

SimPraxis[™] Laparoscopic Cholecystectomy Trainer

The SimPraxis™ Laparoscopic Cholecystectomy Trainer is a revolutionary cognitive interactive simulation software program that runs on a personal computer. It is robust and intuitive to use. It is also an elegant and very engaging way to learn. Each learner is able to assimilate the material at his or her own pace.

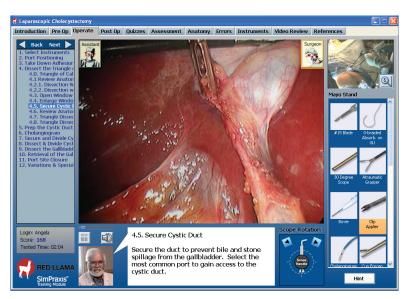
The Trainer uses the PC-based SimPraxis interactive simulation software platform. It focuses on surgical concepts and specific surgical procedures of a laparoscopic cholecystectomy to significantly advance the knowledge and competency of medical students, residents, surgeons, and medical staff. It provides just-in-time training and rehearsal opportunities on the detailed steps performed and critical judgements made during the procedure.

The key elements of this curriculum are:

- Roles of the surgeon & assistant
- Procedural steps of laparoscopic cholecystectomy
- Port and instrument management
- Critical anatomy
- Risks for error, injury, & complications
- Tracking & scoring for Assessment

The entire laparoscopic cholecystectomy procedure is divided into 35 logical, interactive steps. At each step the learner must make critical choices and key cognitive decisions:

- 1. Decide if the surgeon or assistant controls the step
- 2. Choose the appropriate instrument



- 3. Select the appropriate port
- 4. Identify the key anatomic structures
- 5. Indicate the proper point of action

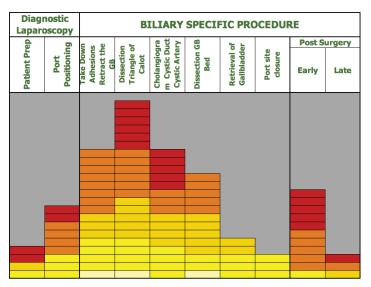
All of the surgical steps are interactive and illustrated with internal and external video clips from an actual procedure. Along with the high definition videos, audio and written descriptions, prompts, hints, quizzes, reference material and a chance to review each step are provided to improve performance and increase the rate of learning.

Utilizing this Trainer will significantly enhance the confidence, capability and efficiency of the surgical team in performing a laparoscopic cholecystectomy. Specifically, it provides the cognitive training necessary for surgeons to be knowledgeable and conversant regarding the procedural steps; instrument and port choices; important anatomic structures; and risks at each phase of a laparoscopic cholecystectomy. Students and surgeons will find this a challenging and captivating way to learn and it will revolutionize your didactic process.

Additional Features of the Trainer

Risks of Errors & Complications

Anatomy and the risks of error, injury or complications are reviewed during each step and phase of the procedure. A new and unique Laparoscopic Cholecystectomy Risks Table was developed to enhance and expand the learning process. The Table links potential errors, injuries, and complica-



tions to the individual steps of a laparoscopic cholecystectomy. Dialog and commentary about the significant risks and methods for avoiding and mitigating such errors, is provided. A comprehensive review is provided in a dedicated Tab of the Trainer as well.

To reinforce these critical cognitive lessons the Learner will:

- 1. Interactively review the key anatomic structures at appropriate steps
- 2. Review the risks, injuries, and complications associated with each step
- 3. Receive constructive mentoring each time anatomy errors occur

Assessment

All actions and decisions made in the Trainer are captured for complete formative tracking and sum-

mative scoring. Comprehensive tracking and scoring is critical to any successful and meaningful assessment. This allows the learner to measure his or her progress and provide focus for specific areas that can benefit from additional review within the Laparoscopic Cholecystectomy Trainer, within the medical literature, and discussion with their mentors. A number of standard and custom reports are available.

Further, this cognitive Trainer and the Sim-Praxis platform are designed so they can be integrated with medical curricula, other simulation technologies, and learning management systems. The SimPraxis platform has been developed using open industry standards.

Summary	
Score	1750
Maximum possible score	2040
Completed steps	of 59
Time so far	4:04:02
Tested time	3:13:24
Total number of errors and deviations	17
Instrument selection deviations	0
Procedure errors	1
Instrument use deviations	3
Location deviations	6
Actor deviations	1
Other deviations	3
Multiple choice errors	0
Anatomy identification errors	3
Serious anatomy identification errors	5%
Hints	4
Version number	1.0.2830.27108
User	Garrison Davis

With successful completion of this cognitive training, the learners are now ready to focus on building their technical skills. We believe that the SimPraxis Laparoscopic Cholecystectomy Trainer will also be an invaluable adjunct to ongoing training and preparation for clinical practice as surgeons move through their medical career.

