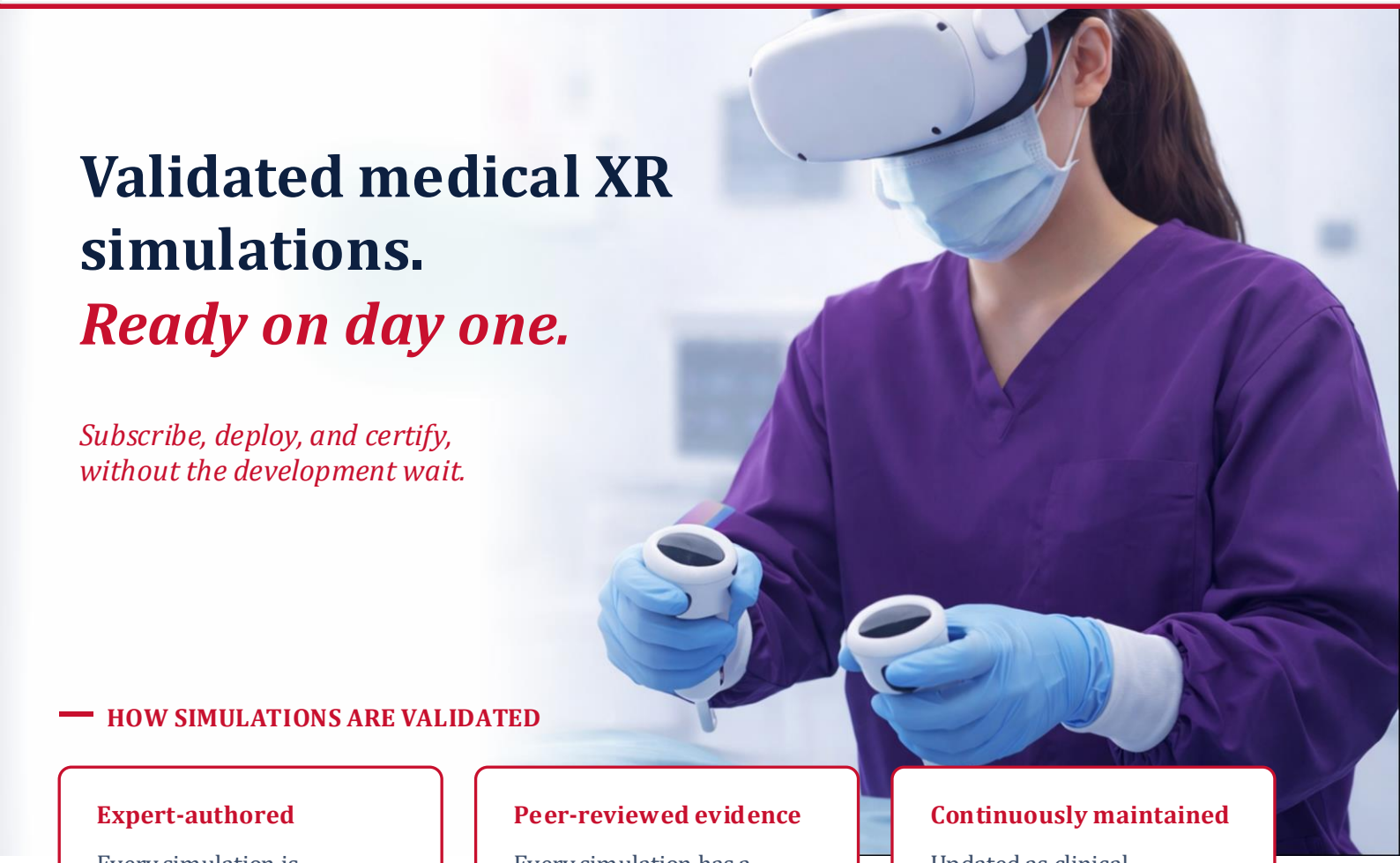
Validated medical XR simulations.
Ready on day one.

Subscribe, deploy, and certify, without the development wait.



HOW SIMULATIONS ARE VALIDATED

Expert-authored

Every simulation is validated by a subject matter expert before release. No exceptions.

Peer-reviewed evidence

Every simulation has a clinical publication behind it.

See the evidence →

Continuously maintained

Updated as clinical guidelines evolve. Subscribers always get the latest version automatically.

HOW THE SIM LIBRARY WORKS · SUBSCRIBE · DEPLOY · EARN

Subscribe. Deploy. *Train your team.*

- ***Subscribe per title.***
  Pick the simulations you need, per year, across three complexity tiers. Each subscribed SIM unlocks full features for all your registered users, no per-seat fees on top.

- ***Deploy across any headset.***
  Compatible with Meta Quest, HTC Vive, Pico, Apple Vision Pro, plus tablet + desktop fallback. Every Library SIM runs on VTC infrastructure.

- ***Build & earn.***
  Author your own SIM on ORamaVR Creator or commission a Custom SIM, publish to the Library, and earn on every license another institution buys. Distribution and billing handled by ORamaVR.

ORTHOPAEDICS

Total Hip Arthroplasty

Full-procedure hip replacement simulation, validated in peer-reviewed RCTs.

THA — VTC Simulation

No OR access
Train on any headset, no cadaver lab, no OR scheduling.

No scheduling constraints
Train on any headset, on demand — no expert availability or facility booking required.

Skill gaps
Real-time error detection surfaces weaknesses before the OR.

Team readiness
Co-op mode trains entire surgical teams, not just individuals.

Inconsistent scores
Every learner assessed to the same objective standard.

