

Catalog



MedVision

Innovations for life



ARCTURUS TECHNOLOGY SOLUTIONS

www.medvisiongroup.com

MedVision is a global company committed to the advancement of educational excellence in quality healthcare through medical simulation. Our designs and leading-edge technologies define our range of adult, pediatric, neonatal and surgical simulators.

We are proud to work closely with healthcare professionals around the world to create successful simulation programs that will impact the quality and safety of patient care and help to improve patient outcomes.

Arcturus Technology Solutions (Pty) Ltd. is a Level 1 BEE company with interests in a range of cutting-edge technologies, predominantly but not exclusively in the medical and healthcare fields. These technologies include AI-enabled medical devices and diagnostic support systems, rapid test equipment, point-of-care rapid tests, etc. Our medical technology systems division has a broad range of innovative products, including nanotechnology-based anti-microbial ceramic coatings and a nanotechnology-based hemostatic gauze.

Arcturus is the local representative of MedVision, who are technology leaders in their fields.

We look forward to partnering with you!



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Please contact us at info@arcturus-solutions.co.za
for further information about our innovative products.

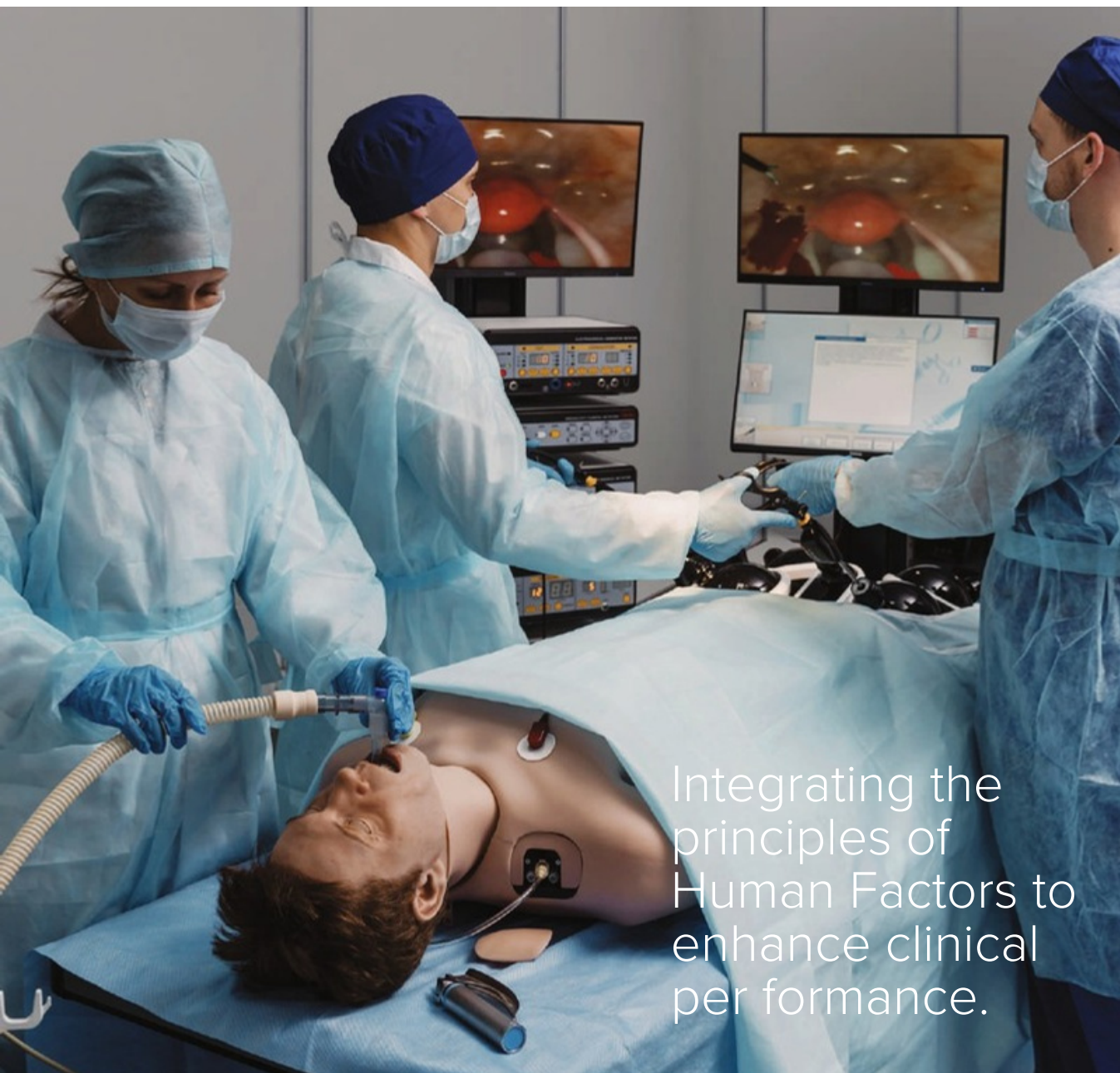
Surgical team
simulation in
OR scenarios



LapVision Hybrid

Our NEW LapVision Hybrid has been designed for realistic simulation scenarios in the OR setting to develop surgical teams in communication, decision-making and technical skills.

The comprehensive manikin-based training platform allows for the acquisition and retention of laparoscopic skills, which can be combined with a variety of dynamic OR scenarios, including anesthesia administration and management of complications, and other emergency scenarios that may arise during surgical procedures.



Integrating the principles of Human Factors to enhance clinical performance.

When combining surgical and anesthesia emergencies into one seamless learning experience, you can create both common and complex critical scenarios that challenge the whole OR team.

Create a complete OR set up for the whole surgical team

- Enhance anesthesia and surgical team performance in critical scenarios
- Full range of advanced ventilation scenarios
- Complete range of resuscitation and anesthesia procedures
- Surgeon's actions can be controlled with the patient simulator's vital signs
- Magnetic haptic feedback with true-to-life tissue resistance
- Realistic interactive laparoscopic stand set-up
- Virtual anesthesia and ventilation machines hook up
- Extensive Leonardo functionality can be employed (see page 5)

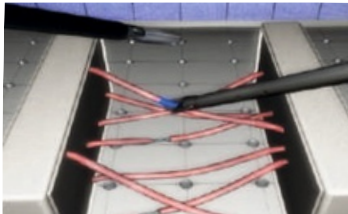
Training together those that work together...

Many dynamic scenarios can be created to reflect complications that arise in the OR realistically. Through the testing of technical and team communication skills, our LapVision Hybrid facilitates immersive learning of related complications, including those associated with:

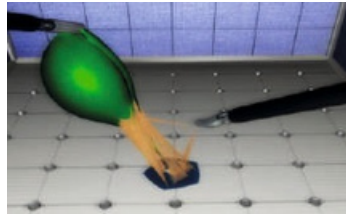
- Administering drug therapy
- The induction of pneumoperitoneum
- 5 trocars in total - expandable with additional virtual trocars
- Bipolar and monopolar diathermy
- Mechanical instruments
- Other associated conditions and many more...



Modules for Basic & Essential Skills in Laparoscopy including:



Vessel clipping and capturing

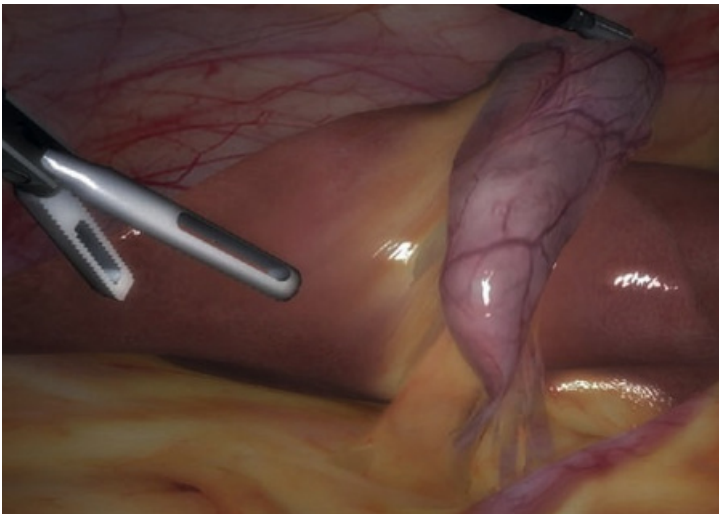


Electrocoagulation operating skills



Endoscopic scissor handling

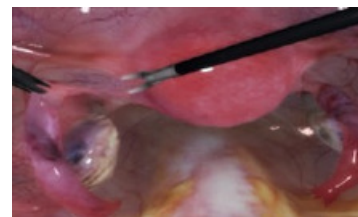
Modules for Surgical Skills in Laparoscopy including:



