LapVision

Surgical Simulator

Diagnostic and Surgical
Skills in Laparoscopy

MedVision

www.medvisiongroup.com

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

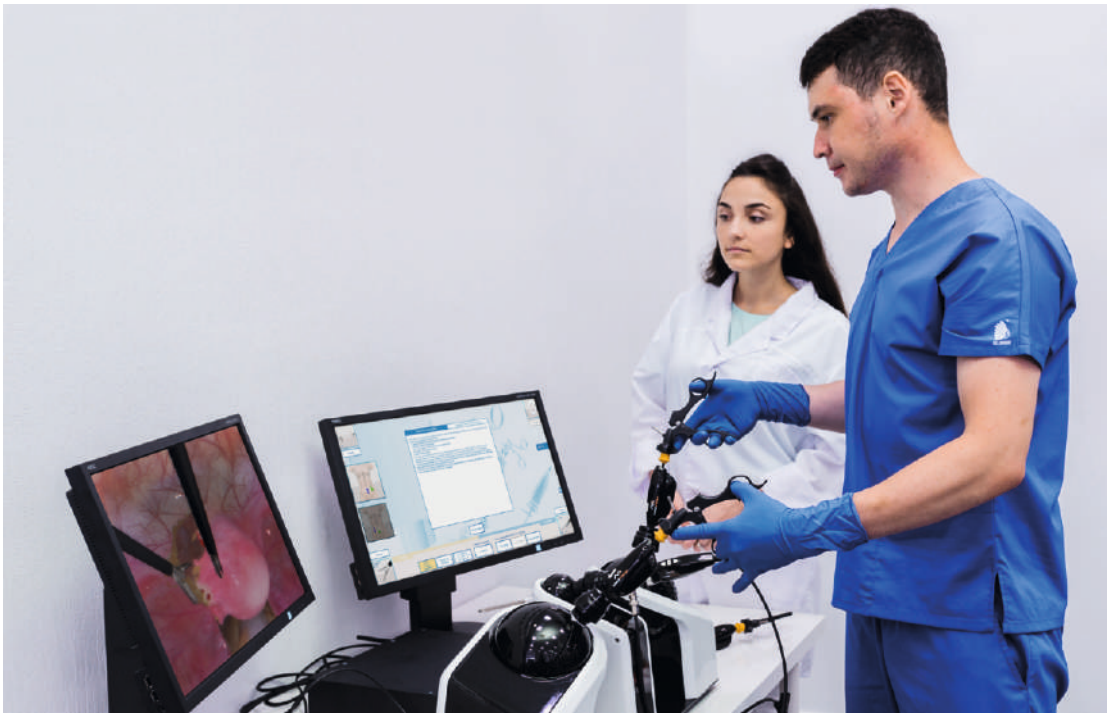
- Individual user profiles
- Detailed automatic registration of all actions performed during exercises
- Course for basic skills training
- Additional suturing modules
- Extensive library of modules
- Screenshots and video recording
- Additional training modules can be added at anytime

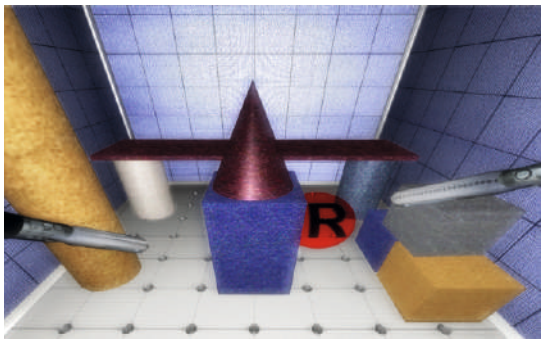
LapVision SMART

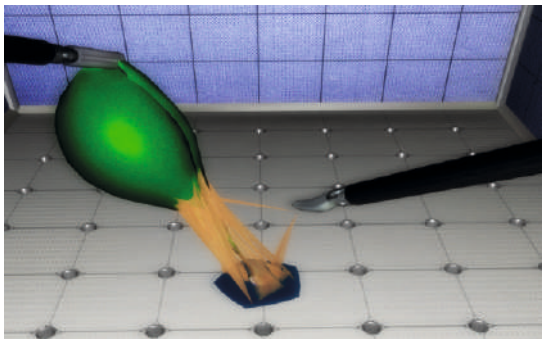
The compact design and portable nature of LapVision SMART makes it the perfect solution not just for simulation centres but also workshops and seminars. Simply place it on the table and begin!