No audit trail
Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Correctly sequence the full Posterior Incision THA approach
2. Accurately position acetabular cup and femoral stem components
3. Identify and avoid critical intraoperative errors
4. Apply correct tissue handling and retraction techniques
5. Demonstrate procedural fluency under time pressure

CLINICAL EVIDENCE

NYU Langone Health

Randomized Controlled Trial — Journal of Arthroplasty, 2019

43%

Fewer stem retroversion errors31.4% vs 55.3% · p = 0.016

VR-trained PGY-1 residents scored 18 points higher in cadaver THA sessions vs. control. Statistically significant improvement in technical performance (p=0.048) after just 2 VR sessions.

READ FULL PAPER →

[VIDEO]

ORTHOPAEDICS

Total Knee Arthroplasty

Medial Parapatellar approach training, step-by-step, hyper-realistic.

TKA — VTC Simulation

No OR access
Train on any headset, no cadaver lab, no OR scheduling.

No scheduling constraints
Train on any headset, on demand, no expert availability or facility booking required.

Skill gaps
Real-time error detection surfaces weaknesses before the OR.

Team readiness
Co-op mode trains entire surgical teams, not just individuals.

Inconsistent scores
Every learner assessed to the same objective standard.

No audit trail
Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Correctly sequence all steps of the Medial Parapatellar TKA approach
2. Accurately perform tibial and femoral bone cuts
3. Position and seat implant components within target parameters
4. Identify and respond to intraoperative complications
5. Complete the full procedure within a proficiency-based time target

SIMULATION HIGHLIGHTS

Complete Procedure Coverage

Guides learners through every step of the Medial Parapatellar approach, from initial incision to wound closure, with comprehensive, step-by-step instruction.

Single & Co-op Modes

Supports individual self-paced practice and live instructor-led co-op sessions, enabling flexible deployment across residency and team training programmes.

Hyper-realistic Environment

Highly detailed surgical visuals and instrument interactions that closely replicate the real OR environment, supporting effective skill transfer.

[VIDEO]

DIAGNOSTICS

Covid-19 Strikes Back

PPE donning/doffing and nasopharyngeal swab training, clinically validated.

CVRSB — VTC Simulation · ***by Inselspital Bern***

PPE non-compliance
Drills correct sequences until they are automatic and second-nature.

No live patients
High-risk infection-control practice in a fully safe virtual environment.

Shortage of material
No PPE or swab supplies consumed, unlimited repetitions at zero cost.

Social distancing
Train remotely; no need to gather for in-person instruction.

Engagement
Gamified leaderboard keeps learners motivated and competing.

No audit trail
Detailed analytics track every error and measure overall compliance.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Correctly don and doff PPE following WHO-standard sequences
2. Perform nasopharyngeal swab collection with correct technique
3. Apply proper hand hygiene protocols at every critical step
4. Identify and self-correct donning/doffing errors in real time
5. Demonstrate retained skill one month after initial training

[VIDEO]

CLINICAL EVIDENCE

Inselspital — University Hospital Bern

Prospective Randomized Pilot Trial — JMIR Serious Games, 2021

+16%

sensorimotor performance improvement

VR-trained medical students scored significantly higher in nasopharyngeal swab performance vs. video instruction (p=0.03). Skill gains sustained at 1-month follow-up. Higher user satisfaction (p=0.01).