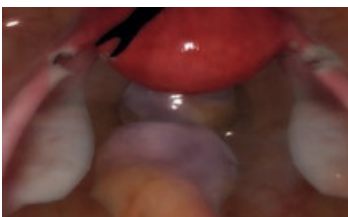
Full procedure of laparoscopic chole



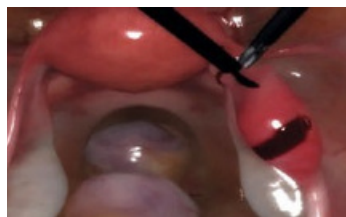
Splenoectomy



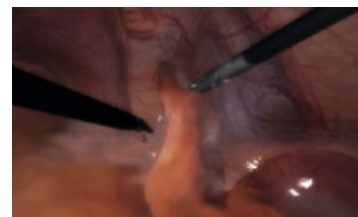
Salpingo-oophorectomy



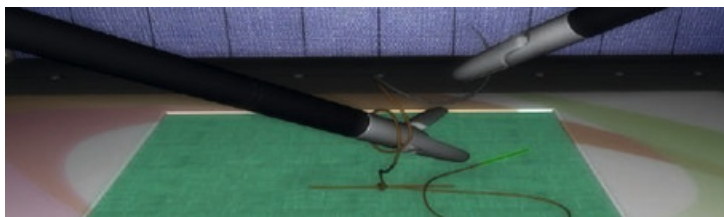
Tubal ligation



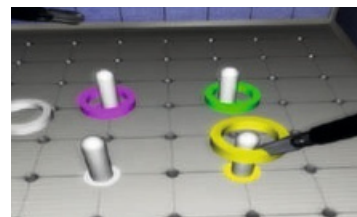
Ectopic Pregnancy-Salpingostomy



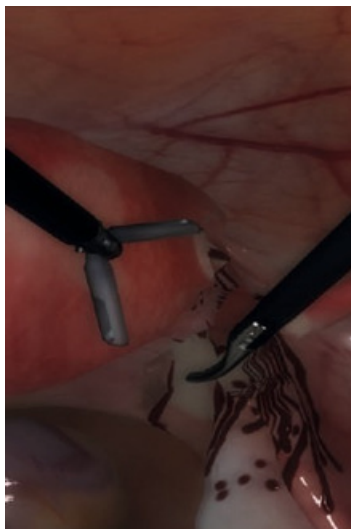
Appendectomy



Suturing and knotting



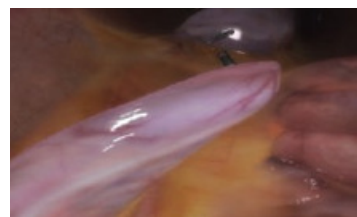
Psychomotor skills



Total hysterectomy



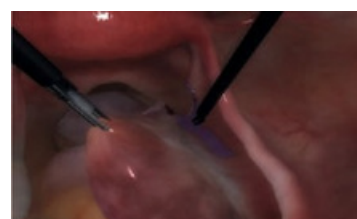
Hernioplasty



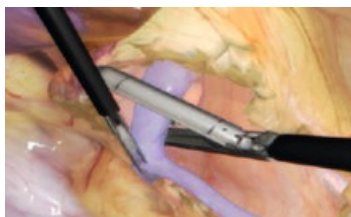
Anastomosis



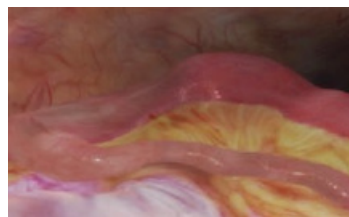
Sigmoid colon resection



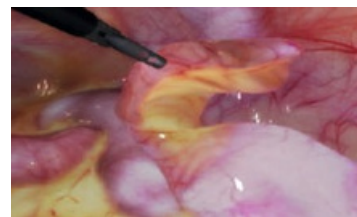
Prophylactic oophorectomy



Nephrectomy



Adhesive small bowel obstruction



Diagnostic laparoscopy



Setting the standard in Laparoscopic Simulation

- 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
- A camera imitator with angle adjustment control



A complete training solution



Our innovative software allows for a complete training solution that includes:

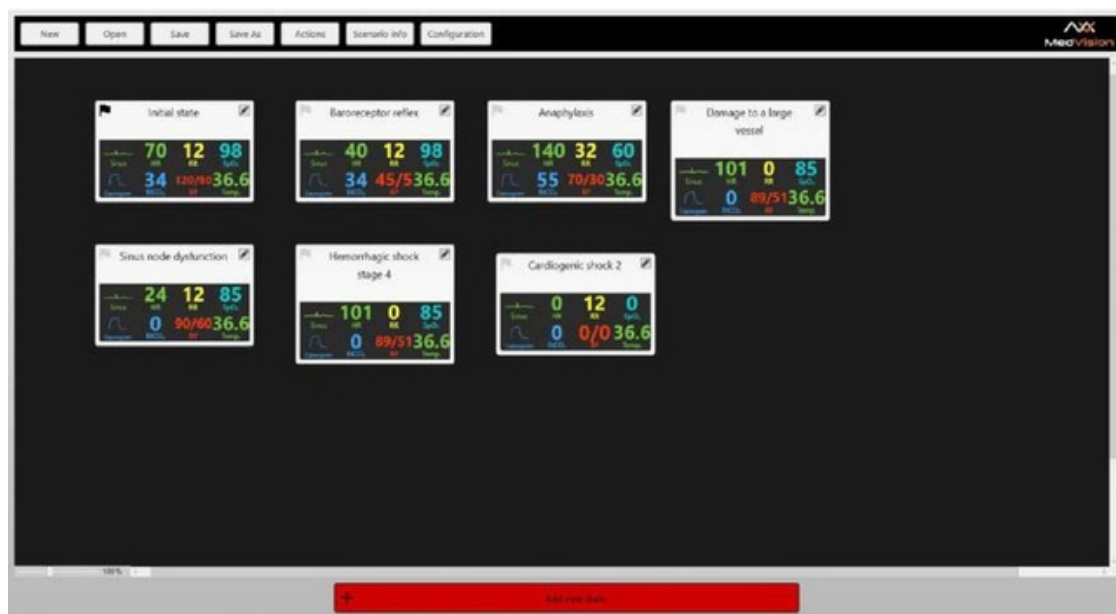
- Training and exam modes
- Detailed statistics after each module
- High definition 3D graphics
- Video and text materials
- 3D anatomy atlas

Let the software do the work...

The software solutions behind our simulator platforms follow a simple mantra: make it easy, make it reliable and make it do whatever the instructor wants!

Our intuitive software is so easy to use, you can run this simulator on the fly and capture learning opportunities in the moment - all in a risk-free environment!

Alternatively, you can create your own scenarios to cover specific teaching points and learning objectives unique to your training programs.



Scenario Builder

Creating scenarios has never been this easy! Highly flexible in its operation, our scenario builder software allows you to create simple to more complex patient cases through its touchscreen 'drag and drop' capability.

Drop in, Slide to Sequence and Easy Adjustment of patient events and physiological parameters, make it possible to fully customize your programs for trainees to acquire the required competencies.

