATION

The Simulation training is competency driven. Although the residents have to complete a certain minimum based on their training level, they have the option of proceeding to more advanced steps as dictated by their competency and motivation.

On the LapSim, each resident can practice at his own pace using the Quick Start menu. However, they are required to sign in using their Logon/Password and complete the training sessions assigned to them and the exam by March 31st, 2005.

- Logon: Last Name and First initial (All CAP)
- Password: Last Initial and Last Four of SSN



On the Pelvic Trainer, each resident is required to go over the “Art of Laparoscopic Suturing” CD-ROM and review the “Top Gun” drills assigned to them, then practice these drills, working on improving their time and decreasing their errors. Working in teams of two is required for many of these drills.

PGY-I: LapSim[®]: Camera Navigation, Instrument Navigation, Coordination
 Top Gun: Cobra rope, Terrible Triangle, Bean Drop

PGY-II: LapSim[®]: Grasping, Lifting and grasping, Cutting
 Top Gun: Terrible Triangle, Bean Drop, Suturing

PGY-III: LapSim®: Lifting and grasping, Cutting, Clip Applying, Suturing
Top Gun: Suturing

PGY-IV: LapSim®: Lifting and grasping, Clip Applying, Suturing
Dry Lab: Suturing

PGY-V: LapSim®: - None -
Top Gun: Suturing

COMPETITION:

PGY I: Date: April 6, 2005*
Prize: Laparoscopic Surgery Textbook

PGY II - IV: Date: May 11, 2005*
Prize: SAGES Meeting, April 26 - 29, 2006, Dallas, TX

PGY V: Prize: Chief Resident SLS Laparoscopy Award

** Dates are not final and are subject to change.*

III- ENDOSCOPY SIMULATION

All PGY1-3 residents are required to go successfully through a specific curriculum assigned to them on the AccuTouch® Endoscopy Simulator.

This system includes three types of endoscopic procedures: Flexible Bronchoscopy and Flexible Sigmoidoscopy / Colonoscopy. The Upper GI endoscopy is not currently available and may be added in the future.



Residents can log in to the Simulator using their User Names and Passwords as in using the other components in the Simulation Center.

BEFORE USING THE ENDOSCOPY SIMULATOR FOR THE FIRST TIME, each resident MUST be oriented to its proper use by the staff.

- Colonoscopy Simulation Training

Colonoscopy Simulation Training is performed while at the VA Medical Center and is a requirement for first and second year residents; upper level residents are certainly strongly encouraged to also make use of the simulator although it is not mandatory.

- First-year residents will be required to complete the flexible sigmoidoscopy and colonoscopy introductory cases on the simulator and each resident's performance on the most difficult introductory case will be evaluated by the staff.
- Second-year residents will be expected to complete the biopsy/polypectomy cases and each resident's performance on the final polypectomy case will be evaluated by the staff.

- Flexible Bronchoscopy Simulation Training

Flexible Bronchoscopy Simulation Training is performed while on the Trauma / SICU service. Instruction in the use of the bronchoscopy simulator will be under the direction of Drs. Timberlake and Toevs.

- First-year residents should become adept at the orienting modules. Goals consist of establishing left and right orientation and visiting and naming every pulmonary segment. There are several simulations for the orienting module and they should complete all of them satisfactorily by the end of the rotation.
- Second-year residents should complete the above module as well as the Bronchio-Alveolar Lavage (BAL) module satisfactorily by the end of the rotation.
- Third-year residents should complete the endobronchial sampling (allows brushings), difficult pediatric airways and transbronchial biopsies modules in addition to the above modules. These modules should be satisfactorily completed by the end of the rotation.

IV- LABORATORY

The laboratory sessions are 4 hours long (Thursday 8am to 12pm) and the residents scheduled for these labs are excused from clinical duties for the duration of the lab. The sessions will usually take place in the Basement level of the James D. Hardy Clinical Sciences Building. Announcements of the laboratory sessions will be sent out one month ahead of time and a detailed schedule of the didactic and hands-on portions will follow.

PGY-I:

Inanimate Lab:
- June 28th -

Open Suturing and Knot Tying
Stapling Instruments and Techniques

PGY-II:

Animal Lab (2 Pigs):
- *October 21st* -

Laparoscopic Cholecystectomy
Laparoscopic Appendectomy
Laparoscopic Ventral Hernia Repair

PGY-III:

Animal Lab (2 Pigs):
- *February 17th* -

Laparoscopic Nissen Fundoplication
Laparoscopic Adrenalectomy/Nephrectomy

PGY-IV:

Animal Lab (2 Pigs):
- *April 21st* -

Laparoscopic Roux-en-Y Gastric Bypass
Laparoscopic Colectomy

PGY-V:

Animal Lab (2 Pigs):
- *November 4th* -

Laparoscopic Heller Myotomy
Laparoscopic Partial Fundoplication (Toupet and Dor)