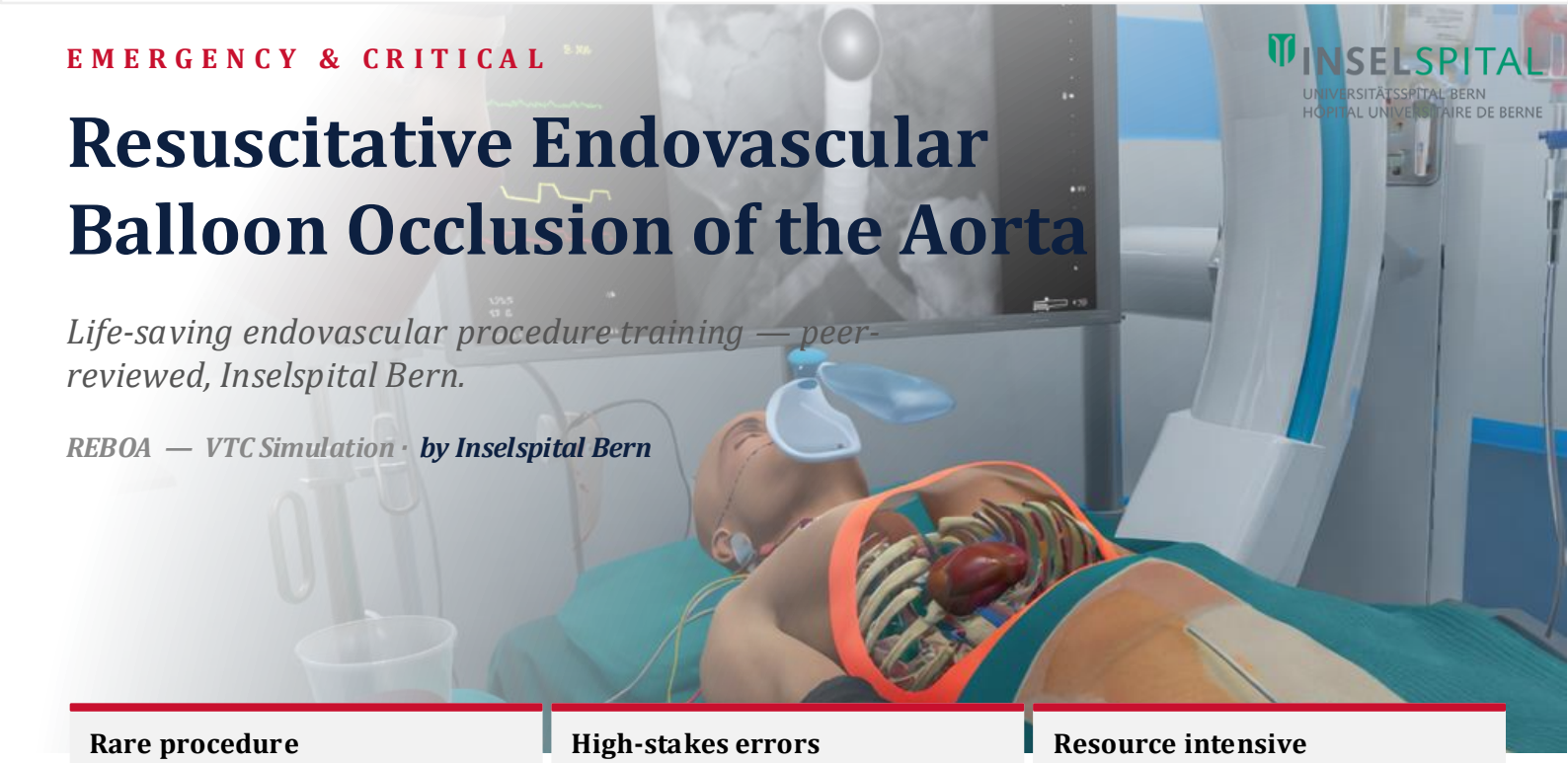
READ FULL PAPER →

EMERGENCY & CRITICAL

Resuscitative Endovascular Balloon Occlusion of the Aorta

Life-saving endovascular procedure training — peer-reviewed, Inselspital Bern.

REBOA — VTC Simulation · ***by Inselspital Bern***



Rare procedure
Practice a rarely-performed technique without requiring live exposure.

High-stakes errors
Repeat the procedure safely until every step is second nature.

Resource intensive
No high-fidelity manikin or animal model required, headset only.

Proctor bottleneck
Instructor-independent learning: train any time, any site.

Confidence gaps
Measurably increases procedural confidence before clinical practice.

No audit trail
Timing, precision and protocol adherence tracked automatically.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Correctly identify hemodynamically unstable trauma indications for REBOA
2. Execute arterial access and sheath placement in correct sequence
3. Position and inflate the balloon at the appropriate aortic zone
4. Recognize and respond to procedural complications in real time
5. Complete the full procedure within protocol-defined time parameters

CLINICAL EVIDENCE

Inselspital — University Hospital Bern

Prospective Feasibility Pilot — Int'l Journal of Emergency Medicine, 2023

p<0.001

confidence increase post-training

REBOA VR training was feasible without side-effects. Trainee confidence increased significantly (p<0.001). System usability rated 'good' (SUS median 77.5). High immersion and user satisfaction scores.

READ FULL PAPER →

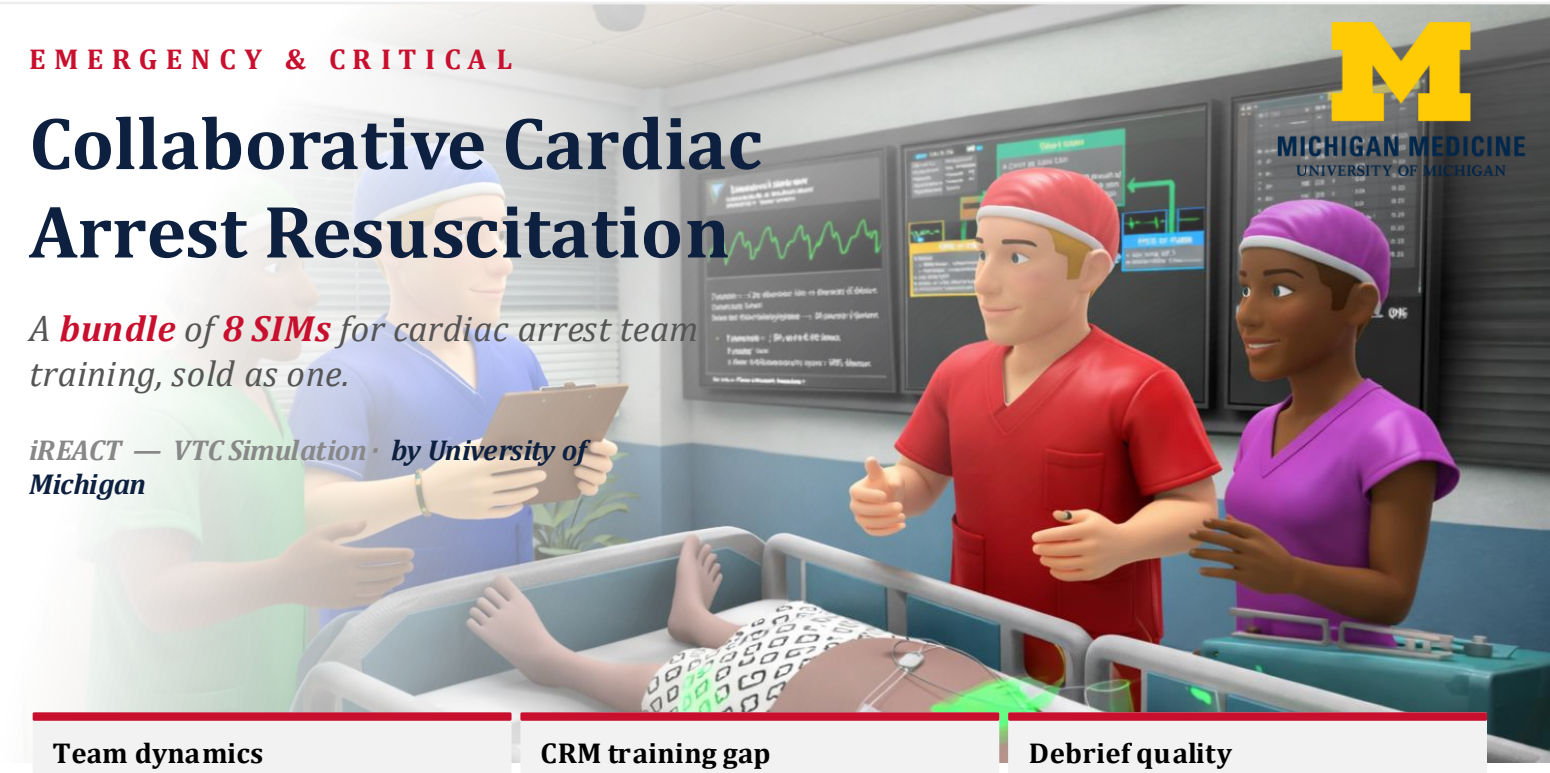
[VIDEO]