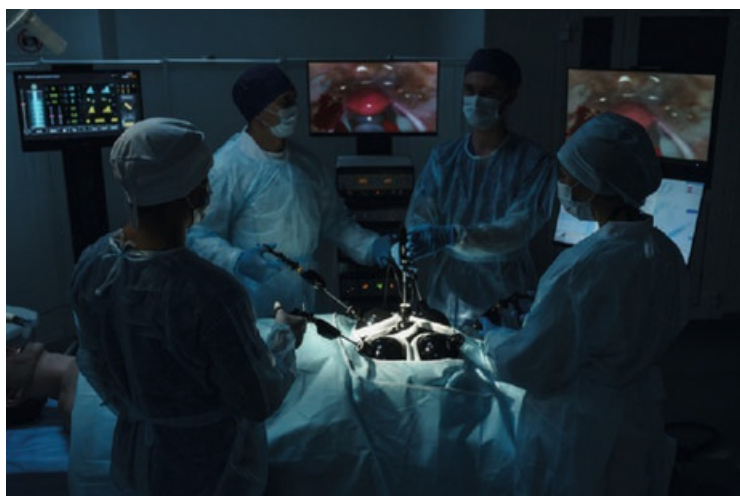


Instructor Tablet

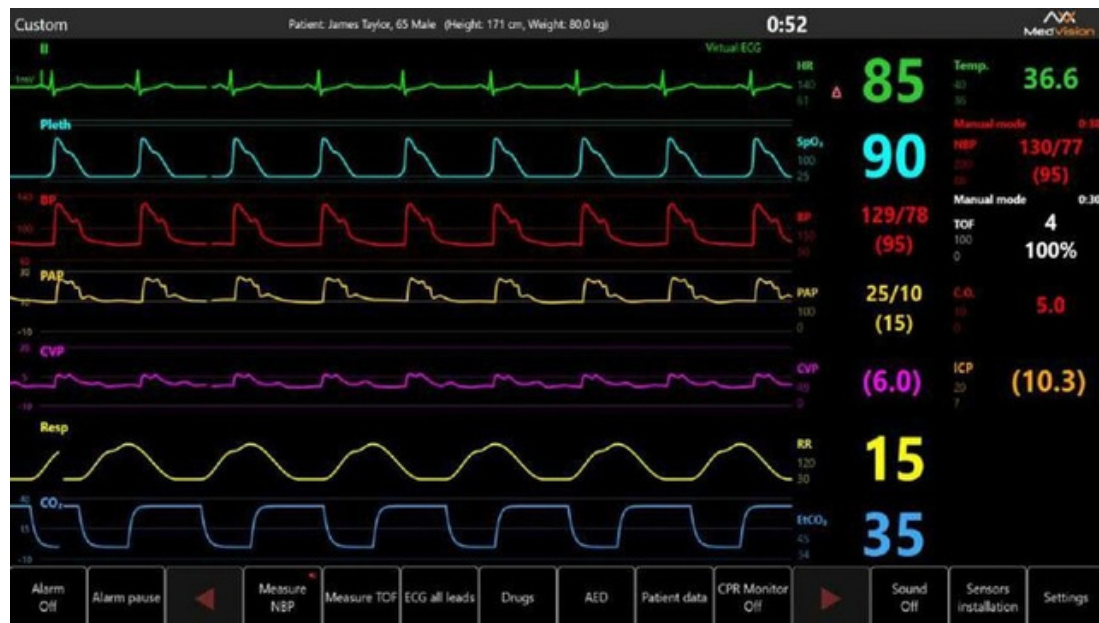
Our Instructor Tablet with its quality touch screen makes navigation between windows and menus a totally seamless experience.

Of course, it has all the functionality you would expect from an instructor tablet: automated and manual scenario modes; easy selection of

patient states and themes; synchronized vital signs with the patient monitor; slider controls for nuanced changes to the patient's condition... but it's the intuitiveness of the user interface that is the real game-changer here. From 'pick-up-and-play' to running complex scenarios, it really is that simple.



Scenarios...
create your
own or run
on the fly



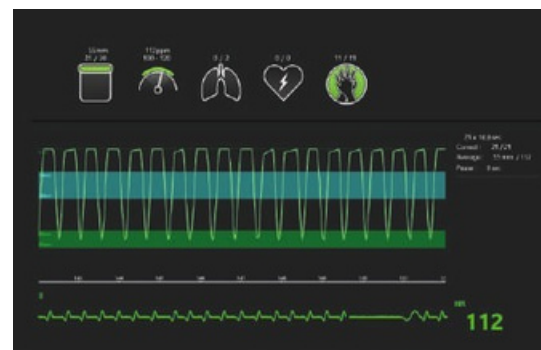
Patient Monitor

Our touchscreen patient monitor displays vital signs with a familiar look and functionality typical of its real counterparts.

It is fully customizable and the operator can simply select and display vital signs most appropriate to the patient's clinical case.

A novel feature of our patient monitor is the real-time CPR performance display, which can be employed during cardiac arrest scenarios. Feedback on the quality of CPR: rate, depth, release and ventilation supports compliance with Guidelines.

A virtual manual defibrillator is also available for cardiac arrest and cardioversion events.





Debrief Viewer

The debrief is arguably the most important element of the simulation exercise, which is why we have put careful attention to the features within our Debrief Viewer.

Our debrief software provides the instructor with unprecedented flexibility in its operation. Whether you review the session from start to finish or jump to time-stamped events, we have made it easy to find and access meaningful moments within the simulation with full patient data to ensure the best possible learning outcomes.

CPR performance metrics are also available at the touch of a button.

The integrated action log captures all trainee records and performance data.

Leonardo's Action Log captures performance data from the scenario to allow for a quality debrief and reflective learning.

A photograph of two surgeons in an operating room. The surgeon in the foreground is wearing a blue surgical cap, a light blue face mask, and a blue sterile gown. He is holding a laparoscopic grasper with his right hand. Another surgeon is visible in the background, also in blue scrubs and a mask. They are performing a laparoscopic procedure on a patient who is lying on a table covered with a blue drape. A large surgical light is visible at the top of the frame.

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

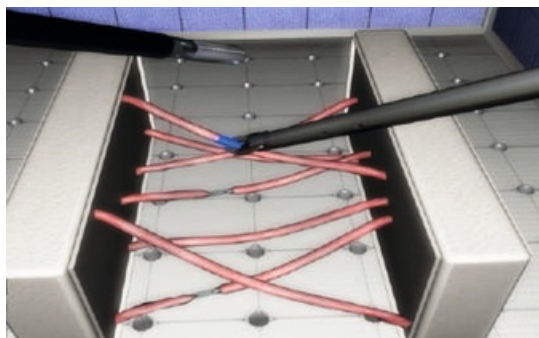
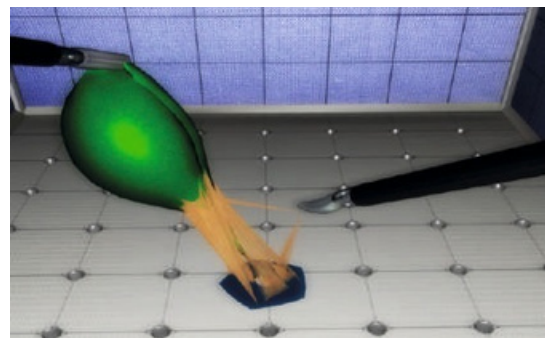
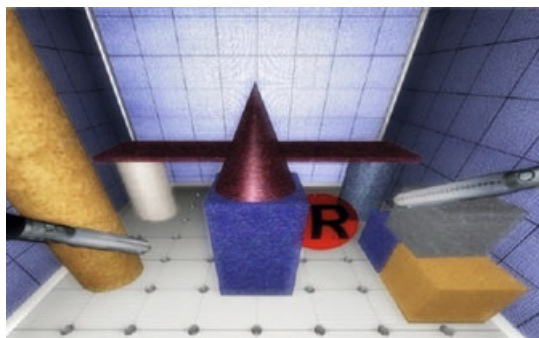
LapVision SMART

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

Mastering use of laparoscopic instruments and camera

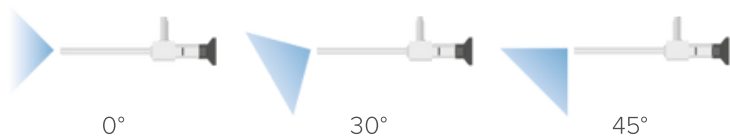
- Our proprietary Magnetic Haptic System provides realistic feedback
- Magnetic Haptic System is also more reliable than mechanical versions
- Wireless instruments can be completely removed from the port
- Instruments use integrated gyroscopes for easy tool selection and swap



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



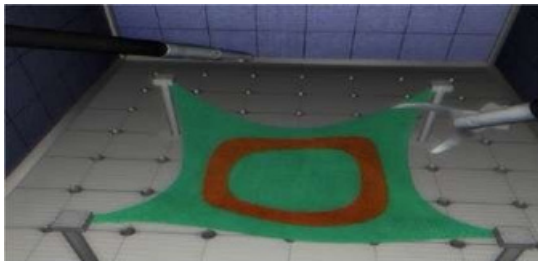
Endobag
Extractor



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



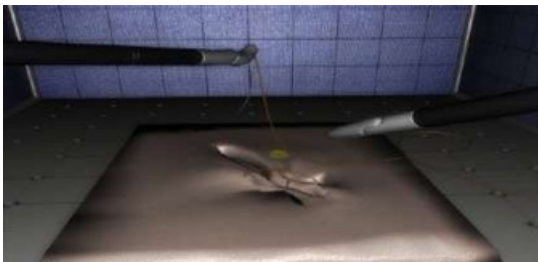
Certain important skills in laparoscopy

- 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



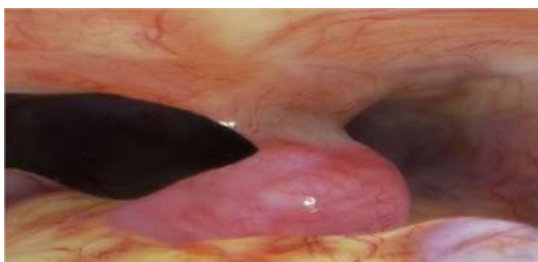
Complex of training tasks on suturing and knotting