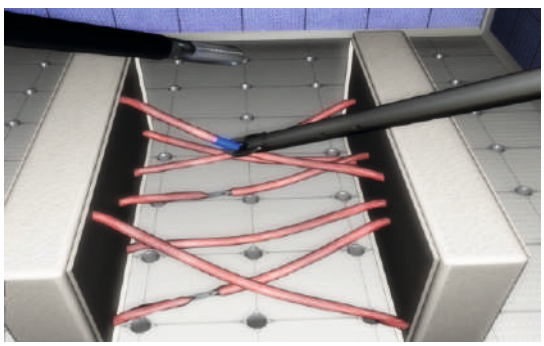
- Easy to set-up
- Expandable with additional virtual trocars – up to five in total

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
- The task on on 3-D coordination, grip of the instruments, movement and rotation of objects

Mastering use of laparoscopic instruments and camera

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

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

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

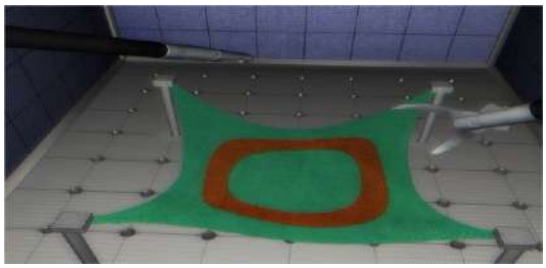
Forceps

Endobag Extractor

Coagulator

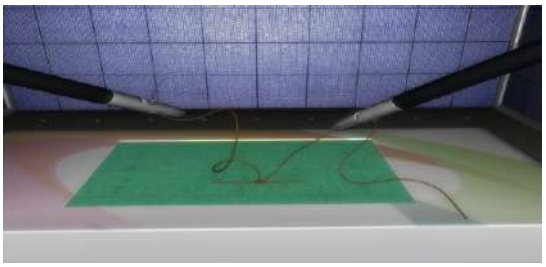
Over 20 different virtual instruments are available that are commonly used in laparoscopic surgeries. We can add new instruments by arrangement.

Library of Laparoscopic Modules



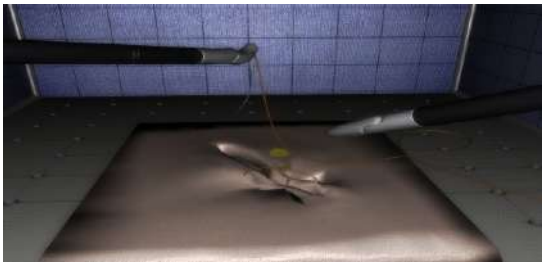
Certain important skills in laparoscopy

- The task on endoclip applicator control
- The task on endoscopic scissors control in examination mode
- The task on endoscopic scissors control in training mode
- The task on movement of objects on pins
- The task on movement of pins



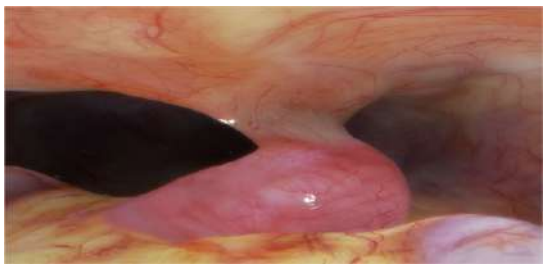
Complex of training tasks on suturing and knotting

- Interrupted (loop) suture for curved incision
- Interrupted (loop) suturing technique
- Square knot tying for right/left hand
- Surgeon`s knot tying for right/left hand



Special critical skills of suturing and knotting

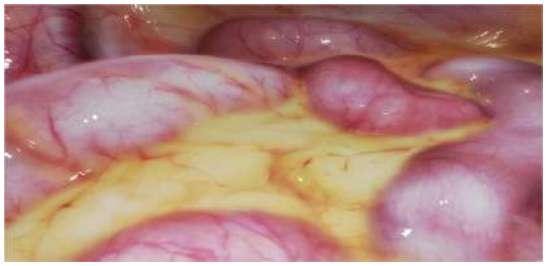
- Mattress suturing technique
- Square knot tying on a thread without a needle
- Surgeon`s knot tying on a thead without a needle
- Suturing by right-hand / left-hand needle
- Training of skills of needle orientation in the need-holder
- Z-shaped suturing technique