EMERGENCY & CRITICAL

Collaborative Cardiac Arrest Resuscitation

*A **bundle** of **8 SIMs** for cardiac arrest team training, sold as one.*

*iREACT — VTC Simulation · **by University of Michigan***



Team dynamics
100+ branching error paths expose real-team coordination breakdowns.

CRM training gap
Non-linear scenarios replicate the dynamic chaos of real cardiac events.

Debrief quality
XR Replay re-experiences sessions from any POV for structured review.

No scheduling constraints
Train as a team on any headset, on demand, no expert availability or facility booking required.

Learner visibility
Multi-modal data capture: actions, cognitive load, visual gaze.

No audit trail
Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Bundle of 8 SIMs · Beginner ×2, Intermediate ×3, MegaCode, Tutorials ×2. *Upon completion:*

1. Lead or participate in a structured cardiac arrest team response
2. Apply Crew Resource Management principles under pressure
3. Communicate role assignments clearly and concisely during resuscitation
4. Adapt decision-making as patient state changes dynamically
5. Conduct structured debrief using XR Replay from multiple perspectives

[VIDEO]

CLINICAL EVIDENCE

University of Michigan — Medicine

Prospective quasi-experimental RCT — ongoing (U-Michigan + ORamaVR)

Largest
ongoing RCT on cardiac arrest VR training

Formative evaluation confirms clinical usability and educational value. Comparing VR vs. mannequin-based training across resident-physicians. Diverse metrics: learning, satisfaction, resource allocation, and CRM aptitude.

READ FULL PAPER →

EMERGENCY & CRITICAL

Endotracheal Intubation

Master the intubation sequence with real-time error detection and feedback.

ENDO — VTC Simulation

No expert proctor
Structured in-simulation guidance replaces the need for a live expert in the room.

Error habituation
Real-time detection corrects technique errors before they become habits.

Time pressure
Sessions simulate clinical urgency, building speed alongside accuracy.

Inconsistent scores
Every learner assessed to the same objective standard.

Access to patients
Practice on demand, without requiring patient or manikin.

No audit trail
Accuracy, speed and compliance tracked automatically every session.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Perform pre-oxygenation and patient preparation in correct sequence
2. Select and assemble airway equipment without errors
3. Execute laryngoscopy and tube placement with correct technique
4. Confirm tube placement using available clinical indicators
5. Recognize and manage failed or difficult airway scenarios

SIMULATION HIGHLIGHTS

Error Recognition & Feedback

Real-time error detection flags technique deviations the moment they occur — correcting habits before they transfer to clinical practice.

Full Intubation Workflow

Covers every step from pre-oxygenation through tube confirmation, ensuring no critical phase is skipped or de-emphasised during training.

Performance Analytics

Automatically tracks accuracy, speed, and protocol compliance — providing objective data for competency assessment without requiring a live instructor.

[VIDEO]

"No patient should be anyone's first."

EMERGENCY & CRITICAL

Emergency Trauma Scenarios

Dynamic, unpredictable trauma scenarios for individual and team training.

ETS — VTC Simulation

Scenario variety
Wide range of trauma types prevents rote memorization of single paths.

Team coordination
Co-op mode trains full emergency teams in realistic high-pressure dynamics.

Decision-making
Unpredictable patient state changes force genuine clinical reasoning.

No scheduling constraints
Train on any headset, on demand , no expert availability or facility booking required.

Inconsistent scores
Every learner assessed to the same objective standard.

No audit trail
Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Apply primary and secondary trauma survey frameworks under time pressure
2. Prioritize and sequence interventions across diverse emergency presentations
3. Communicate critical decisions clearly in a team context
4. Adapt clinical response as patient condition evolves dynamically
5. Demonstrate consistent protocol adherence across varied scenario types

SIMULATION HIGHLIGHTS

Dynamic, Branching Scenarios

Patient conditions evolve unpredictably across sessions, preventing rote memorization and forcing genuine clinical reasoning every time.

Single & Co-op Modes

Trains individual decision-making or full emergency team coordination — adaptable to both personal skill development and team-based curricula.

Wide Trauma Range

Covers a comprehensive breadth of emergency presentations, ensuring broad exposure rather than mastery of a single, predictable case type.

[VIDEO]

