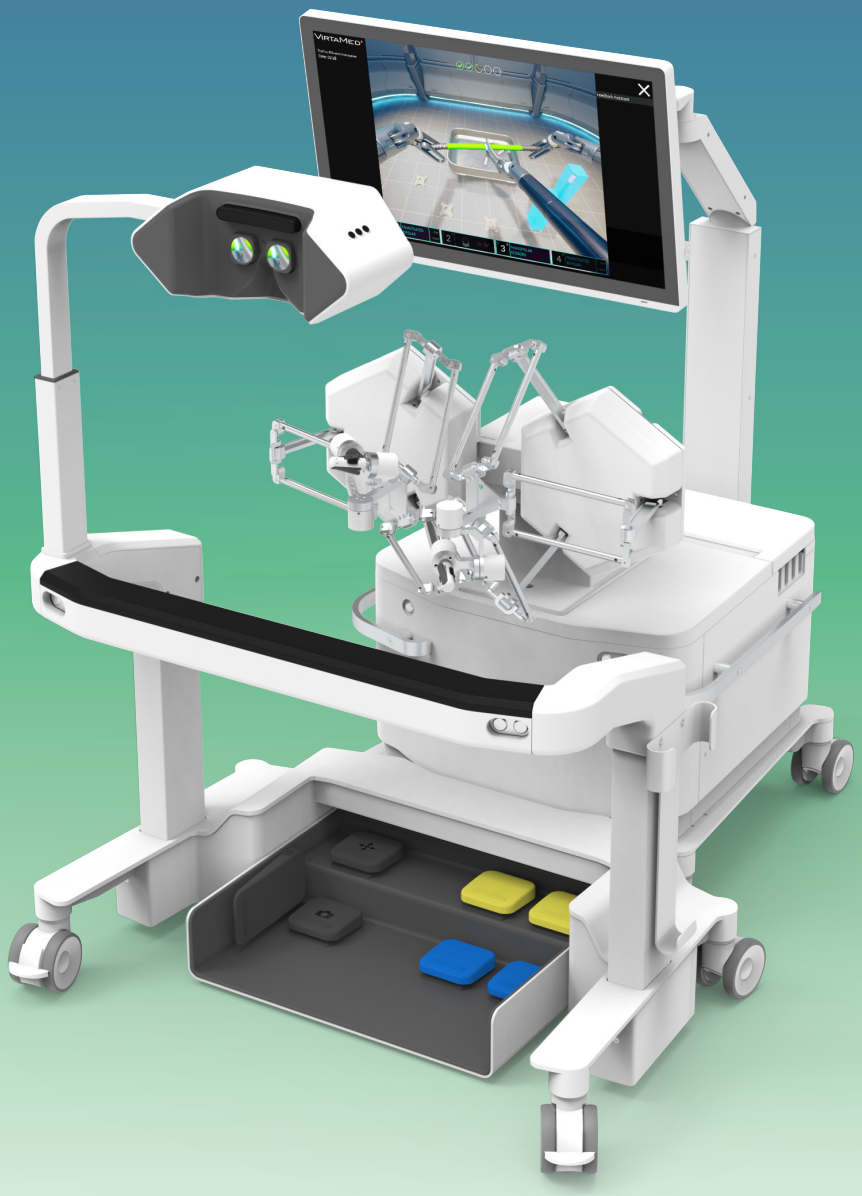
VIRTAMED
Better Surgeries



VirtaMed RoboS™

Robotic surgery simulator: independent learning, seamless transition to surgery

Modules from other specialties – LaparoS™, GynoS™, ArthroS™ and UroS™ – are compatible with the RoboS™ platform.