- 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

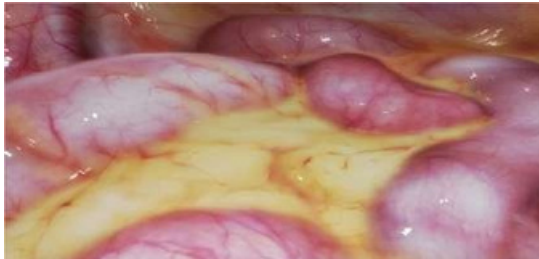
- Mattress suturing technique
- Square knot tying on a thread without a needle
- Surgeon's knot tying on a thread without a needle
- Suturing by right-hand / left-hand needle
- Training of skills of needle orientation in the need-holder
- Z-shaped suturing technique



Acute adhesive small bowel obstruction

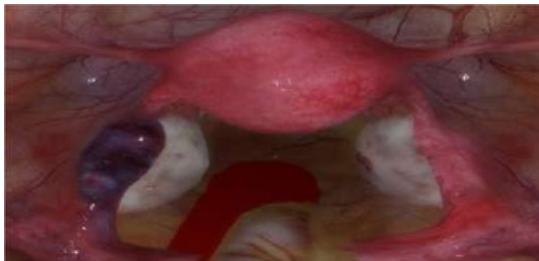
- Acute adhesive small bowel obstruction in the right/left area

Library of Laparoscopic Modules



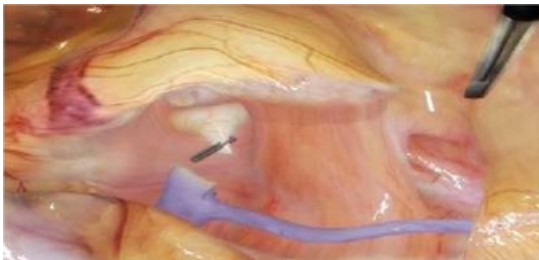
Diagnosis of the abdominal cavity

- 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 sterilization
- 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
- Mobilization of the descending colon
- Removal of the kidney



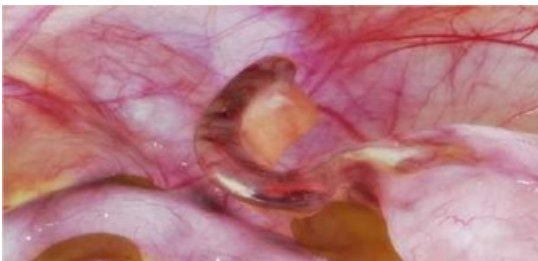
Important skills in laparoscopic cholecystectomy

- 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



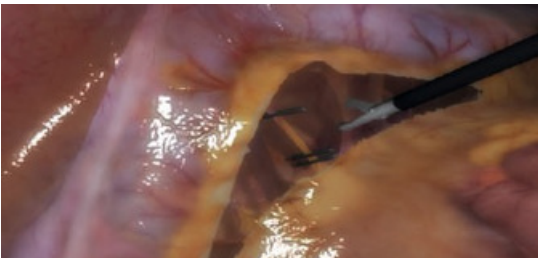
Execution of hysterectomy

- 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

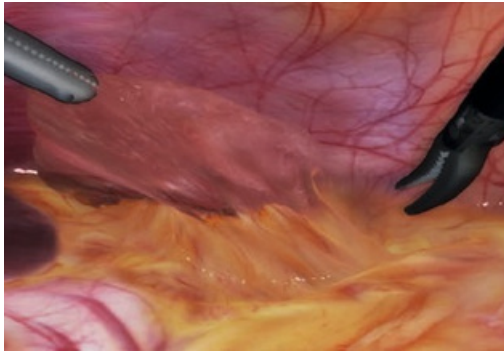


Full procedure of laparoscopic cholecystectomy

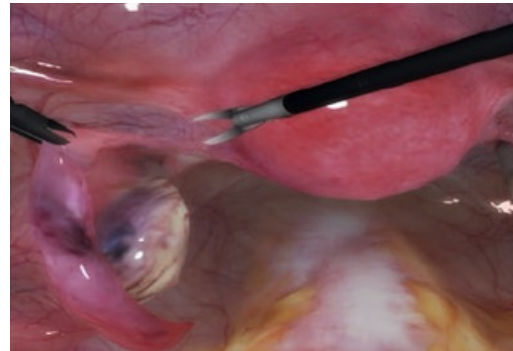
- Planned cholecystectomy with acute catarrhal cholecystitis
- Cholecystitis with phlegmonic cholecystitis
- Urgent cholecystectomy with gangrenous cholecystitis with local peritonitis

Library of Laparoscopic Modules

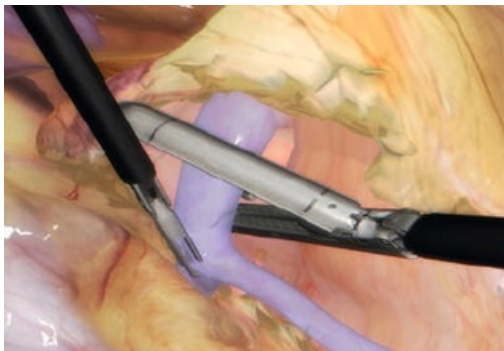
Immersive anatomies



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 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.



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

Real-feel surgical simulation





AngioVision

AngioVision is a surgical simulator for the acquisition and retention of endovascular skills. It is suitable for radiology, cardiology and neuroradiology training programmes and presents users with real endovascular instruments and an extensive module library.

With its highly realistic and detailed anatomy, simulated physics, haptic feedback for tissue resistance, and radiocontrast agent spreading; users can master and perfect their endovascular skills in preparation for real surgical procedures.





- One-piece ergonomic stand
- Two mounted FullHD monitors for X-ray and CINE
- Real-time catheter tracing unit
- Intuitive and simple touch screen controls
- Adjustable stand height
- Mobile

AngioVision Standard

Device Simulation

- More than 30 virtual endovascular instruments
- Imitation of a real C-arm control panel
- Real-time tracking for movement and rotation

Virtual OR

- Suitable for radiology, cardiology and neuroradiology training
- DSA (Digital Subtraction Angiography)
- X-ray imaging in positive and negative with our 3D mode
- A set of virtual hints and guides and step-by-step instructions

Educational Features

- Individual user profiles
- Detailed log of all actions performed
- Course of basic skills training
- C-arm operation training
- Work with real endovascular instruments
- Work with a wide range of virtual instruments
- Customisable training courses
- Extensive educational content
- Standardise, structure and complement hands-on skills training

AngioVision SMART

- Compact and portable for easy set-up at workshops and conferences
- Touch-sensitive FullHD monitor for all menu controls and high-quality visuals
- Real-time 3D tracking of all catheters
- Haptic feedback system for tissue resistance