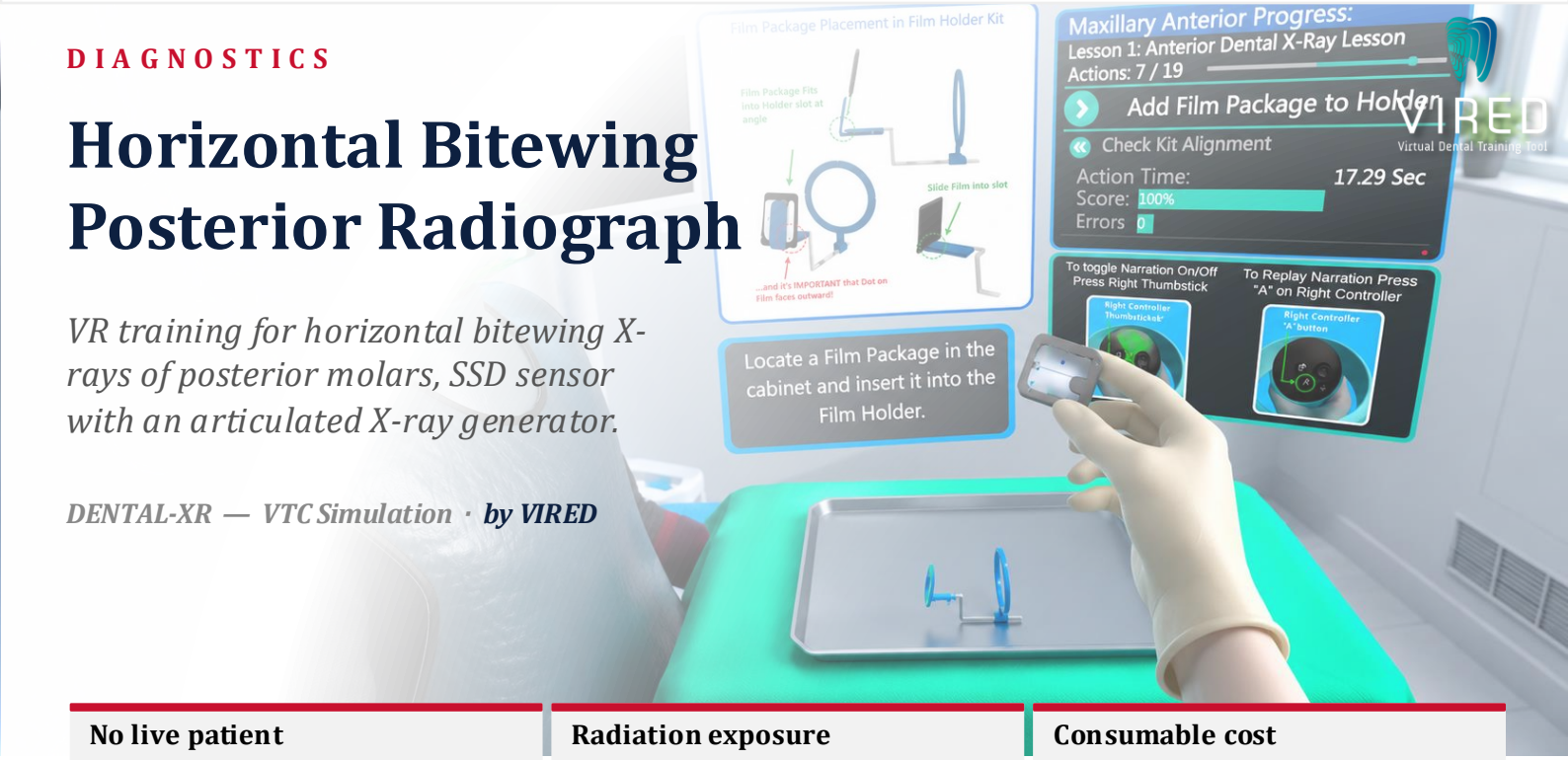
"No patient should be anyone's first."

DIAGNOSTICS

Horizontal Bitewing Posterior Radiograph

VR training for horizontal bitewing X-rays of posterior molars, SSD sensor with an articulated X-ray generator.

DENTAL-XR — VTC Simulation · by VIRED



No live patient

Practice the full intraoral X-ray workflow on any headset, no clinic slot or patient required.

Radiation exposure

Zero-radiation rehearsal of film placement, alignment and exposure.

Consumable cost

No film packages, holders or developer chemistry consumed, unlimited repetitions.

Holder-kit errors

Guided film, holder and ring assembly drills the correct. Sequence.

Inconsistent scores

Every learner assessed against the same bitewing and periapical technique standards.

No audit trail

Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Verify patient protective gear before any exposure
2. Select and assemble the bitewing film holder and aiming ring
3. Position the SSD sensor for posterior molar bitewing capture
4. Align the X-ray generator to the correct horizontal target and angulation
5. Select the correct exposure mode and processing settings

SIMULATION HIGHLIGHTS

Solid-state sensor workflow

Trains the full SSD posterior bitewing procedure — from kit selection through image capture.

Per-action analytics

Real-time score, error count and action time for every step — surfaces specific skill gaps for debrief.

Zero-radiation, zero-consumables

Unlimited repetitions on any compatible headset — no film, no developer, no clinic slot.