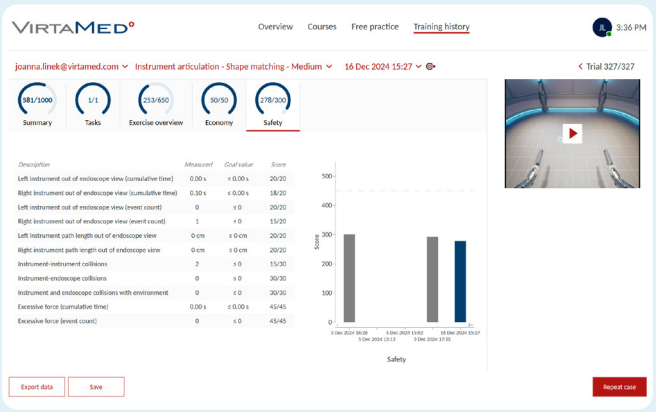
virtamed.com

RoboS™

Step into the future of surgical training with VirtaMed's robotic surgery simulator. Designed for soft tissue robotic surgery residency programs, our simulator is your passport to proficiency, offering expert-specified metrics that pinpoint unsafe behavior and guide you towards safe surgical performance. Experience a true-to-life interface, mirroring the most widely used robotic consoles. With VirtaMed, skills transfer is assured, regardless of your access to a robotic console. Plus, hospitals and training centers gain the power to customize their own training curriculum. With VirtaMed, you're not just learning – you're mastering the art of robotic surgery!

Elevate your surgical skills

A realistic, market standard training tool with customizable programs designed to ensure accelerated proficiency on extraordinary robotic-assisted surgery platforms.



Key features

- Adjustable and ergonomic console
- Gravity free controller + handles with clutching feature
- Advanced 3D visualization system
- Standard pedal layout
- Realistic training environment
- Customizable curriculum
- KOL approved metrics
- Team training with two people (optional module)

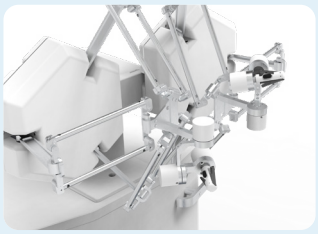
"Every surgical robot includes a VR simulator. While it might be tempting to see it as a cool gadget for residents or just an advanced instruction manual, its true potential lies far beyond. In my experience as a preceptor, I've witnessed numerous cases where a well-designed exercise would have been crucial in significantly improving surgeons' performance. VirtaMed's focus is on providing hardware and exercises specifically crafted to aid in the acquisition and retention of critical surgical skills, ensuring practical, hands-on learning that translates directly to improved patient outcomes. Invest in a system that goes beyond being a navigation of technical specs. Choose a platform designed to truly elevate surgical expertise, from any level."

Federico Gheza, MD, PhD
Candidate AI in Medicine and Surgical Education Expert

"A key highlight of our product is its capability to seamlessly translate real-life situations into training scenarios and vice versa. One significant challenge with the leading robotic systems is that, unless an institution possesses an additional console for a dedicated training area outside the operating room, these systems cannot be utilized during working hours or when surgeries are being performed. This limitation restricts the availability and accessibility of training opportunities. This is where RoboS will be instrumental."

Federico Serrot, MD
Medical Director, Bariatric & Metabolic Surgery, Cleveland Clinic, FI

Why RoboS™ stands out



Hardware closely mimics the console

To become proficient as a robotic surgeon, one needs to practice with a simulator that closely mimics leading robotic surgery consoles. It should replicate critical interfaces, tactile feedback, and the ergonomic setup, including handles, workspace, immersive display, and seating. This hands-on experience is vital for developing the fine motor skills and spatial awareness required for successful surgeries.

Relevant exercises and metrics

Metrics are essential for shaping a surgeon's console performance by promoting desired behaviors and discouraging unwanted ones. Drawing on our robotics simulation expertise, we developed a powerful tool with diverse content, cases, and features, including a new Feedback Assistant that shows exactly where points are lost. Additionally, we're collecting vast amounts of data to improve training.

