



Better surgical training means safer, more capable surgeons. With clinically proven impact on OR performance, fully customizable curriculum and the industry's highest quality system and service, LapSim is the unmatched leader in virtual reality laparoscopic training.

TARGETED, EFFICIENT TRAINING

The only VR system with published validation of skill transference to the OR, LapSim is also the only VR system that offers a fully customizable curriculum, allowing for thousands of unique challenges and increasing levels of difficulty. LapSim also offers the opportunity to hone in on the critical procedural elements most in need of practice, making the most of valuable training time. The system's unique assessment and performance metrics provide the opportunity for real-time onscreen cues and off-site review.

QUALITY & SERVICE

With LapSim, you're getting the best technology possible, plus the industry's only true partnership. From day one through the life of the simulator, our simulation specialists will assist in everything from set up to curriculum customization to research.

ONGOING INNOVATION

Surgical Science is committed to keeping LapSim on the leading edge. We are the only company to guarantee annual updates with significant module additions and improvements. These updates are at no additional cost through our industry leading warranty program.

LAPSIM 2015 FEATURES

LapSim is more powerful and easier to use than ever. Our latest annual update features rich upgrades to curriculum

design, metrics, instruments and system functionality, more than 50 new courses and so much more.

CORE UPDATES:

- Easier Course Administration Group courses in your own curricula, set the order in which they are presented to trainees, and customize training within courses.
- Enhanced Metrics Application Easily and quickly implement default metrics across all exercises.
- New Instruments Atraumatic graspers, Maryland graspers and other new instruments are now available in several existing exercises.
- Improved Realism Many new tasks and procedures now feature improved collisions and fewer fly-throughs.
- Additional Courses Access more than 50 new courses in the LapSim default library, all with PGY1-5 classification.



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Q+



Prepare. Practice. Perfect.

CUSTOMIZED COURSEWORK. DYNAMIC ASSESSMENT.

High-performance laparoscopic skills come only with repetition. With LapSim, techniques and complete procedures can be practiced again and again at increasing levels of difficulty, with thousands of new challenges, scenarios and complications to make each experience unique. Each exercise is digitally recorded with detailed metrics, statistics and video debriefing, providing both immediate and long-term skill development feedback.

THE LAPSIM SYSTEM

The LapSim System includes a Haptic or Non-Haptic hardware platform with LapCam, a separate laparoscope; Basic Skills, Task Training and Camera Anatomy Training software modules; all necessary computer and monitor hardware; and a height-adjustable rolling SimStation to house the system.



LAPSIM HAPTIC SYSTEM he haptic system was recently awarded the prestigious 2015 Gold if Design Award

LAPSIM NON-HAPTIC SYSTEM

LAPSIM CORE SOFTWARE MODULES

BASIC SKILLS



















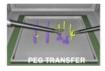






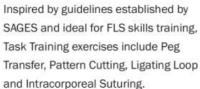
The LapSim Basic Skills software module includes 13 exercises: Camera Navigation, Instrument Navigation, Coordination, Grasping, Cutting, Catheter Insertion, Clip Applying, Lifting & Grasping, Bowel Handling, Fine Dissection, Seal & Cut, Suturing, and Precision & Speed.

TASK TRAINING









CAMERA ANATOMY TRAINING





Camera Anatomy Training modules focus on teaching camera handling with straight and angled optics within a virtual anatomy.

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Beyond the Basics.

LapSim's suite of validated, fully customizable procedure modules provides a complete training solution for surgeons across multiple disciplines. With clearly defined learning objectives, procedural deconstruction capabilities and endless variations and challenges, LapSim's library of software modules provides surgeons with unparalleled access to skill practice essential to building surgical proficiency.

ADDITIONAL LAPSIM SOFTWARE MODULES

CHOLECYSTECTOMY





Featuring SimPraxis™, an integrated cognitive skills trainer, this module simulates each procedural step, from clipping the cystic duct to removing the gall bladder.

APPENDECTOMY





Featuring CaseNetwork®, an integrated cognitive skills trainer for the diagnosis and management, this module simulates various approaches to appendectomy including loop technique, single and dual stapling techniques and optional stapling techniques.

BARIATRICS







Features procedural deconstruction. Includes simulations of four training tasks: lap-band suturing, jejunal suturing, inspect and measure the bowel.

NEPHRECTOMY





Features procedural deconstruction. Simulates three training tasks, including: camera management, kidney dissection, and kidney clipping.