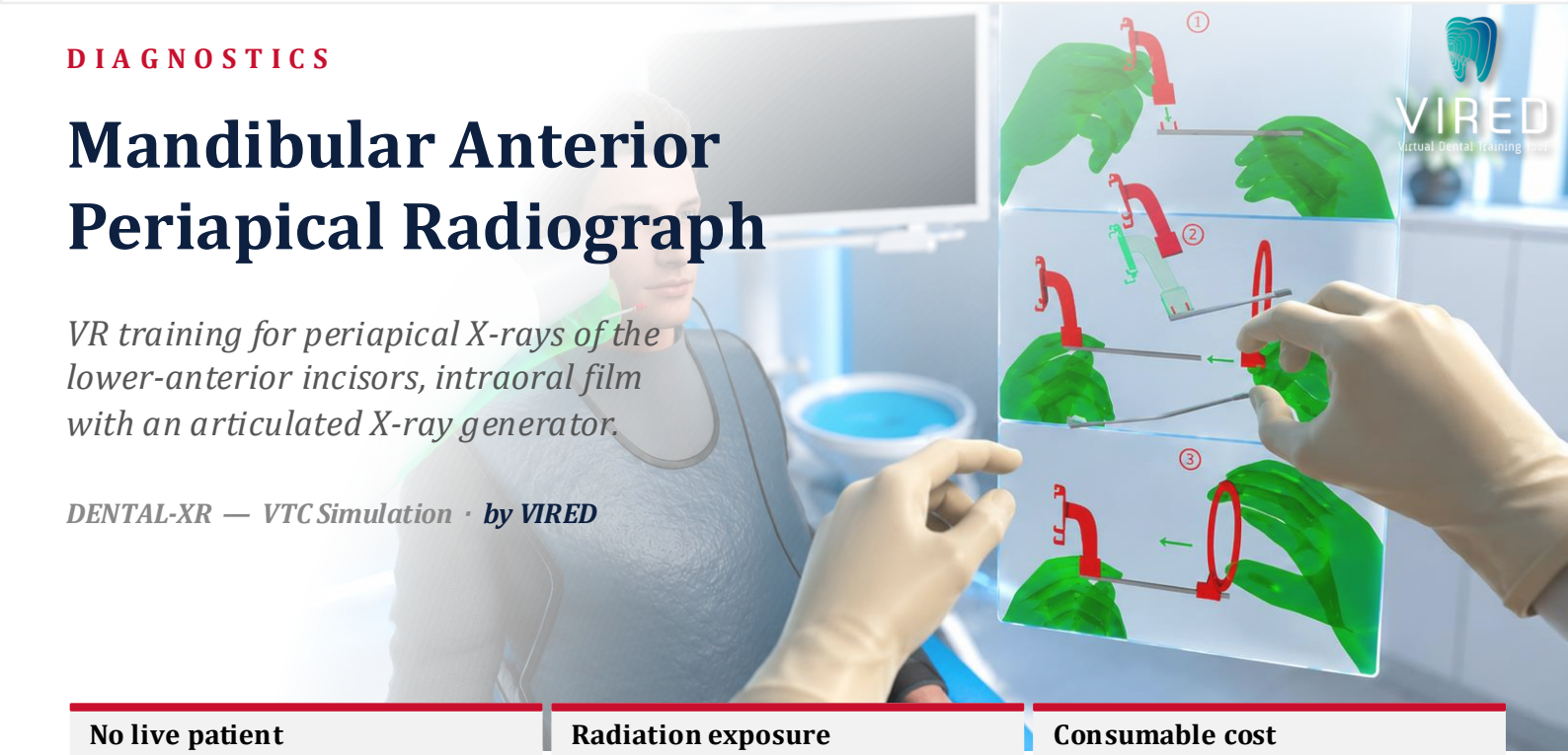
[VIDEO]

DIAGNOSTICS

Mandibular Anterior Periapical Radiograph

VR training for periapical X-rays of the lower-anterior incisors, intraoral film with an articulated X-ray generator.

DENTAL-XR — VTC Simulation · by VIRED



No live patient

Practice the full intraoral X-ray workflow on any headset , no clinic slot or patient required.

Radiation exposure

Zero-radiation rehearsal of film placement, alignment and exposure.

Consumable cost

No film packages, holders or developer chemistry consumed, unlimited repetitions.

Holder-kit errors

Guided film, holder and ring assembly drills the correct. Sequence.

Inconsistent scores

Every learner assessed against the same bitewing and periapical technique standards.

No audit trail

Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Verify patient protective gear before any exposure
2. Assemble the periapical film package, holder and aiming ring
3. Position the intraoral film for full-tooth-and-root capture of lower incisors
4. Align the X-ray generator to the correct vertical angulation
5. Process the exposed film through the scanner and evaluate image quality

SIMULATION HIGHLIGHTS

Intraoral film workflow

Trains the full lower-anterior periapical procedure — from film placement through processing.

Per-action analytics

Real-time score, error count and action time for every step.

Zero-radiation, zero-consumables

Unlimited repetitions on any compatible headset — no film, no developer, no clinic slot.

[VIDEO]

DIAGNOSTICS

Mandibular Posterior SSD Radiograph

VR training for posterior molar SSD X-rays, yellow-coded holder kit with an articulated X-ray generator.

DENTAL-XR — VTC Simulation · by VIRED

No live patient
Practice the full intraoral X-ray workflow on any headset, no clinic slot or patient required.

Radiation exposure
Zero-radiation rehearsal of film placement, alignment and exposure.

Consumable cost
No film packages, holders or developer chemistry consumed, unlimited repetitions.

Holder-kit errors
Guided film, holder and ring assembly drills the correct sequence.

Inconsistent scores
Every learner assessed against the same bitewing and periapical technique standards.

No audit trail
Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Verify patient protective gear before any exposure
2. Select the yellow color-coded posterior film holder kit
3. Assemble the holder kit (rod · clip · aiming ring) per CDC infection-control standards
4. Position the SSD sensor and align the X-ray imager for posterior mandibular capture
5. Select adult/child mode, set exposure time, and activate from the safe room

SIMULATION HIGHLIGHTS

18-action procedural workflow
Kit selection, sterile assembly, sensor placement, alignment, exposure — every step tracked.

CDC infection-control checks
Embedded knowledge questions on sensor sheath protocols and cross-contamination prevention.

Safe-room exposure protocol
Trains adult/child mode selection, exposure time, and post-shoot verification.

[VIDEO]

SURGICAL ROBOTICS

ERMIS VR 1

A bundle of 11 robotic-surgery skill scenarios, sold as one.

ERMIS VR 1 — VTC Simulation · ***by Isle Academy***

No robot access

Train on robotic systems without the physical robot or OR time.

Force feedback gap

Physics-based accuracy builds genuine instrument control and feel.

Infrastructure cost

Standalone XR headset, no additional hardware or infrastructure needed.

No scheduling constraints

Train on any headset, on demand, no expert availability or facility booking required.

Inconsistent scores

Every learner assessed to the same objective standard.

No audit trail

Auto-generated competency records, IFU-aligned and audit-ready.