Independent training pathway

Robotic consoles are often in use during actual surgeries and are not always available for practice, prospective robotic surgeons need access to valid training pathways that are independent of direct access to these consoles. Effective training programs should provide comprehensive education and simulation opportunities without relying on the availability of the robotic systems in a clinical setting.

Skills transfer from simulator to robotic console

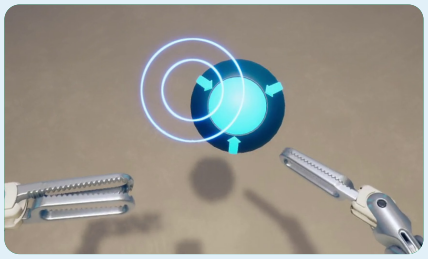
Working at a hospital or training at an institution where skills transfer from simulation to the robotic console is assured is essential for a surgeon's development. Hospitals play a key role in controlling the training and education of their surgeons, ensuring that the skills learned in simulation translate effectively to real-world robotic surgeries. This environment helps in reinforcing the training and adapting it to practical applications in a clinical setting.

Team training

RoboS™ is the first solution to enable true team training in robotic surgery – something not even possible on the actual robotic console. By integrating the fully sensorized abdomen from the LaparoS laparoscopic trainer with the RoboS system, bedside assistants can now train in real-world skills such as abdomen orientation, trocar placement, instrument insertion angles, and seamless coordination with the surgeon. This powerful capability enhances OR team performance, leading to safer, more effective robotic procedures.

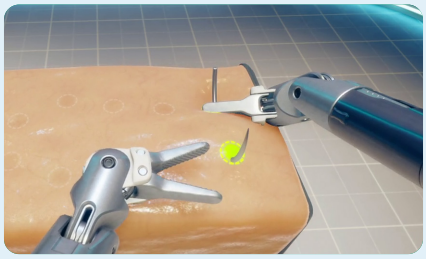
RoboS™ Fundamental skills

Build a strong foundation in robotic surgery with the Fundamental Skills module. Covering essential techniques such as clutching, non-dominant hand control, endoscope handling, suturing, and working without haptic feedback, this module enhances precision, coordination, and adaptability. Through progressive exercises, trainees develop critical skills needed for confident and efficient robotic surgery performance.



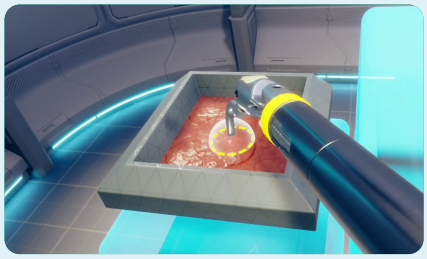
Clutching

- Clutching basics
- Short range clutch
- Long range clutch
- Long range clutch and horizon control



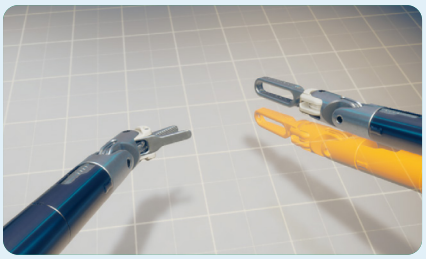
Needle handling

- Needle pose
- Needle targeting
- Needle handling (easy)
- Needle handling (difficult)



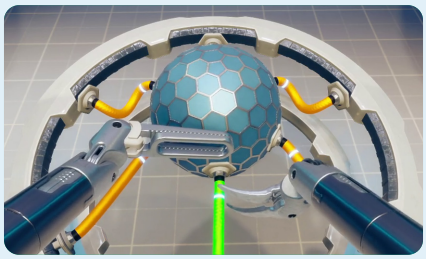
Energy

- Monopolar and bipolar basics (easy)
- Monopolar and bipolar basics (difficult)