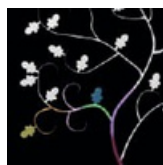


Library of Modules

Basic Course



Catheter
Training



Guidewire
Training



Embolization
Coils Training

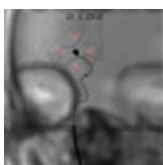


Angiographic
Projections

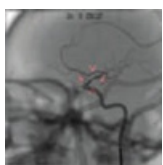


Coronary
Projections

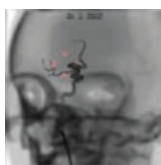
Intracranial Interventions



Intracranial
Aneurysm
Embolization



Cerebral
Stenting

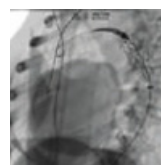


Ischemic
Stroke

Aortic Aneurysm Repair

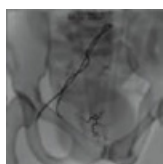


Endovascular
Aneurysm
Repair

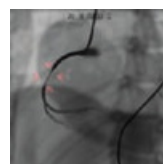


Thoracic
Endovascular
Aneurysm
Repair

Uterine Fibroid Embolization



Advanced Coronary Stenting



Balloon angioplasty and stenting



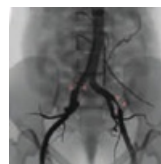
Carotid
Stenting



Renal
Stenting



Coronary
Stenting



Iliac Stenting



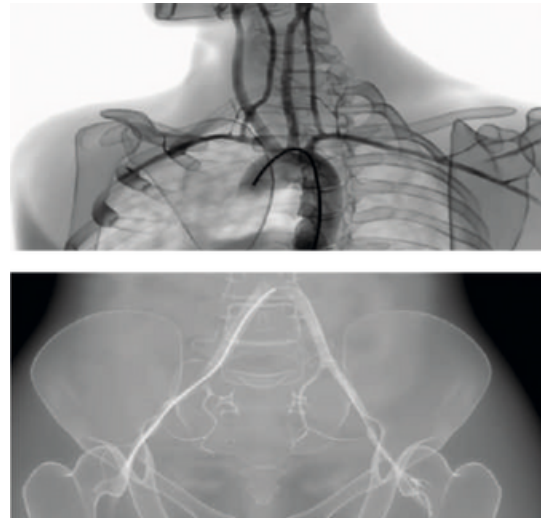
SFA Stenting



Below-the-
knee Stenting

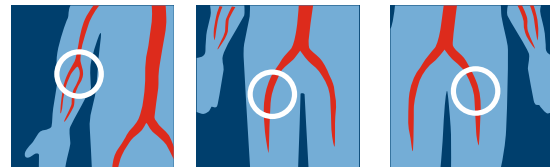
Realistic X-Ray

- During the fluoroscopy, the X-ray image reflects the corresponding changes in the current projection of the C-arm and the patient position
- Heartbeat and breathing affect the displayed image
- Realistic contrast spreading depending on the catheter position
- The intensity of the fluoroscopic image corresponds to the volume of the introduced contrast agent, speed of injection and time interval from the moment of injection



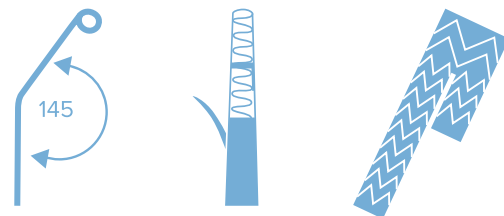
Access Points

- Three access points (right radial, right femoral, left femoral)
- Simultaneous work with multiple access points
- Change the access point during the intervention



Library of instruments

- In each exercise, several endovascular instruments can be used during the procedure.
- The software does not limit the choice of instrument within the procedure.
- More than 30 instrument types are available in the virtual library.
- During the simulation of endovascular procedures, realistic endovascular instruments such as catheters and guidewire are used as their real counterparts.







HystVision/TUR

HystVision/TUR is a comprehensive training solution for Hysteroscopy&TUR examinations that includes training and exam modes, detailed performance data after each module, high definition graphics, videos, text materials and a 3D anatomy atlas.

The realistic feel of the haptic, makes HystVision/TUR an essential simulation tool to build confidence and competence when performing such a procedure.

The simulator comes in various options. There are HystVision and TURVision modules a combined HystVision/TUR version.





HystVision/TUR Standard

- Mobile and convenient: sturdy wheelbase with adjustable height. A perfect solution for simulation centers and training rooms
- Two FullHD monitors: one touch-sensitive for all your menu controls and one for endocamera feed
- Proprietary magnetic feedback system
- Adjustable height
- Wheels for easy transportation
- Pedals for coagulation and electric dissection

Resectoscope for hysteroscopy

We provide instrument imitations for every instrument manufacturer brand out there, available by special order

Software

- Training and exam modes
- Detailed statistics after each module
- High definition 3D graphics
- Visual tips and guidelines
- Video and text materials
- 3D anatomy atlas

Magnetic feedback

Our proprietary magnetic feedback system allows for unprecedented immersion. Furthermore, unlike mechanical feedback systems, it is far more reliable

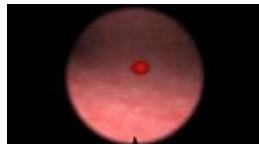
HystVision/TUR SMART

- Mobile and convenient, forged with on-the-go functionality in mind
- FullHD monitor for good quality visuals
- Touch-sensitive Full HD monitor for all menu controls
- Magnetic feedback system allows for a unique, realistic feel of tissue resistance
- Real resectoscope handle
- Pedals for coagulation and electric dissection

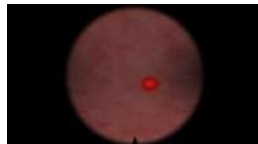


Gynecology Modules

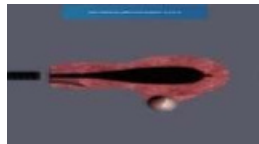
Essential skills



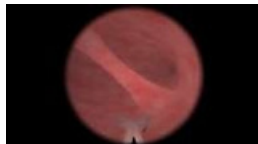
0° viewing angle camera
uterus inspection



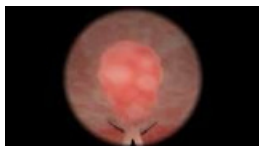
30° viewing angle camera
uterus inspection



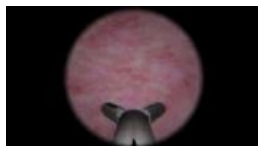
Uterus distention mastering



Resection of the
intrauterine septum

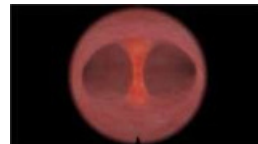


Polypectomy using grasper
and scissors

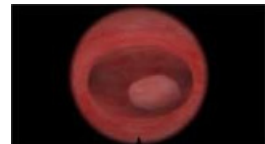


Taking a biopsy from
the uterine wall

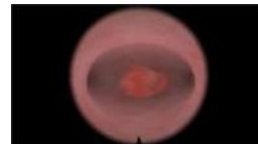
Advanced resection



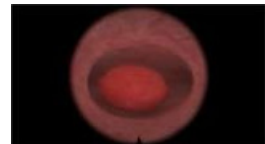
Resection of the
intrauterine septum



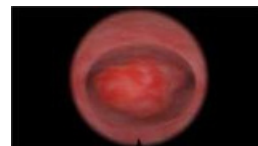
Resection of the myoma
type 0 according to ESGE 1



Resection of the myoma
type 0 according to ESGE 2

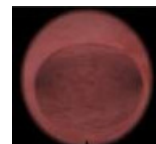
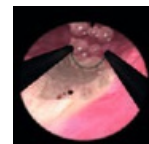
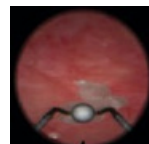
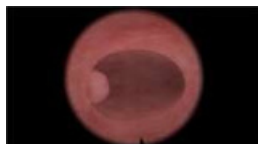
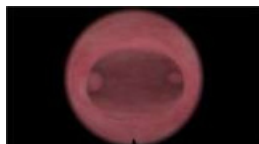


Resection of the myoma
type 1-2 according to ESGE



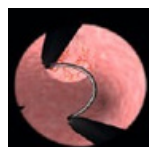
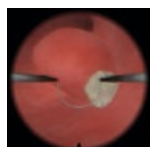
Resection of the polyp

Diagnostic hysteroscopy

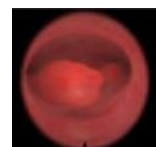
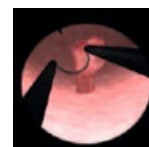
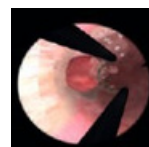


Endometrial ablation

Removal of myoma submucosal nodes

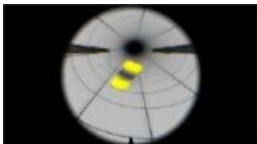


Polypectomy

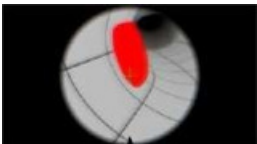


Urology Modules

Essential skills



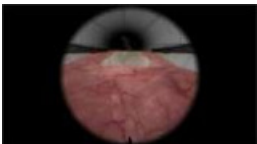
Basic skills of working with endoscopic instruments



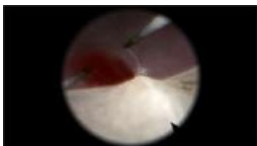
Basic skills with resectoscope for angular optics