Acute adhesive small bowel obstruction

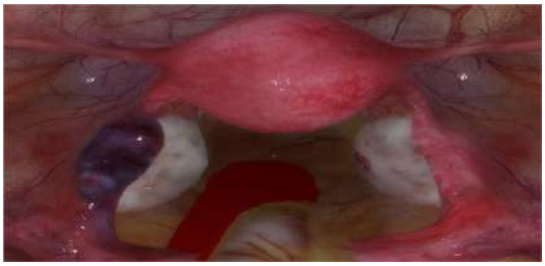
- Acute adhesive small bowel obstruction in the right/left area

Library of Laparoscopic Modules



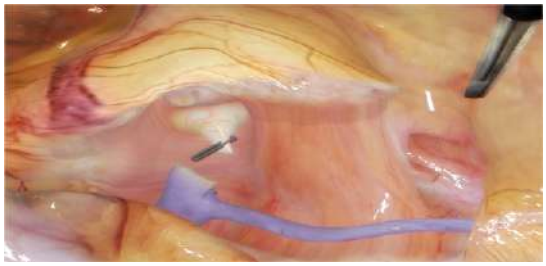
Diagnosis of the abdominal cavity

- Diagnosis of appendicitis
- Diagnosis of cholecystitis
- Diagnosis of ectopic pregnancy
- Diagnosis of ovarian cysts
- Diagnosis of perforated duodenal ulcer



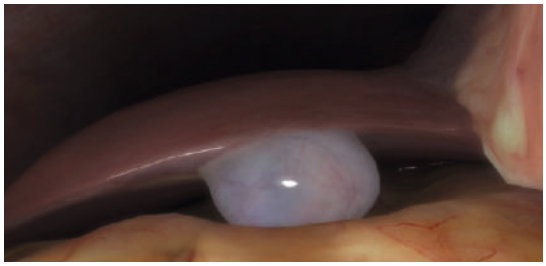
Skills in gynecological surgery

- Preventive oophorectomy
- Tubal sterillization
- Tubectomy with abdominal pregnancy in ampullar area of the right/left fallopian tube with active bleeding
- Tubectomy with abdominal pregnancy in ampullar area of the right fallopian tube in ampulla of the right tube
- Tubotomy with abdominal pregnancy in isthmic area of the right fallopian tube



Skills in laparoscopic nephrectomy

- Clipping and intersection of the ureter
- Clipping and intersection of the vessels
- Mobolization of the descendig colon
- Removal of the kidney