SCENARIO LIBRARY

Guided exercises included in this title - in order of progression:

1 Wrist Articulation 1
Precise control of the instrument's wristed joints; coordinated movement in a confined workspace.

2 Wrist Articulation 2
More complex wrist movements performed with precision, reinforcing fine motor control for advanced tasks.

3 Camera 0
Basic endoscopic camera control - framing, zoom and maintaining a stable surgical view.

4 Clutch
Reposition instrument controls relative to the hands to manage workspace limits and instrument range.

5 Camera 30
Control the endoscope at a 30-degree angle; orient the view and navigate around structures.

6 Sea Spikes 1
Grasp and transfer small objects with the wristed joints - targeting, pickup and controlled placement.

7 Sea Spikes 2
Builds on Sea Spikes 1 with more precise grasping, transfer and placement under higher demand.

8 Rollercoaster 1
Guide the instrument tip along a set path; control curves, alignment and instrument orientation.

9 Rollercoaster 2
Tighter curves and varied elevations while keeping accurate alignment along the track.

10 Needle Pose
Position and orient a needle within the wristed joints for effective robotic suturing.

11 Ring Tower Transfer
Pick up rings at varying heights and transfer them between posts across spatial levels.

CLINICAL EVIDENCE · Randomized Controlled Pilot Study, 2026 — READ FULL PAPER →

[VIDEO]

SURGICAL ROBOTICS

ERMIS VR 2

A bundle of 12 advanced robotic-surgery scenarios sold as one.

ERMIS VR 2 — VTC Simulation **by Isle Academy**

No robot access
Train on robotic systems without the physical robot or OR time.

Force feedback gap
Physics-based accuracy builds genuine instrument control and feel.

Infrastructure cost
Standalone XR headset, no additional hardware or infrastructure needed.

No scheduling constraints
Train on any headset, on demand, no expert availability or facility booking required.

Inconsistent scores
Every learner assessed to the same objective standard.

No audit trail
Auto-generated competency records, IFU-aligned and audit-ready.

SCENARIO LIBRARY

Guided exercises included in this title - in order of progression:

1 Three Arm Relay 1
Coordinate three robotic arms passing objects between instruments - timing and spatial awareness.

2 Three Arm Relay 2
Higher coordination: more complex transfers, tighter timing and greater precision.

3 Three Arm Relay 3
Increases the coordination demands of three-arm operation even further.

4 Energy Pedals 1
Activate and coordinate the energy pedals during instrument actions - layout, timing, safe engagement.

5 Energy Pedals 2
Alternate between different energy modes while performing instrument actions; reinforces accuracy.

6 Energy Vessel Dissection
Apply energy to dissect around a vessel with controlled handling and a safe working distance.

7 Puzzle Piece Dissection
Dissect along predefined boundaries, removing tissue while preserving surrounding structures.

8 4th Arm Cutting
Incorporate the fourth robotic arm during cutting for retraction, exposure and tissue control.

9 Combo Exercise
Integrates three scenarios into a single workflow with smooth, consistent transitions.

10 Needle Hoop Driving 1 (Experimental)
Drive a needle through a series of hoops; controlled wrist articulation and trajectory.

11 Needle Hoop Driving 2 (Experimental)
Tighter hoop spacing and more complex angles demanding precise wrist articulation.

12 Big Dipper (Experimental)
Drive a needle through entry points in a soft-tissue model; accurate trajectory and depth.

CLINICAL EVIDENCE · Randomized Controlled Pilot Study, 2026 — READ FULL PAPER →

[VIDEO]

GENERAL SURGERY

Complete Thyroidectomy Operation

Step-by-step thyroidectomy training: explore the neck anatomy and rehearse every step, from incision to gland removal.

THYRO — VTC Simulation · ***by Hellenic Society of Endocrine Surgeons***

No live patients

Rehearse the entire operation on a headset, with no OR, cadaver lab or patient required.

Critical-structure risk

Protect the recurrent laryngeal nerve, vessels and parathyroids with zero patient risk.

JARIA AI

On-demand procedural guidance from JARIA AI, trained on the official IFU, at any point in the session.

No scheduling constraints

Train on any headset, on demand, no expert availability or facility booking required.

Inconsistent scores

Every learner assessed to the same objective standard.

No audit trail

Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Identify key neck anatomy: thyroid gland, strap muscles, major vessels and critical nerves
2. Sequence the full thyroidectomy procedure from skin incision to gland removal
3. Apply dissection techniques that protect the recurrent laryngeal nerve and parathyroid glands
4. Achieve haemostasis and safely manage major vessels during gland mobilisation
5. Complete the procedure with correct technique in a risk-free, repeatable environment

CLINICAL EVIDENCE

Aristotle U. Thessaloniki · HSES

Blinded Prospective Randomized Controlled Trial — Updates in Surgery, 2025

23%

faster task completion vs. control group

19 surgery residents at the 2nd Surgical Department, Aristotle University of Thessaloniki. IVR group completed the neck-incision-through-CIONM-electrode-placement task significantly faster (27.25 vs 35.25 min, p=0.012). Superior OSATS overall scores (p=0.035), higher satisfaction (p=0.002) and enjoyment (p<0.001).

READ FULL PAPER →

[VIDEO]

SURGICAL ROBOTICS

ERMIS (Enhanced Robotic Medical Immersive Simulator) VR Demo

INCLUDED FREE
WITH VTC ACCOUNT

Physics-based robotic twin, realistic force feedback, standalone XR headset.

ERMIS-Demo — VTC Simulation · ***by Isle Academy***

No robot access

Train on robotic systems without the physical robot or OR time.

Force feedback gap

Physics-based accuracy builds genuine instrument control and feel.

Infrastructure cost

Standalone XR headset, no additional hardware or infrastructure needed.

No scheduling constraints

Train on any headset, on demand, no expert availability or facility booking required.

Inconsistent scores

Every learner assessed to the same objective standard.