Basic skills with resectoscope



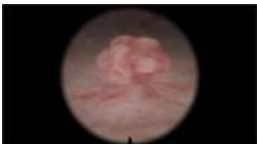
Resection of the prostate share



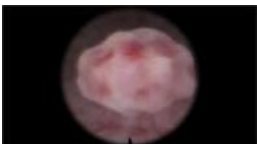
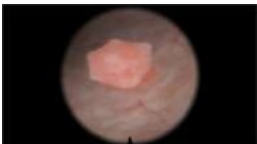
Test of hemostasis



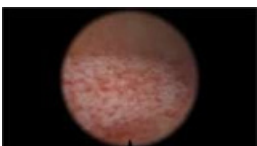
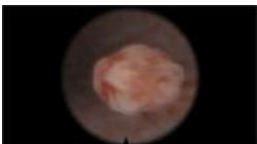
Visualization of anatomical landmarks



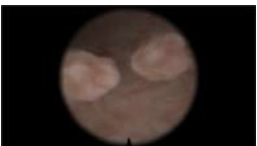
Polyp diam. 2-3 cm, base 1-2 cm, rear and left wall



Polyp diam. 5 cm, base 2.5-3 cm, rear and right wall

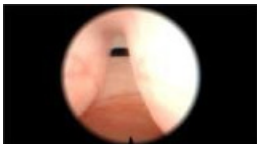


Creeping polyp, height 1 cm, base 3x2 cm, right wall



Two polyps, diam. 4 cm and 3 cm, bases 2x2 cm and 2 cm, back and left walls

Transurethral resection of the prostate



Large adenoma with an average lobe



Large adenoma with lateral lobe, without middle lobe



Large adenoma with lateral lobes, with an average lobe



Medium sized adenoma with medium lobe



Medium sized adenoma without middle lobe



Small adenoma with an average lobe



Small adenoma without middle lobe

A person is lying on a medical simulator table, which is covered with a white sheet. The person's eyes are closed, and they are wearing a blue mouthpiece. A surgical instrument, held by a gloved hand, is positioned near the person's face. The background shows a bright, clinical setting with a window. The text "Real-feel surgical simulation" is overlaid on the right side of the image.

Real-feel surgical
simulation



EndoVision

EndoVision sets the standard in simulation for hands-on-training in endoscopic procedures. Allowing trainees realistic and safe clinical experiences, EndoVision offers exposure to an extensive library of modules and patient cases to challenge diagnostic and psychomotor skills in preparation for real presentations.

True-to-life instruments for procedures in Bronchoscopy, Gastroscopy and Colonoscopy, along with an interactive 3D anatomy atlas, videos, texts and automatic data capture for quality debriefing, high standards of competency are assured.

The simulator offers various modules and their combinations, i.e. bronchoscopy, gastroscopy, colonoscopy and an all-in-one version.

EndoVision Standard

- Manage complications caused by trainee's actions
- 2 FullHD displays with one of them being a touchscreen for all your menu controls
- Haptic feedback for realistic tissue resistance
- Interactive 3D anatomy atlas with real-time tracking of the instrument
- Real patient cases
- Detailed automatic recording of all actions
- A set of virtual tips with videos, texts and visual cues
- Mobile wheelbase
- Height adjustable

Software

- Training and exam modes
- Detailed statistics after each module
- High definition 3D graphics
- Visual tips and guidelines
- Video and text materials
- 3D anatomy atlas



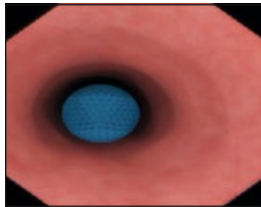
Endoscopy instruments

- Real adapted gastroscope, bronchoscope, colonoscope
- High-precision no-lag instrument tracking system provides accurate, smooth response for all your actions



Bronchoscopy Modules

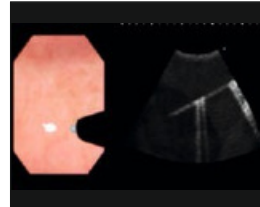
Essential skills



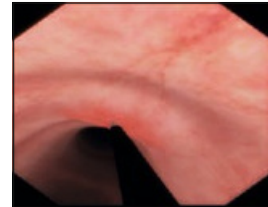
Bronchoscope Handling Skills in Real Anatomical Environment



Knowledge of Anatomy in Bronchoscopy

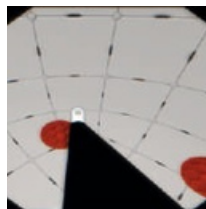


EBUS-TBNA



TBNA

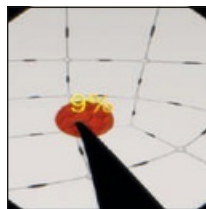
Instrument handling skills



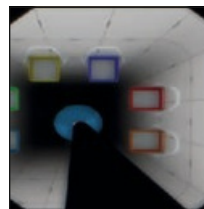
Biopsy forceps



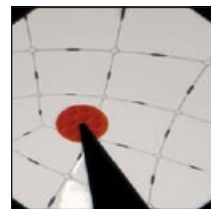
Endoloop



Coagulator Control (monoelectric and argon plasma unit)

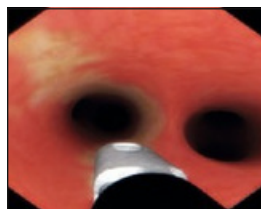


Forceps for Grab of a Subject

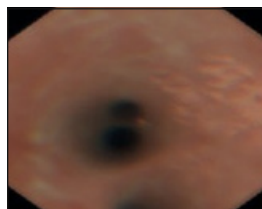


Puncture Needle

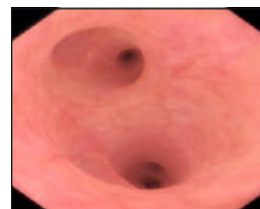
Diagnostic Bronchoscopy



Biopsy in Bronchoscopy



Bronchoalveolar Lavage

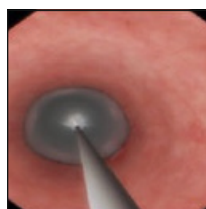


Pediatric Bronchoscopy

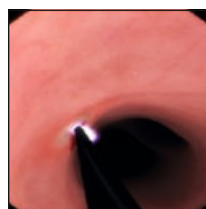


Routine Endoscopy Skills

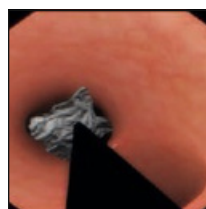
Therapeutic Bronchoscopy



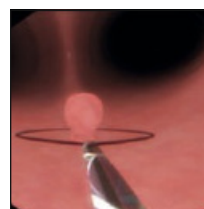
Balloon dilatation



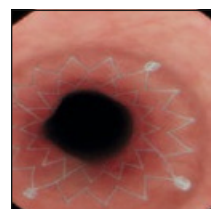
Bleeding Control



Foreign Body Removal



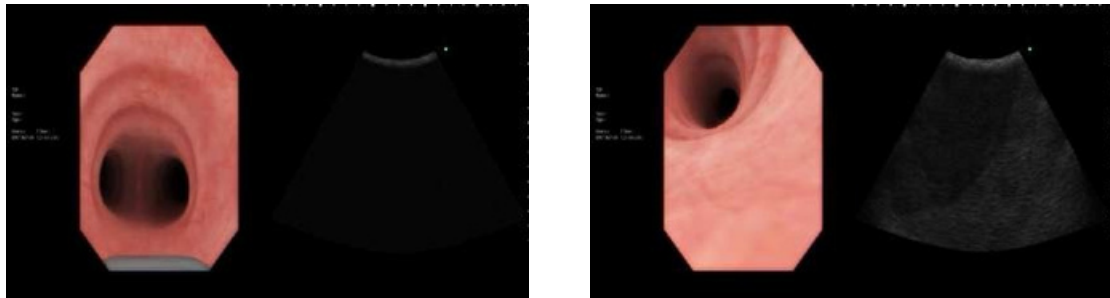
Polypectomy in Bronchoscopy



Stenting



Endobronchial ultrasound transbronchial needle aspiration



Due to the close proximity of vessels and unavailability of endoscopic landmarks, we have to use something that could indicate the location of the anatomical structures outside the walls of the bronchi. That “something” is ultrasound (US), and the procedure becomes an ultrasound-guided TBNA technique.

How to actually perform an ultrasound scanning, if standard probes are not designed to reach these nodes? EBUS bronchoscope, i.e. a bronchoscope with an ultrasound sensor in the tip making it possible to run an ultrasound-guided procedure.

