

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!



Contents

Patient Simulators

Leonardo Adult Simulator	4
Mia Newborn Simulator	14
Arthur Pediatric Simulator	22
Lisa ALS Manikin	30

Patient/Surgical Simulators

LapVision Hybrid	36
Software	44

Surgical Simulators

LapVision	48
AngioVision	58
HystVision /TUR	64
EndoVision	74
Bakulev CPBSS	78

Diagnostics Simulators

MATT & Pediatric MATT	84
SonoVision	90
Leonardo VR	94
Services	98

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



MedVision Auscultation Task Trainers



MATT & Paediatric MATT

Our portable auscultation skills trainers are highly effective for learning cardiac, lung and abdomen auscultation points and sounds.

A rich library of sounds with amplified details for trainees to develop their patient assessment skills will allow for both cost and time efficiencies in your training programs, while ensuring the highest standards in learning outcomes.



The sounds library conforms to American Thoracic Society guidelines.



Easy to teach... Easy to learn!

- Adult and Pediatric manikins available
- 39 Heart, 9 Lung and 14 Abdomen sounds
- Anterior and Posterior auscultation points
- All auscultation points light up
- Transmit sounds to external speakers
- Compatible with a real stethoscope



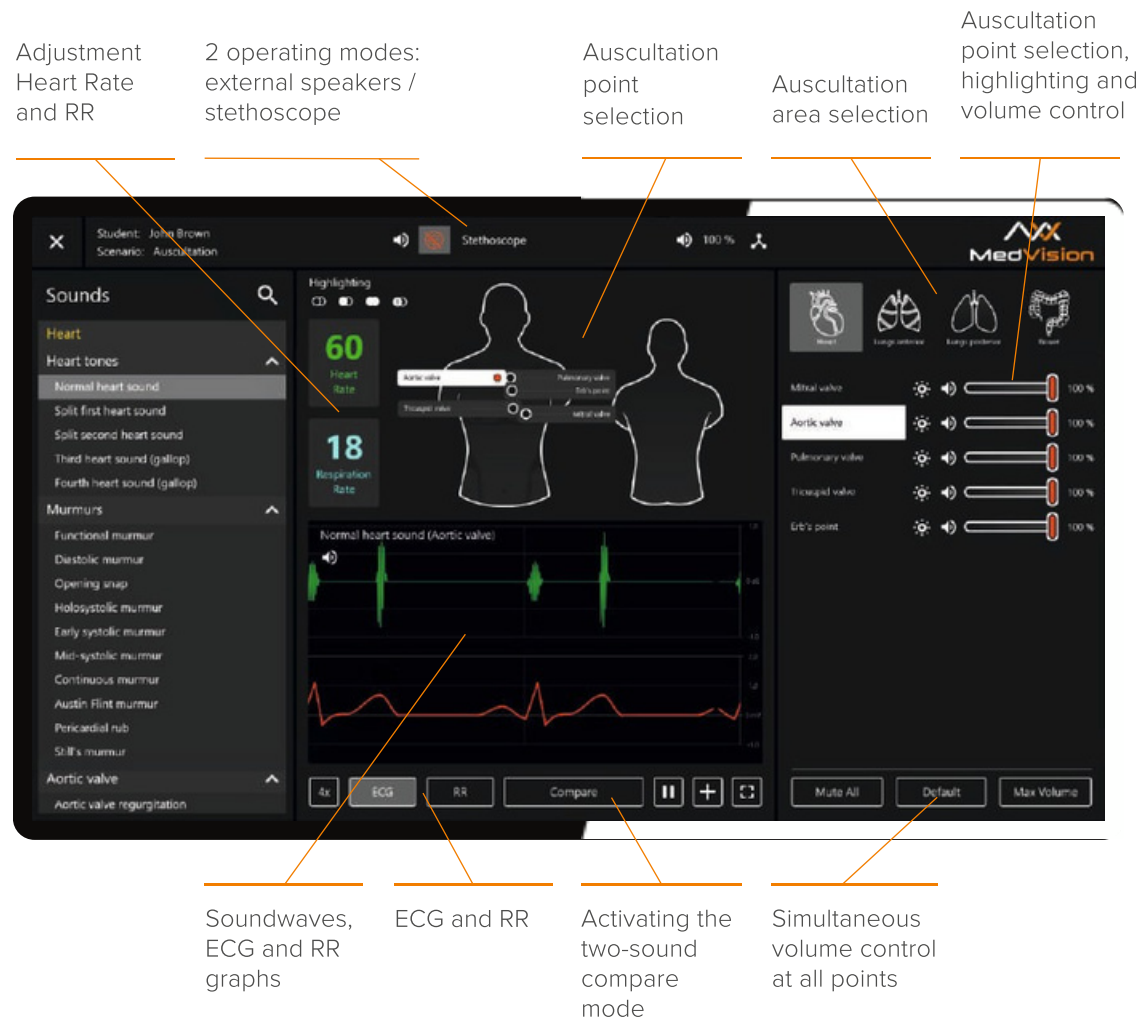
Challenge assessment skills from clear clinical findings to detecting faint murmurs. The flexible operating tablet allows you to:

