Simulation in laparoscopic skills

LapVision

The **LapVision** simulator has been designed for surgeons and a wide range of medical specialists to safely learn, refine and retain laparoscopic skills. From basic to advanced levels of operation, LapVision provides a comprehensive educational platform that tests technical skills in a variety of surgical scenarios. Complete with a library of educational modules of common laparoscopic procedures, LapVision can be easily integrated into any surgical curriculum or training program.

Line them up in your simulation centre then wheel them away when not in use!

- Convenient all-in-one structure
- Adjustable workspace height
- Plug and play
- Mobile

LapVision Standard

Instrument Simulation

- Realistic, wireless instruments that resemble their real counterparts
- Magnetic haptic feedback with true-to-life tissue resistance
- Zero delay tracking

Virtual OR

- 3D Anatomy Atlas
- Video hints, step-by-step instructions and video courses
- Complications and pathologies
- Free mode of operation
- Videos from real surgeries

Educational Features

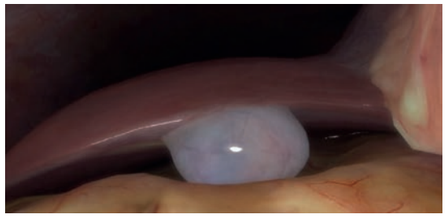
- Individual user profiles
- Detailed automatic registration of all actions performed during exercises
- Course for basic skills training
- Additional suturing modules
- Extensive library of modules
- Screenshots and video recording
- Additional training modules can be added at anytime

LapVision SMART

The compact design and portable nature of LapVision SMART makes it the perfect solution not just for simulation centres but also workshops and seminars. Simply place it on the table and begin!

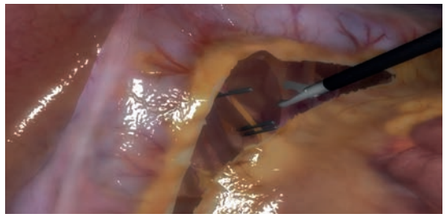
- Easy to set-up
- Expandable with additional virtual trocars – up to five in total

Library of Laparoscopic Modules



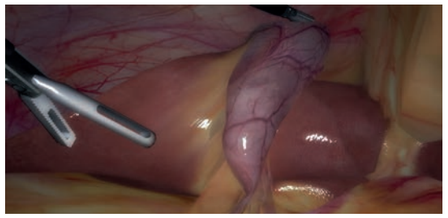
Important skills in laparoscopic cholecystectomy

- Traction and dissection of the peritoneum
- Dissection of structures in Calot's triangle
- Clipping and cutting of cystic artery and cystic duct
- Mobilisation of the gall bladder



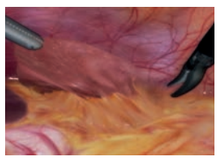
Sigmoid colon resection

- Cutting vessels, mobilisation and intersection of the sigmoid colon
- Anastomosis

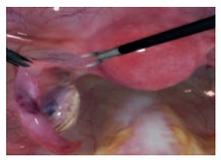


Full procedure of laparoscopic cholecystectomy

- Planned cholecystectomy with acute catarrhal cholecystitis
- Cholecystitis with phlegmonic cholecystitis
- Urgent cholecystectomy with gangrenous cholecystitis with local peritonitis



Splenectomy



Salpingo oophorectomy

Nephrectomy

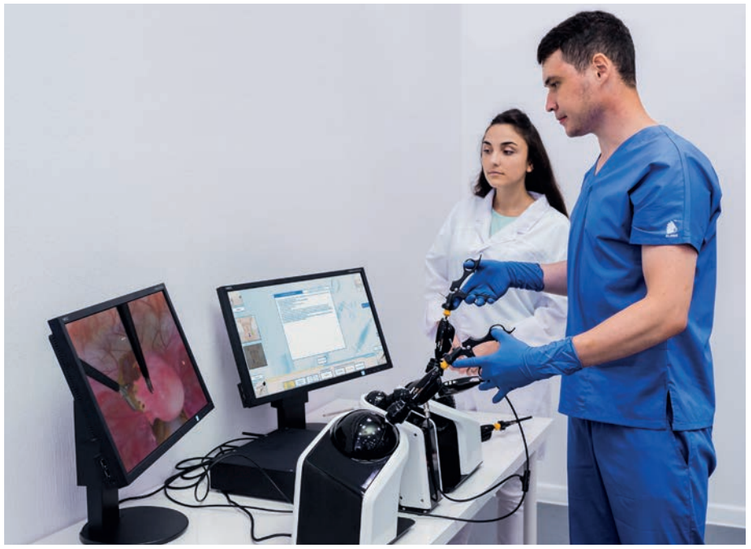
Hernioplasty

Immersive anatomies

- Internal organs and abdominal cavity are modelled using footage from real surgeries
- Internal bleeding that occurs during the exercise will lead to changes in the patient's condition including possible death
- When coagulating or dissecting, the tissues of the internal organs change and react accordingly
- Realistic fluid physics
- The abdominal cavity is operable, presenting the perfect learning opportunity to make surgical mistakes and then correct them.

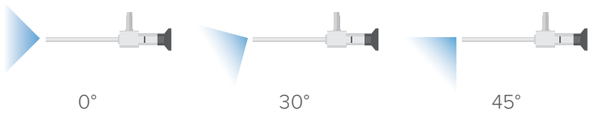
... and many more!

Mastering use of laparoscopic instruments and camera



Laparoscope control

- Three camera angles: 0°, 30°, 45°
- Endocamera use training
- Realistic camera functions



Virtual instruments

Extend the learning and practice with a variety of virtual instruments.

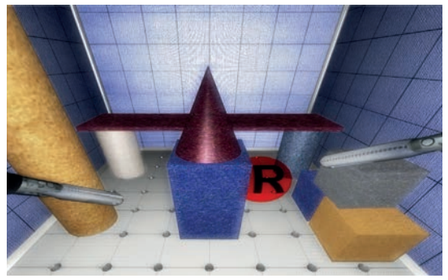
- Easy switch between instruments
- Instrument freeze functions

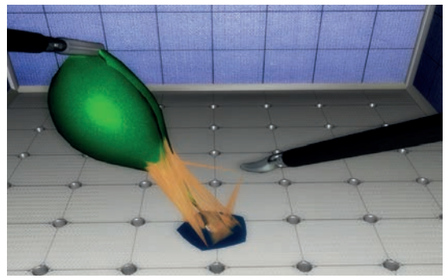
Over 20 different virtual instruments are available that are commonly used in laparoscopic surgeries. We can add new instruments by arrangement.

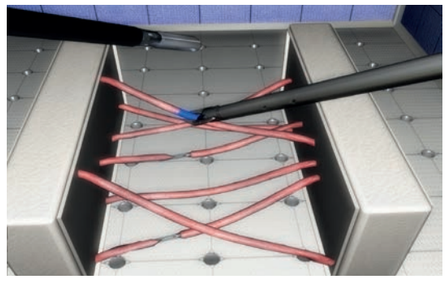
Highly realistic instruments support a seamless transition of skills to real surgical practice

- Our proprietary Magnetic Haptic System provides realistic feedback
- Magnetic Haptic System is also more reliable than mechanical ones
- Wireless instruments can be completely removed from the port
- Instruments use integrated gyroscopes for easy tool selection and swap

Basic Skills







Refining dexterity in instrument handling

- Control of camera with multiple viewing angles
- Vessel clipping and capturing
- Electrocoagulation operating skills
- Endoscopic scissor handling
- Suturing
- Knot tying