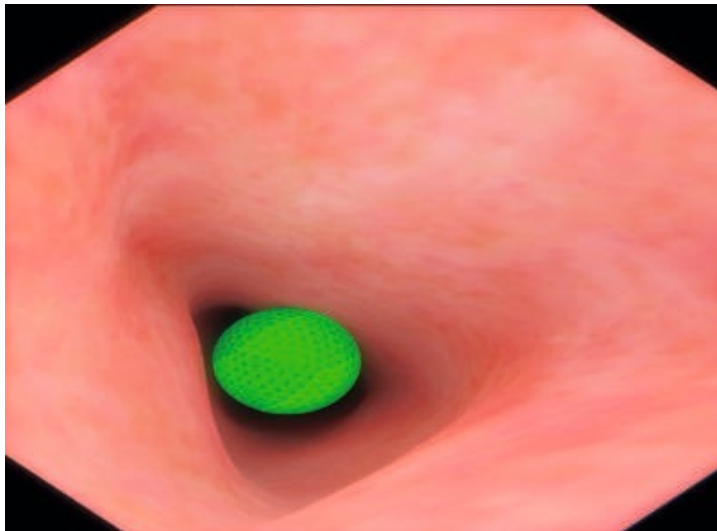
The TBNA procedure is completely the same, but now it is possible to provide real-time imaging of the nearby anatomical structures behind the bronchial wall.

In such bronchoscopes, the lenses have such an angle of view (30 to 45 degrees) that would make it possible to maximally remove the probe from the field of view, but at the same time maintain the usual view.

Upper GI Endoscopy

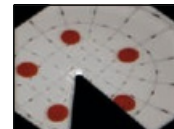
Gastroscopy Modules

Essential skills

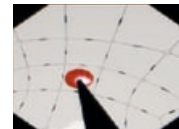


Gastroscope Handling Skills in Real Anatomical Environment

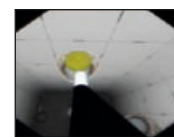
Instrument handling skills



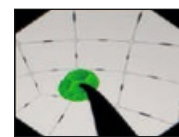
Biopsy forceps



Coagulator Control (monoelectric and argon plasma unit)



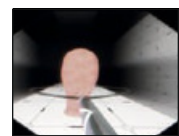
Forceps for Grab of a Subject



Injection needle

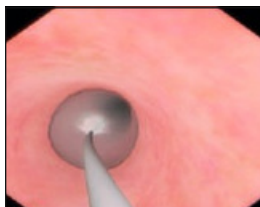


Puncture needle

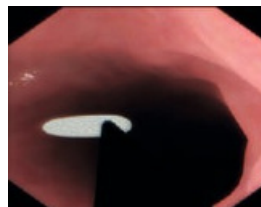


Endoloop

Therapeutic Gastroscopy



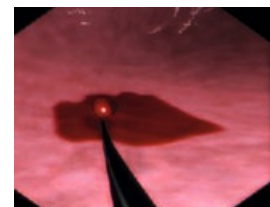
Balloon dilatation



Foreign Body Removal

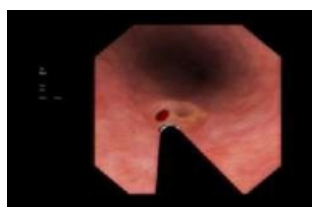


Stenting



Upper GI Bleeding

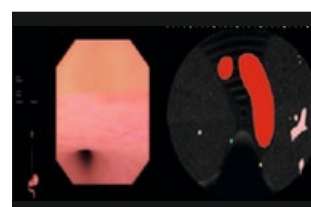
Diagnostic Gastroscopy



Esophagogastrroduodenoscopy (EGDS)

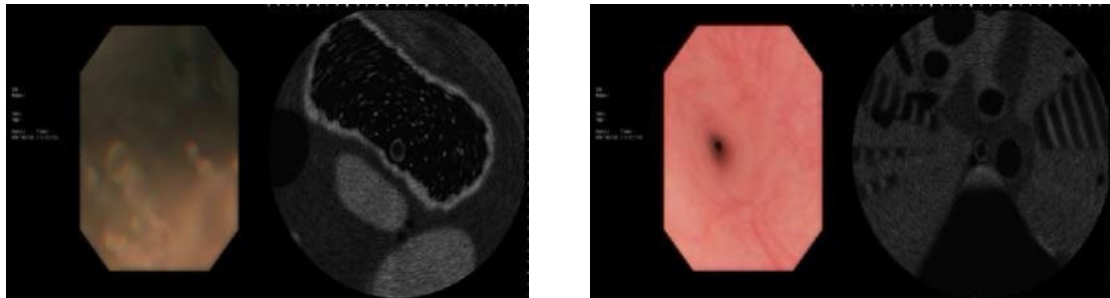


Endoscopic Retrograde Cholangiopancreatography



Endoscopic Ultrasonography

Endoscopic Ultrasonography



An obvious advantage of this technique is the ability to produce images of organs that are inaccessible by conventional ultrasound scanning, i.e the mediastinum organs and structures such as vessels, lymph nodes, etc. It is also possible to see organs "from the other side" adding functionality to conventional ultrasound examination. One more important feature to mention is the examination of gastric submucosal tumors (or deeper layers of the GI tract walls), which allows making diagnosis when regular biopsy is not informative or sampling is not possible.

Along with ultrasonic bronchoscopes, ultrasound gastroscopes are used. There are two types of ultrasound gastroscopes: a curved, linear-array gastroscope (similar to EBUS-TBNA bronchoscope) and a radial-array gastroscope. The latter allows imaging in a circular plane. Considering that such imaging is untypical and requires certain skills, the design of our simulator is focused on the radial-array type of probes.

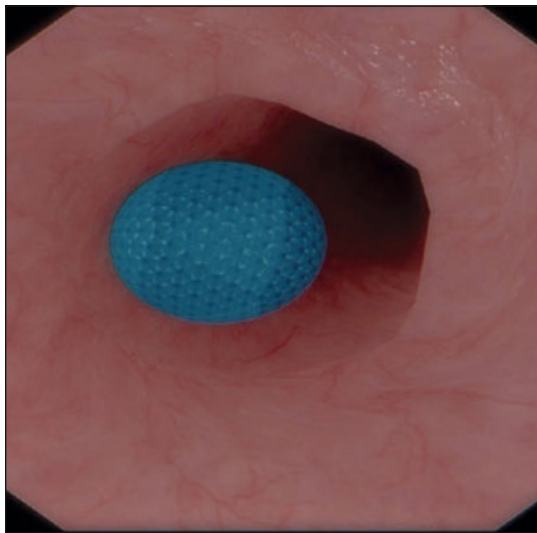
The module contains 4 clinical cases:

- Healthy Patient (Mediastinal Examination)
- Neoplasm in the Lung
- Healthy Patient (Abdominal Examination)
- Choledocholithiasis (Gallstone Disease)

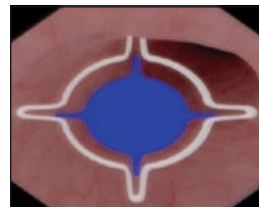
Lower GI Endoscopy

Colonoscopy Modules

Essential skills



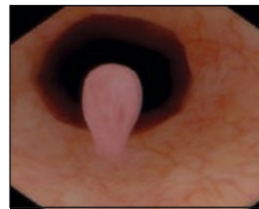
Colonoscope Handling Skills in Real Anatomical Environment