- Activate or deactivate auscultation points and backlighting individually
- Adjust volume and intensity of sounds
- Change HR and RR for a sound that is currently being reproduced
- Compare sound recordings
- Sound matches ECG diagrams and other vital parameters



Available in several skin tones

Intuitive operating tablet to support gradient levels of skills development



MedVision simulator software allows for analyzing sounds in four critical areas: cardiac, lungs (anterior & posterior) and abdominal quadrants. Two different sounds can be compared within the same auscultation area. ECG and Respiratory Rate (RR) graphs are also shown.

Features

Cardiac auscultation

- Normal heart sound
- Split first heart sound
- Split second heart sound
- Third heart sound (gallop)
- Fourth heart sound (gallop)
- Functional murmur
- Diastolic murmur
- Opening snap
- Holosystolic murmur
- Early systolic murmur
- Mid-systolic murmur
- Continuous murmur
- Austin Flint murmur
- Pericardial rub
- Graham Steell murmur
- Aortic valve regurgitation
- Aortic valve stenosis
- Aortic stenosis and regurgitation
- Mitral valve regurgitation
- Mitral valve stenosis
- Mitral valve prolapse
- Mitral valve stenosis and regurgitation
- Mitral valve stenosis and tricuspid valve regurgitation
- Pulmonary valve stenosis
- Pulmonary valve regurgitation
- Tricuspid valve regurgitation
- Coarctation of the aorta
- Hypertrophic cardiomyopathy
- Patent ductus arteriosus
- Atrial septal defect
- Ventricular septal defect
- Acute myocardial infarction
- Congestive heart failure
- Systemic hypertension
- Acute pericarditis
- Dilated cardiomyopathy
- Pulmonary hypertension
- Tetralogy of Fallot
- Ventricular aneurysm

Auscultation of lungs (anterior & posterior)

- Bronchial respiration
- Vesicular respiration
- Diminished vesicular respiration
- Coarse crackles
- Fine crackles
- Wheezes
- Rhonchi
- Stridor
- Pleural friction rub