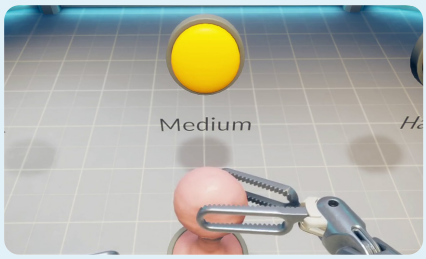
Instrument articulation

- Instrument pose
- Shape matching
- Work behind obstacles



Non-dominant hand

- Traction and isolated cuts
- Pushing and isolated cuts



Working without haptic feedback

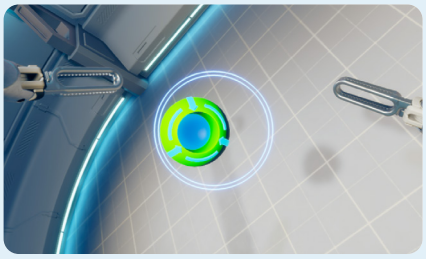
- Recognition of hardness | Grasping

4th arm

- 2nd to 4th arm transpose

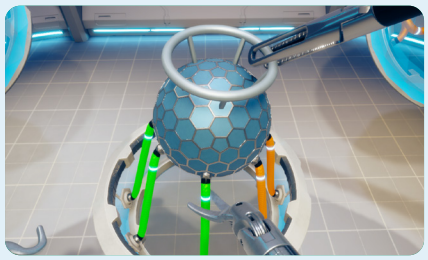
Bimanual coordination

- Bimanual weight collection



Endoscope handling

- 30° optic

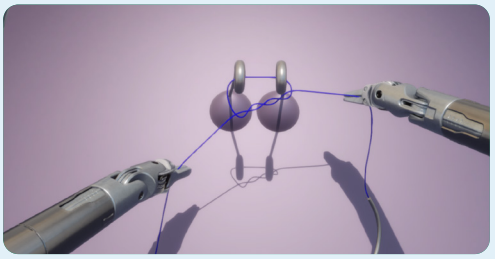


Team training

- Long range clutch
- Long range clutch – Communication
- Tube clipping
- Tube clipping – Communication
- Passing objects - Left
- Passing objects - Right
- Exposure | Traction
- Exposure | Traction - Communication

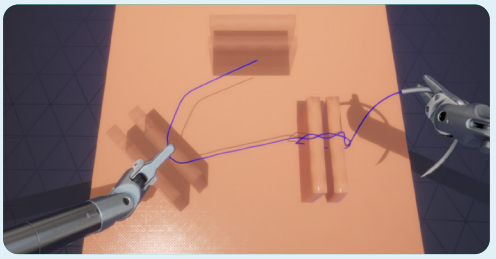
RoboS™ Advanced suturing

Refine your suturing skills with the Advanced Suturing module. Designed to enhance precision, efficiency, and confidence, this module guides trainees through complex techniques like continuous suturing and surgeon's knots. With real-time feedback and progressive challenges, it prepares surgeons for the high-precision demands of robotic surgery.



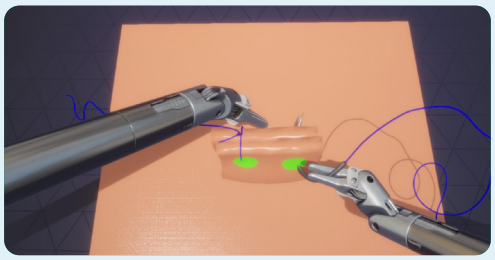
Knot tying

- Half knot – Guided/Unguided
- Square knot – Guided/Unguided
- Surgeon's knot – Guided/Unguided