No audit trail

Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Operate robotic surgical instruments with correct reach, alignment and force
2. Interact with soft tissue in a physics-accurate virtual OR environment
3. Develop instrument control through proprioceptive feedback loops
4. Navigate the robotic arm within safe anatomical boundaries
5. Complete procedural steps within proficiency-based performance targets

CLINICAL EVIDENCE

Isle Academy · Sofmedica · University of Crete

Randomized Controlled Pilot Study — Preprint, March 2026

58.8%

fewer camera control penalties vs. control group

53 participants (27 ERMIS-VR, 26 control) across 2 sites. At first attempt, ERMIS-VR trainees completed tasks 9.3% faster (p=0.023) and made 58.8% fewer camera penalties (p=0.025). At second attempt, camera score improved +20.3%. Usability and acceptance rated 95–100% by survey respondents.

READ FULL PAPER →

[VIDEO]

GENERAL SURGERY

INCLUDED FREE
WITH VTC ACCOUNT

Intraoperative Neuromonitoring Demo

Controller-free electrode placement training across AR, MR, and VR modes.

HSES-Demo — VTC Simulation · ***by Hellenic Society of Endocrine Surgeons***

No controllers

Hand tracking enables natural procedure practice without hardware barriers.

Platform flexibility

AR, MR and VR support — deploy on hardware the institution already owns.

Proctor bottleneck

JARIA AI delivers on-demand, IFU-trained guidance at any point in the session.

Debrief quality

XR Recorder captures every session for structured post-session review.

Inconsistent scores

Every learner assessed to the same objective standard.

No audit trail

Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Identify and correctly place neuromonitoring electrodes during thyroidectomy
2. Apply hand-tracking-based instrument manipulation without controller dependency
3. Recognise anatomical structures relevant to intraoperative neuromonitoring
4. Use JARIA AI guidance to navigate procedural decision points independently
5. Review and analyse session recordings for self-directed skill improvement

[VIDEO]

CLINICAL EVIDENCE

Aristotle U. Thessaloniki · HSES

Blinded Prospective Randomized Controlled Trial — Updates in Surgery, 2025

23%

faster task completion vs. control group

19 surgery residents at the 2nd Surgical Department, Aristotle University of Thessaloniki. IVR group completed the neck-incision-through-CIONM-electrode-placement task significantly faster (27.25 vs 35.25 min, p=0.012). Superior OSATS overall scores (p=0.035), higher satisfaction (p=0.002) and enjoyment (p<0.001).

READ FULL PAPER →

GENERAL SURGERY

INCLUDED FREE
WITH VTC ACCOUNT

Experience Medical Procedures in VR Demo

Physics-based free-cut surgical interaction to develop genuine psychomotor skill.

EMP-Demo — VTC Simulation

Scripted training

Advanced free-cut algorithms let learners develop real dexterity, not scripts.

Cognitive load

Tests both psychomotor and cognitive skills within the same session.

Team readiness

Collaborative mode trains entire surgical teams in a realistic OR environment.

No scheduling constraints

Train on any headset, on demand, no expert availability or facility booking required.

Performance gaps

Real-time analytics surface cognitive and psychomotor gaps as they occur.

No audit trail

Auto-generated competency records, IFU-aligned and audit-ready.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Perform bone preparation steps for knee arthroplasty without predefined path constraints
2. Apply correct cutting force and angle judgement during soft-tissue interaction
3. Coordinate visual–motor feedback loops for precise instrument control
4. Identify anatomical landmarks and apply them to surgical decision-making
5. Demonstrate improving psychomotor accuracy across repeated sessions

SIMULATION HIGHLIGHTS

Advanced Cutting/Tearing Algorithms

Free cuts without predefined paths give learners true surgical freedom, developing genuine psychomotor skill rather than script-following behavior.

Real-time Psychomotor Analytics

Tracks cognitive and motor performance simultaneously, surfacing the specific skill gaps that conventional assessment tools miss.

Collaborative & Single-Player

Supports team-based OR training alongside individual practice, covering both the social and technical dimensions of surgical competency.

[VIDEO]

"No patient should be anyone's first."

SURGICAL ROBOTICS

INCLUDED FREE
WITH VTC ACCOUNT

Robotic Readiness Demo

The whole robotic program ready in XR: team, site and surgeons, before the first case.

Robotic Readiness — VTC Simulation

Robot stays in cases

The team rehearses the full setup and workflow in XR, off the robot.

Ready before the first case

Team, site and surgeons reach readiness before the first case, and stay ready as the program grows.

Every surgeon trained

Train a whole roster in XR, not just the one or two who get console time.

Team and site ready

OR setup, arm layout, camera and instruments, room and workflow, the part console simulators leave out.

Additive to the console sim

Surgeons build their console skills in XR, then finish on the console simulator.

Audit-ready competency

Objective competency records for every team member and surgeon.

LEARNING OUTCOMES

Upon completing this simulation, learners will be able to:

1. Select the correct OR and arm layout for the procedure
2. Position the patient and assign robotic arm roles
3. Insert trocars to target depth, confirm camera placement, and dock the arms
4. Control the console: camera movement, clutching, wrist articulation and instrument switching
5. Apply energy safely for cutting, sealing and vessel dissection
6. Complete the full procedure on the console to a proficiency standard

PROGRAMME HIGHLIGHTS

Whole Program, One Offer

Team and site readiness together with surgeon training, covering everything from OR setup to the console, not just the surgeon.

Off the Robot, Additive to Console Sim

The team rehearses setup and the full workflow in XR without occupying the system. Surgeons build core console skills in XR, camera control, clutching, wrist articulation, instrument switching and energy, before finishing on the console simulator.

Objective Competency for Everyone

Every team member and surgeon is assessed to the same standard, with automatic, audit-ready competency records.

[VIDEO]

"No patient should be anyone's first."