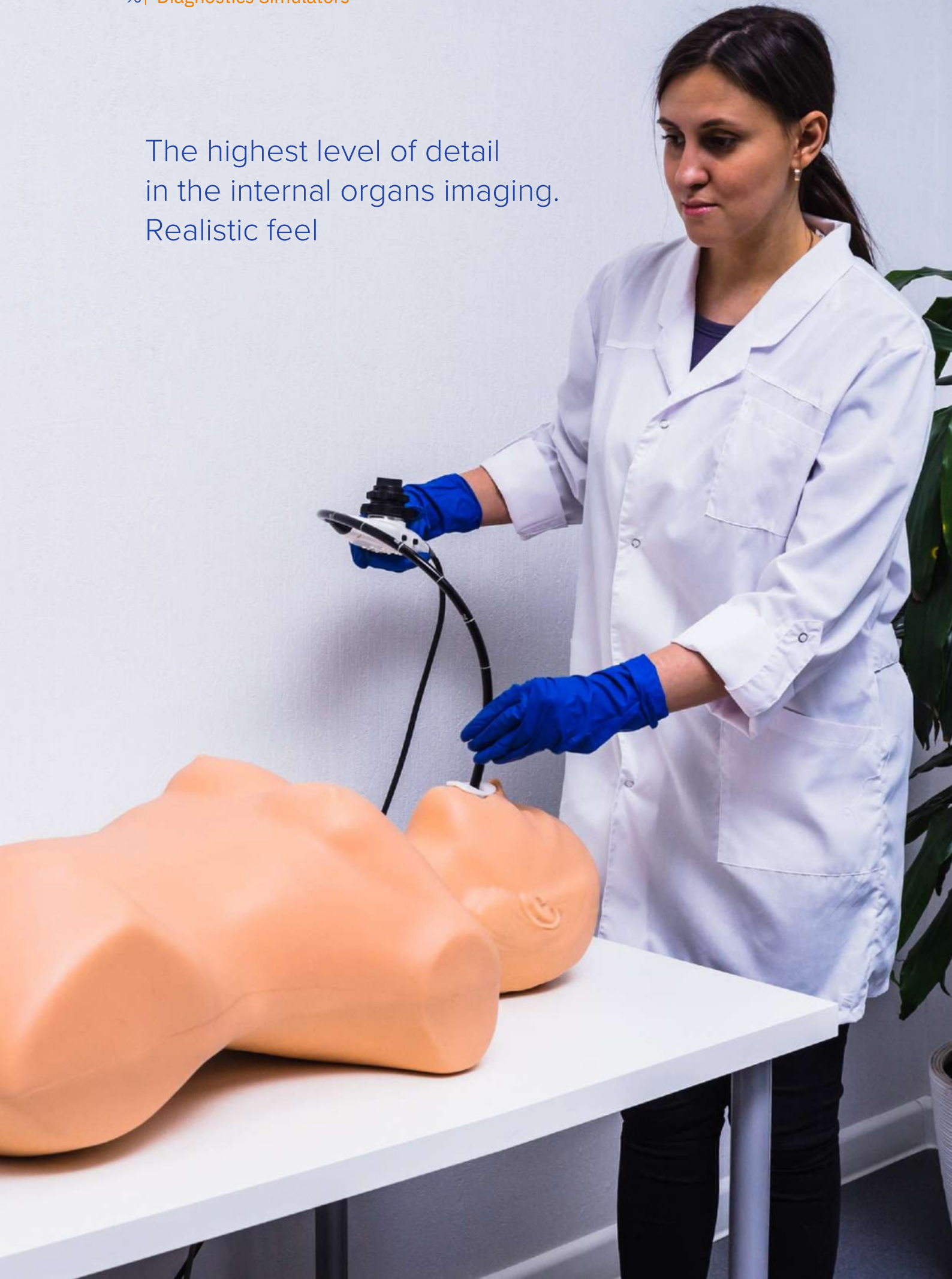
Abdomen auscultation

- Normal bowel sound
- Hyperactive sounds
- Hypoactive sounds
- Borborygmus
- Capotement
- Peritoneal friction rub
- Normal bowel sound with bruits
- Irritable bowel syndrome
- Diarrhea
- Bruits due to renal arteries stenosis
- Constipation
- Ulcerative colitis
- Crohn's disease
- Paralytic ileus

Highlights

- 39 heart sounds
- 9 lung sounds
- 14 abdomen sounds
- All the auscultation positions light up
- Sounds can be transmitted to an external speaker
- Realistic manikin skin
- Anterior and posterior auscultation points
- Rotatable platform
- Compatible with a real stethoscope

The highest level of detail
in the internal organs imaging.
Realistic feel





SonoVision

SonoVision ultrasound diagnostic simulator is a professional medical training tool. This virtual simulator is designed for developing and improving diagnostic medical sonographer skills. SonoVision is used by students and practitioners in clinics and hospitals. An ultrasound simulator is a great add-on to traditional healthcare education and professional development training.