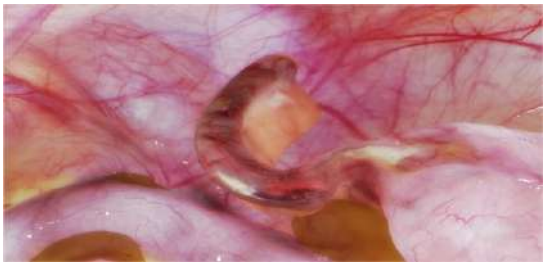


Important skills in laparoscopic cholecystectomy

- 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

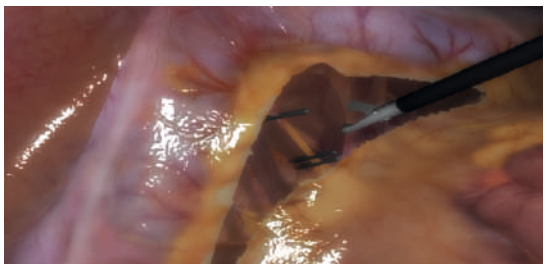
Execution of hysterectomy

- Execution of total hysterectomy
- Subtotal hysterectomy



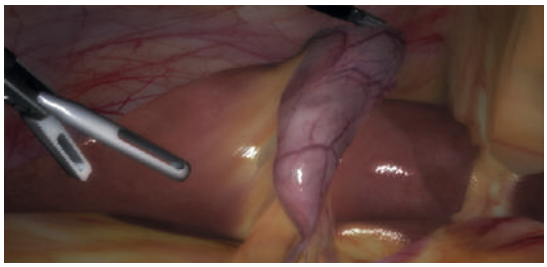
Execution of laparoscopic appendectomy

- Acute phlegmonous appendicitis in pregnant woman
- Acute phlegmonous appendicitis with effusion in the area of the appendix
- Acute phlegmonous appendicitis with local peritonitis
- Acute phlegmonous appendicitis with retrocecal location of the appendix
- Acute phlegmonous appendicitis
- Gangrenous appendicitis with effusion and local peritonitis



Sigmoid colon resection

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

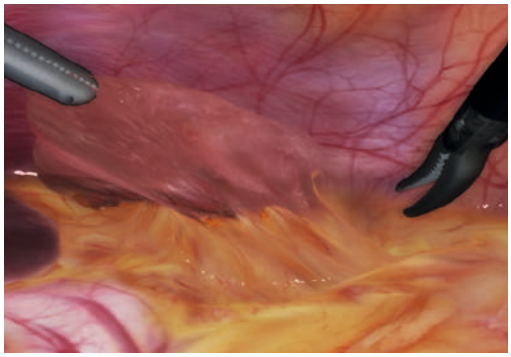


Full procedure of laparoscopic cholecystectomy

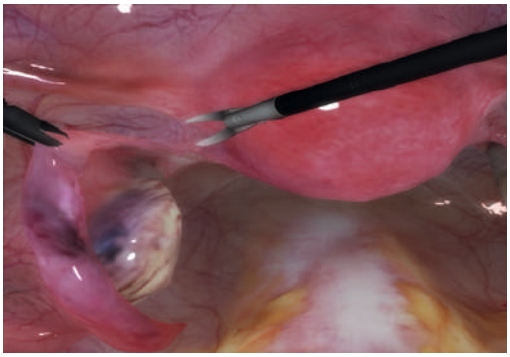
- Planned cholecystectomy with acute catarrhal cholecystitis
- Cholecystitis with phlegmonic cholecystitis
- Urgent cholecystectomy with gangrenous cholecystitis with local peritonitis