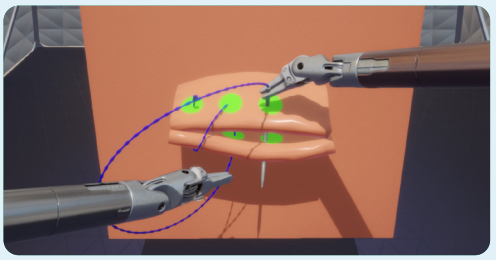
Suture pad introduction

- Needle driving
- Half knot
- Surgeon's knot



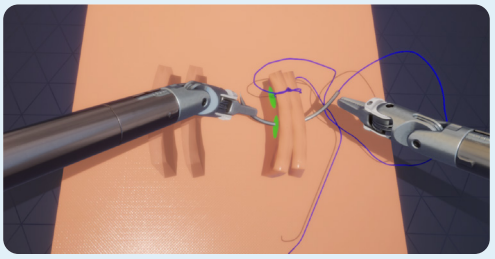
Interrupted suturing

- Forehand vertical
- Forehand oblique
- Backhand oblique
- Backhand horizontal
- Training for ventral hernia repair



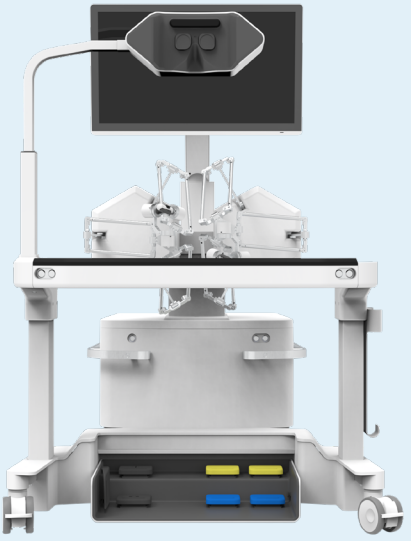
Running suturing

- Needle driving with barbed suture
- Forehand needle driving with braided suture
- Backhand needle driving with braided suture
- Running suturing with braided suture
- Training for vaginal cuff closure with barbed suture



Anastomosis training

- Training for anastomosis 1
- Training for anastomosis 2



Expert panel

"During my decade of teaching and research in robotic surgery at the AdventHealth Nicholson Center, I have had the opportunity to use every simulation platform that was created to mimic surgical robots. It is a significant challenge to create a system that contains the best virtual reality software, effectively designed exercises, meaningful metrics, a hardware interface that replicates the real robot, and do it all at a price point that hospitals and education centers can afford. The VirtaMed RoboS has taken a significant step forward in all of these categories, making it a powerful tool in the education pathway for surgeons seeking to master robotic techniques."

Roger Smith, PhD
Award Winning Robotic Surgery and Simulation Research Scientist

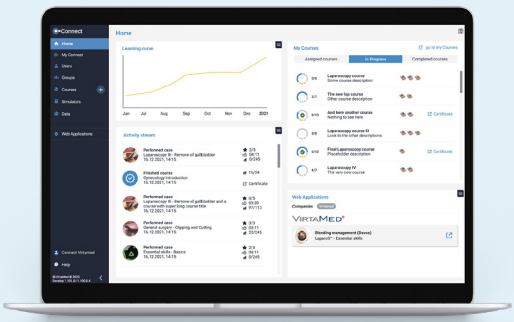
"For a long time, I found simulation tools in robotic surgery were either hardly accessible or not realistic enough compared to the real console. Then I discovered RoboS. It felt remarkably similar to leading robotics consoles on the market. Unbelievable for a system that works outside of the operating room!

I feel like RoboS is a game changer. For the first time universities and hospitals will have access to a simulation system that will allow them to optimise the precious time of their robotic surgery operating rooms. Even before the surgeon or the hospital, the first beneficiary will be the patient himself."

Jean-Pierre Henry
Chairman & Co-Founder, STAN Institute

VirtaMed Connect

Connect is VirtaMed's cloud-based solution that lets you access your simulator data anytime from anywhere. Use Connect to remotely create courses, track student progress, and manage your simulator usage – all from the convenience of your desk or tablet. With Connect, trainees are motivated through online leader boards and can compare their own results over time.



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