The next-generation ultrasound simulator ensures the highest level of detail of internal organs imaging. An anatomically correct manikin provides realistic feel and imaging during scanning. The simulator offers more than 40 clinical scenarios.

The musculoskeletal structure of the torso is based on real Computed Tomography (CT) images. The skin is made of special silicone resistant to constant mechanical stress and the use of an ultrasound gel.



The system uses realistic imitators of ultrasound probes.



3D model of organs displayed in a virtual reality window
Thorough medical history for each clinical case
Real-time ultrasound probe tracking
Ultrasound measurements and image optimization

The anatomically correct phantom torso and head and a lifelike ultrasound probe imitator are the important elements of the simulator.

The simulator is designed to support the learning of fundamentals and features of diagnostic ultrasound. Simulations are run in a realistic, fully-immersive and anatomically correct environment without putting patients at risk.



The software includes a set of training scenarios. Each scenario has a theoretical part with instructional materials and a practical part with a set of parameters. Students are expected to develop the most suitable course of action based on such parameters.

Training module library

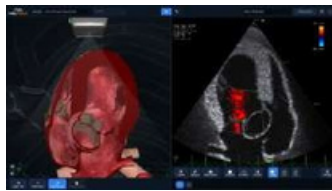
The training module library includes exercises for practicing pelvic (male and female), abdominal and chest ultrasound. Each clinical case has a thorough history to make the learning process more deep and efficient.



Anatomy of the healthy patient



Ultrasound study module for abdominal organs and retroperitoneal space



Transthoracic echocardiography (TTE) skills training module



Transesophageal Echocardiography (TEE) skills training module



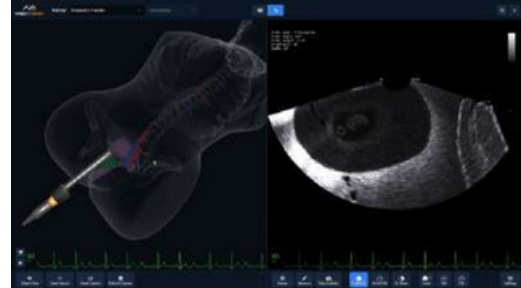
Transthoracic Echocardiography (TTE) based on data from real patients training module



Focused assessment with sonography for trauma (FAST) skills training module



Gynecology basic skills training module



The first trimester obstetrics skills training module



Urinary bladder (female anatomy) and female pelvis (uterus, ovaries) ultrasound scanning skills training module with abdominal transducer



Thyroid ultrasound scanning skills training module

Leonardo VR is a comprehensive system to train clinical reasoning and decision making.



EXAMINATION



ANALYSES



TREATMENT



SCREENING



DRUGS



Leonardo VR

A Virtual Patient Simulator is a large interactive multitouch table presenting a virtual patient. The simulator screen also displays physiological parameters, ECG data, assigned laboratory tests results and Xrays of a virtual patient necessary for diagnostic decision making. The simulator allows realtime tracking of any changes in the condition of the virtual patient, manipulations performed by students and relevant patient's reactions to the treatment. After the exercise is finished, the screen displays the assessment of the student's actions according to the specified criteria.

The simulator offers clinical scenarios of different levels of difficulty covering various medical specialties, i.e. cardiology, endocrinology, traumatology, neurology, obstetrics, etc. With the use of the virtual simulator, students greatly improve their skills in making clinical decisions, which increases the competence of health care professionals and reduces the risk of medical errors.