Library of Laparoscopic Modules

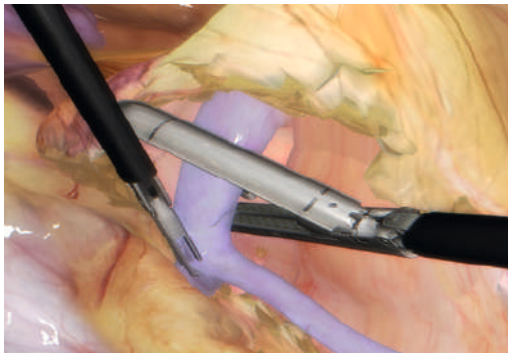
Immersive anatomies



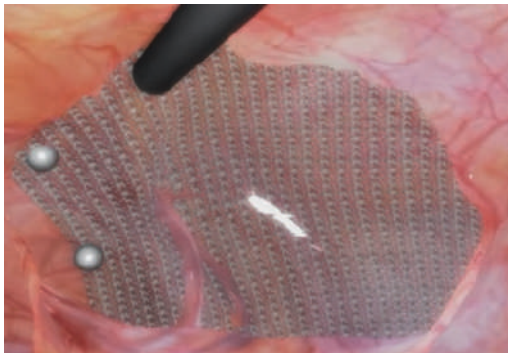
Splenectomy



Salpingo
oophorectomy



Nephrectomy



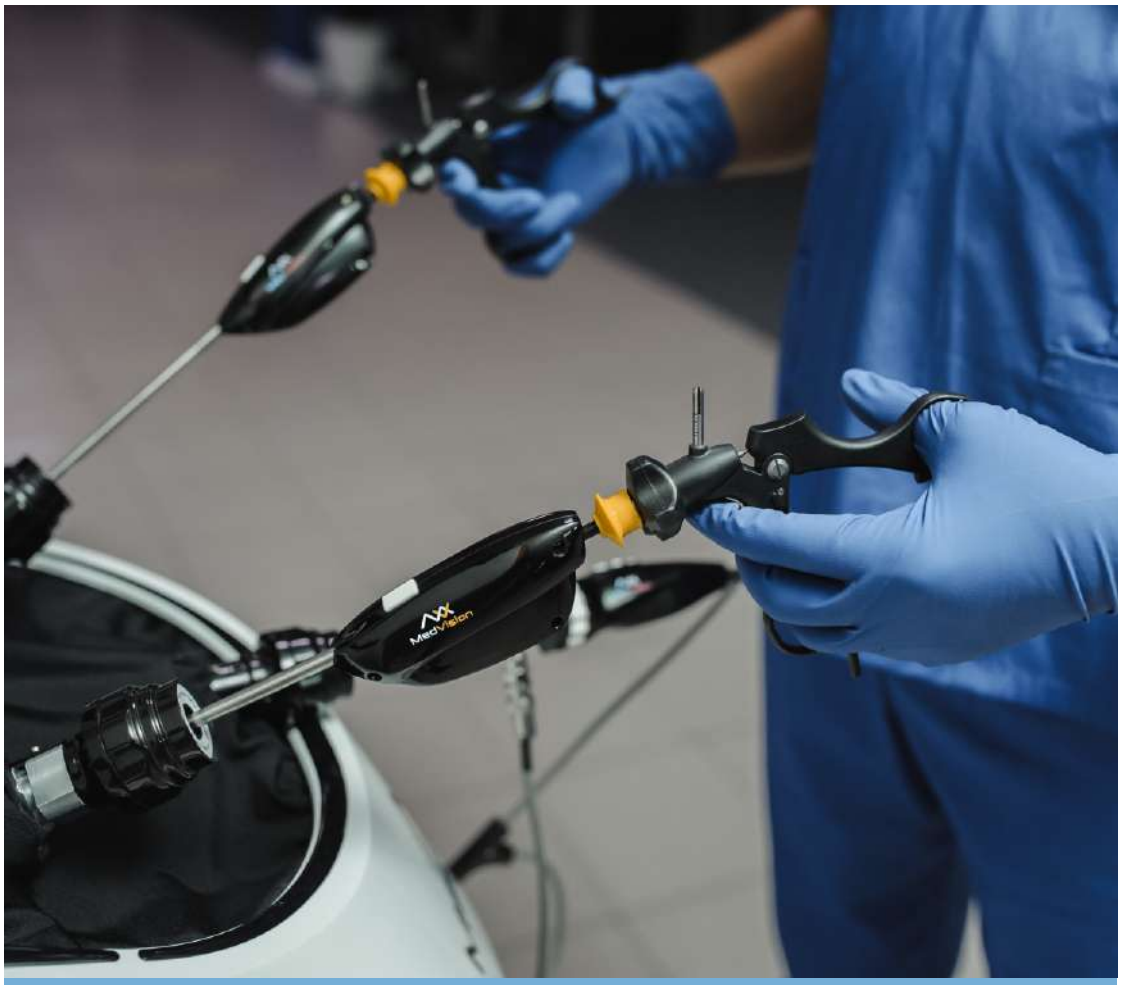
Hernioplasty

• Internal bleeding that occurs during the exercise will lead to changes in the patient's condition including possible death;

• When coagulating or dissecting, the tissuesof the internal organs change and react accordingly;

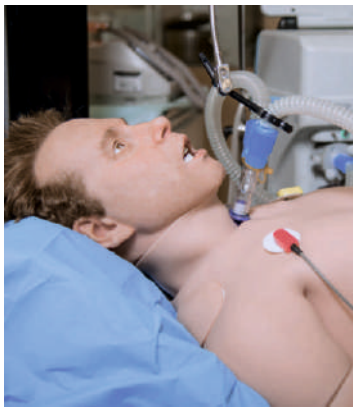
• Realistic fluid physics;

• The abdominal cavity is operable, presenting the perfect learning opportunity to make surgical mistakes and then correct them.



Internal organs and abdominal cavity are modelled using footage from real surgeries

Have you seen our patient simulators?



Leonardo

Mia

Arthur

MedVision is a global company committed to the advancement of quality education in healthcare through simulation. Innovative design and cutting-edge technologies define its range of adult, pediatric, neonatal and surgical simulators.

For further information about any of our products, please contact your local regional representative.

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