GYNECOLOGY







Includes cutting edge simulations of four procedures: Tubal occlusion, Salpingectomy, Salpingostomy and Myoma suturing.

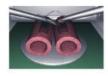






HYSTERECTOMY - Featuring SimPraxis™, an integrated cognitive skills trainer, this module includes right and left uterine artery dissection, vaginal cuff opening, and suturing of the cuff after removal of the uterus.

SUTURING & ANASTOMOSIS







Features a progressively complex, stepwise approach to suturing and knot tying techniques.

SIMULATION INDUSTRY FIRST!

VIDEO-ASSISTED THORACOSCOPIC SURGERY (VATS) LOBECTOMY







Simulates all key steps of the removal of the upper right lung lobe using a three-port anterior approach.

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LapSim[®] Virtual Training. Proven Results.

Proven More Cost-effective than Conventional Training.

According to the Annals of Surgery, "training on VR simulators [is] more costeffective than conventional residency training ... for residency programs with more than 10 trainees."

*Annals of Surgery, Volume 255, Number 5, May 2012

LapSim Return on Investment = 3.2 years*

Updates & Support: Keeping You on the Cutting Edge.

A big part of delivering on our commitment to advancing the field of medical simulation training is making sure our software is constantly evolving, improving and available to our users without any hassle.

That's why we take full responsibility for keeping LapSim up-to-date with the most current software version available. Subscribers to our Update & Support agreement receive substantial upgrades at least once a year, including improved software and new training simulations.

The illustration below shows some of the updates released in the last five years.

2012

More than 50 new features

New Hysterectomy module

· Touch screen functionality added

· New Basic Skills exercise

· Redesigned graphical use

interface

2013

New Basic Skills exercise:

Additional video recording

storage and save options

· Directly import students from

module

Excel files

New LapSim

Haptic System



2014

· New: Bariatrics module now s

to Lap-band Suturing. Catheter Insertion · New: Nephrectomy module Improved Appendectomy now includes 2 new exercises: Kidney Dissection and Kidney New instrument choices in Combined, in addition to Kidney **Bowel Handling**

Clipping. New: Survey function allows instructor ability to create and insert customizable questionnaire to any course for

Jejunal Suturing, Inspect Bowel,

and Measure Bowel in addition

students/trainees · Improved: Results page now shows a clearer view of results, to add comments with the



2015

· Easier Course administration: Group courses in your own curricula, set the order in which they are presented to trainees, and customize training within courses.



- · New: Easily & Quickly implement default metrics across all exercises
- · New Instruments; Atraumatic graspers, Maryland graspers and other new instruments are now available in several existing exercises.
- more than 50 new courses in the LapSim default library, all with PGY1-5 classification.

 Additional scope angle option of 45°

More realistic features

and images

2011

· Better dynamics in all Gynecology exercises

New features in Admin login

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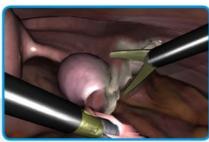




Proven Skill Transference from VR to OR.

LapSim is the only virtual training system proven to improve OR performance. In fact, multiple randomized published studies have demonstrated that the skills practiced during both short–term and long-term training with LapSim are directly transferable to the operating room.

VR TRAINING LEADS TO FEWER ERRORS AND OPERATING TIMES



Picture from the Salpingectomy procedure in LapSim.

Watch the video at: http://www.youtube.com/surgicalscience

CLINICAL STUDY: "Effect of virtual reality training on laparoscopic surgery: randomized controlled trial"

Published in BMJ 2009; 338:b1802 (e-publication, May 14, 2009)

RESULTS: After 6 hours of virtual reality-based LapSim training, the performance level of novices increased to that of a laparoscopist with 20-50 case experiences and halved the time needed to complete the procedure.

VR WARM-UP IMPROVES OR PERFORMANCE



Picture from the Cholecystectomy procedure in LapSim.

Watch the video at: http://www.youtube.com/surgicalscience

CLINICAL STUDY: "Warm-up in a virtual reality environment improves performance in the operating room"

Published in Annals of Surgery, June 2010

RESULTS: Brief (15 minute), pre-surgical warm-up on LapSim significantly improved the performance of surgeons conducting a laparoscopic cholecystectomy in the OR, leading to improved procedural outcomes, improved patient safety and better utilization of OR resources.

surgicalscience

Surgical Science is the unmatched global leader in medical simulation training, offering the industry's highest quality and most innovative virtual reality surgical education platforms. Our mission is to provide validated, targeted and efficient training in the most true-to-patient scenarios possible.

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