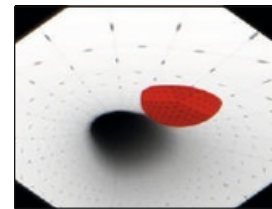
Colonoscopy Navigation



Mucosal Assessment Skills in Colonoscopy

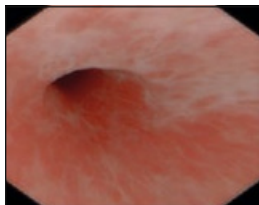


Pathology Visualization Skills

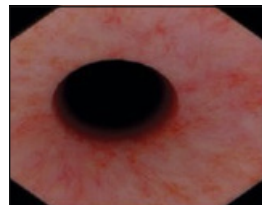


Targeting in Colonoscopy

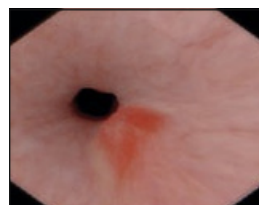
Sigmoidoscopy



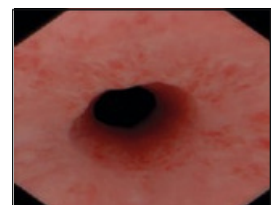
Random Anatomy of Sigmoidoscopy



Sigmoidoscopy



Biopsy in Colonoscopy



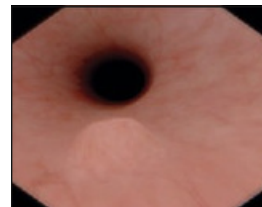
Colonoscopy

Diagnostic colonoscopy

Therapeutic colonoscopy

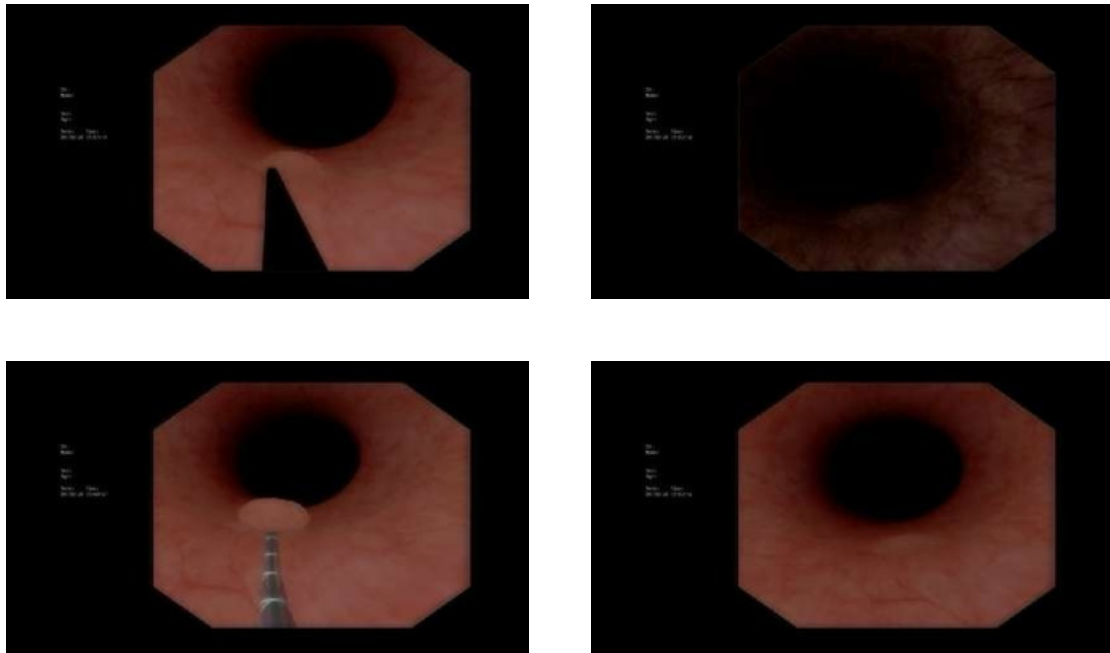


Polypectomy in Colonoscopy



Endoscopic Mucosal Resection

Endoscopic Mucosal Resection

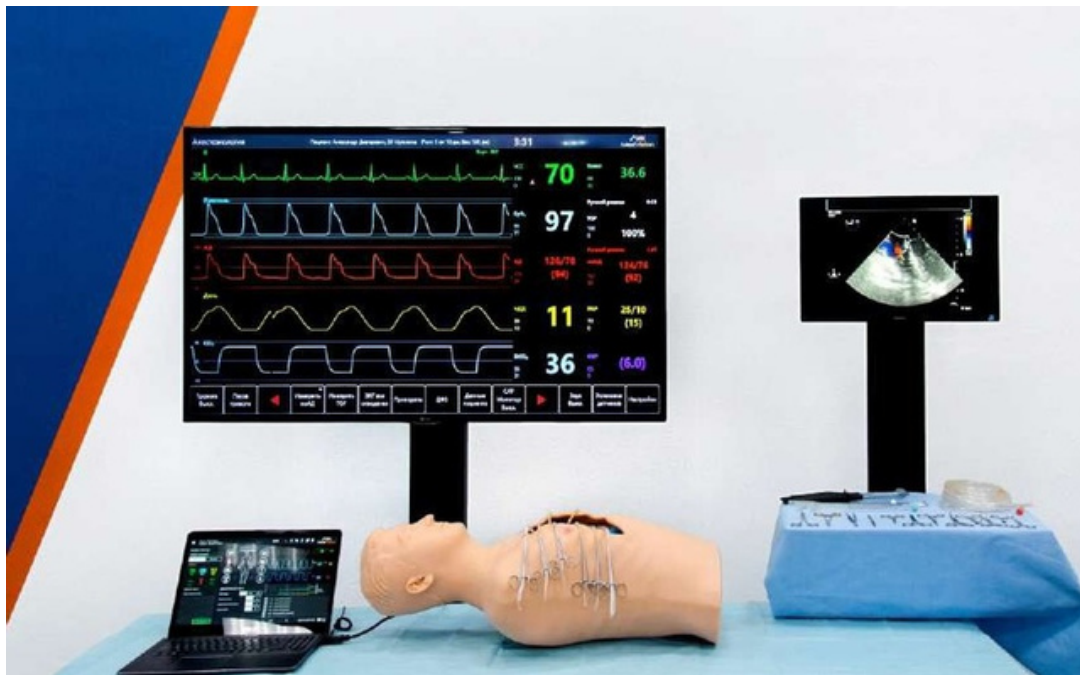


One of the standard treatments for patients with early-stage colon cancer is endoscopic mucosal resection (EMR). Under certain criteria, neoplasms can be resected in a minimally invasive manner preventing more serious forms of cancer. This is one of the cornerstones of modern endoscopy.

The purpose of the module is to learn and practice the main stages of the procedure and to demonstrate the possibility of using extra types of examination such as narrow band imaging endoscopy.

Cardiopulmonary Bypass Surgery Simulator

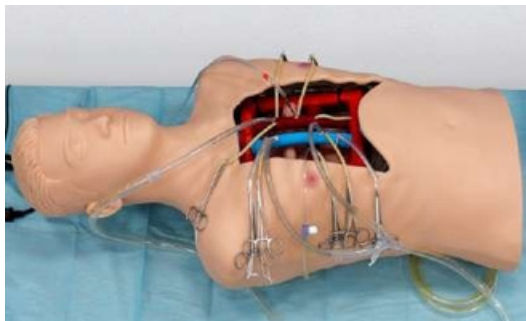




Bakulev CPBSS

A simulator for practicing the basic technical skills in cardiopulmonary bypass supported heart surgery using the Teacher Cardio software and a set of scenarios. Turnkey solution for training young healthcare professionals and supporting advanced professional training, CME courses and accreditation.

- The adult patient head and torso with access to the vessels of the venous and arterial segment in the chest area
- A removable blood vessels imitation module
- Controlling simulation and patient parameters using the Teacher Cardio software with pre-installed scenarios
- The simulator set includes an all-in-one PC to imitate a bedside monitor and a display to demonstrate images of a TEE test



List of equipment:

Adult patient head and torso - 1 pc
Display - 2 pcs
Laptop - 1 pc
Teacher Cardio, Bedside Monitor software
Dry removable module imitating inferior and superior vena cava, aorta, pulmonary artery and vein - 1 pc
Anaesthesia screen - 1 pc
J-tip wire-reinforced venous cannula for cardiopulmonary bypass - 1 pc
J-tip wire-reinforced aortic cannula for cardiopulmonary bypass - 1 pc
Catheter for left heart catheterization - 1 pc
Head up/down tilt table equipment - 1 pc
Surgical drape sheets - 4 pcs
Vascular forceps - 1 pc
Curved Billroth hemostatic forceps - 8 pcs
Angled jaws aorta vascular clamps - 1 pc
Towel clamp - 8 pcs
Straight surgical clamps for cardiopulmonary bypass machine and cannulae - 3 pcs
Purse string suture tourniquet - 6 pcs
Vena caval tourniquet - 2 pcs
Cardiovascular tourniquet stylet - 1 pc
Vascular tape, 20 cm - 2 pcs
Dissector to simulate cannulation - 1 pc
Cardioplegia cannula (Dufaut needle imitation) - 1 pc
Loop tubing 3/8, 100 cm - 1 pc
Left ventricular drainage tubing 1/4, 100 cm - 1 pc
Cardioplegia tubing 1/8, 100 cm - 1 pc
Y connector 3/8-3/8-3/8 - 1 pc
Leur lock adapter, 3/8-3/8 - 1 pc
Scalpel No.11 - 1 pc

Contact us

To connect with your local Regional Representative
email: sales@arcturus-solutions.co.za



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.

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Sales Enquiries:

 +27 76 811 5888
 sales@arcturus-solutions.co.za



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