Leonardo VR is a touchscreen table where you can interact with a virtual patient. The table has been designed to acquire diagnostic skills, run treatment, practice clinical decision making and thus accelerate various skills of a healthcare professional.

Control panel

Tap the button and interact with the patient. In the drop-down list, select a question and get a preset reply from the patient.



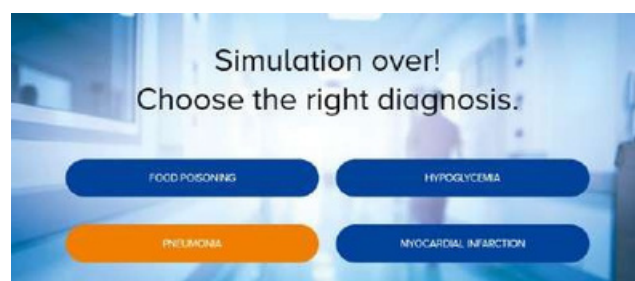
Simulation-based development of clinical reasoning

Patient Library

More than 20...

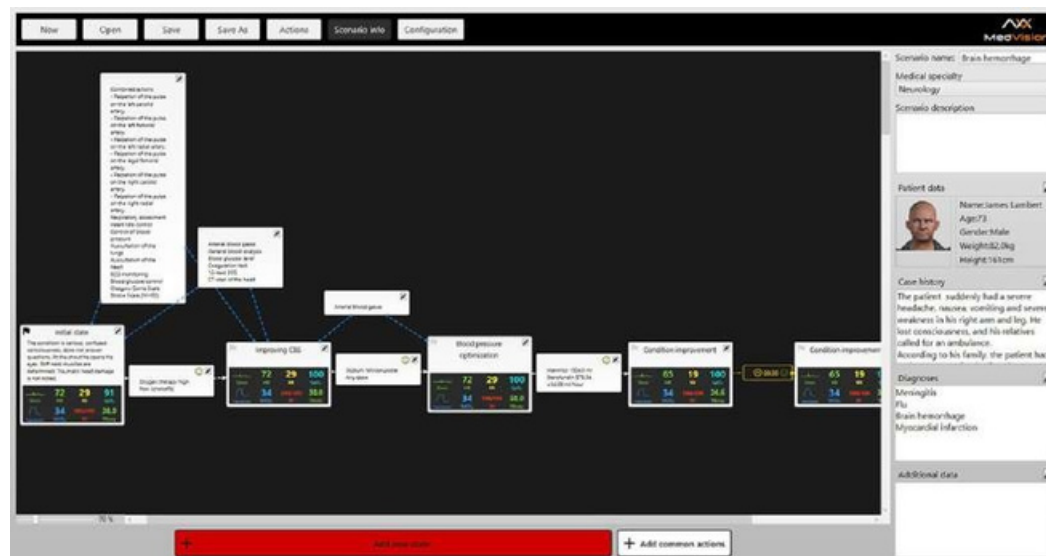


At the end of the simulation, the student should decide upon the diagnosis



Scenario constructor

With Scenario Constructor, you can create an unlimited number of new scenarios and thus build up the functionality of Leonardo VR. The software allows setting the patient's condition as well as triggers causing the change of state.



Clinical case library

- Hypoglycemia
- Septic shock associated with tricuspid valve endocarditis
- Ischemic attack
- Embolic stroke
- Septic shock associated with aortic valve endocarditis
- Diabetes with unstable angina
- ST segment elevation myocardial infarction
- Monomorphic ventricular tachycardia
- Acute hypertensive encephalopathy
- Asthma
- Unstable angina
- Septic shock secondary to pneumonia
- Warfarin-induced brain hemorrhage
- Hypoglycemia induced by sulfonylurea overdoses
- Acute coronary syndrome
- Septic shock associated with hemodialysis with a central venous catheter
- Cardiac tamponade
- Brain hemorrhage



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.

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

Sales Enquiries:

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



ARCTURUS TECHNOLOGY SOLUTIONS

www.medvisiongroup.com