SIMULATION & TRAINING
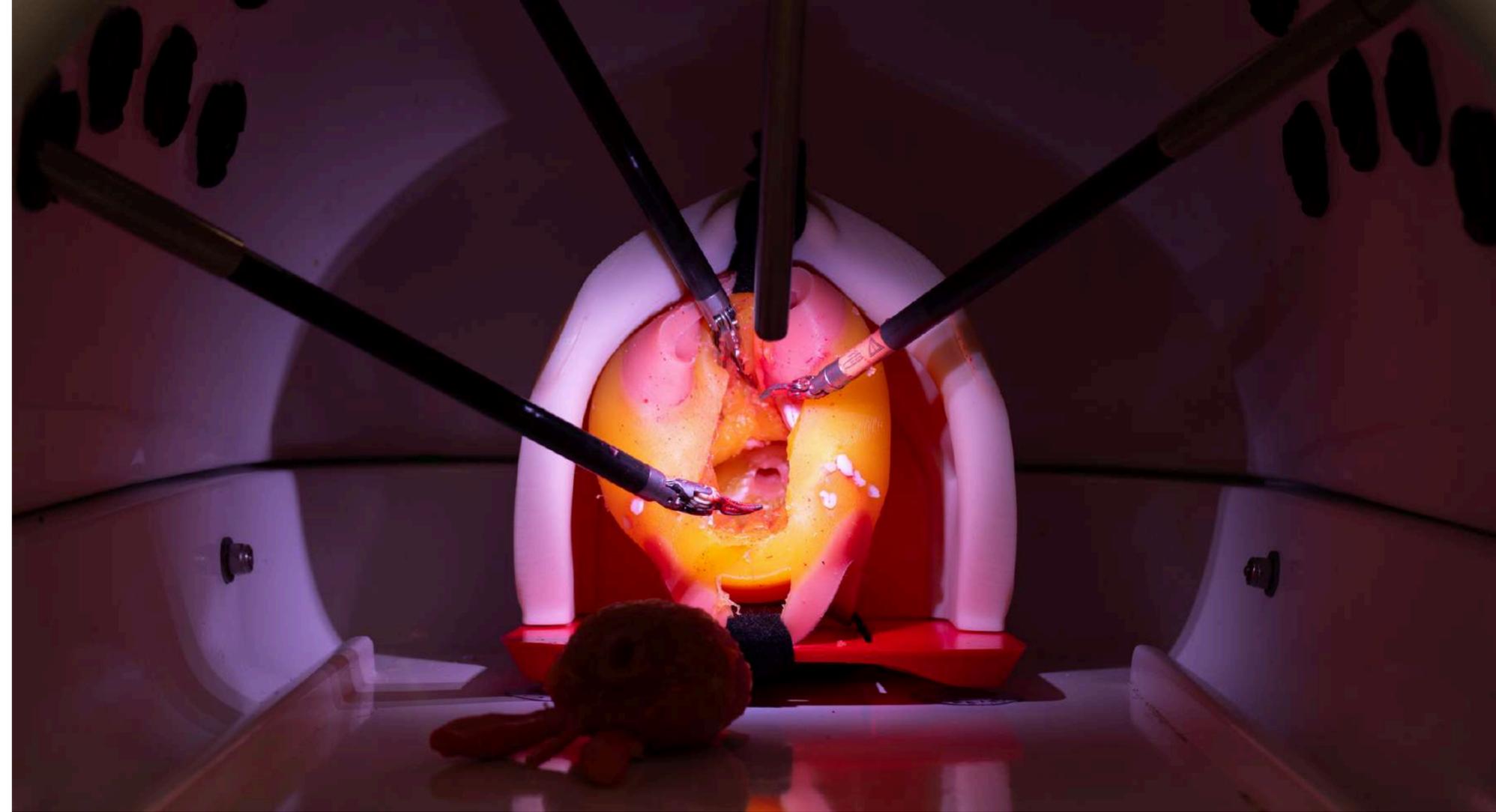
ROBOTIC & LAP SURGERY

UROLOGY / RADICAL PROSTATECTOMY & PARTIAL NEPHRECTOMY

GYNECOLOGY / HYSTERECTOMY & MYOMECTOMY

THORACIC / LOBECTOMY

COLORECTAL / COLECTOMY

UROTRAINER

What we do?

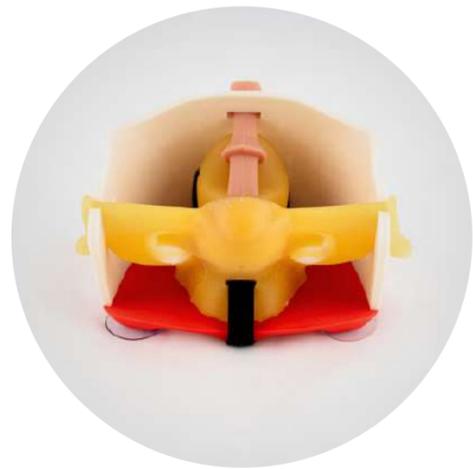## High-fidelity synthetic models for surgical simulation

Partial Nephrectomy

Radical Prostatectomy

Perfused Models

Histerectomy
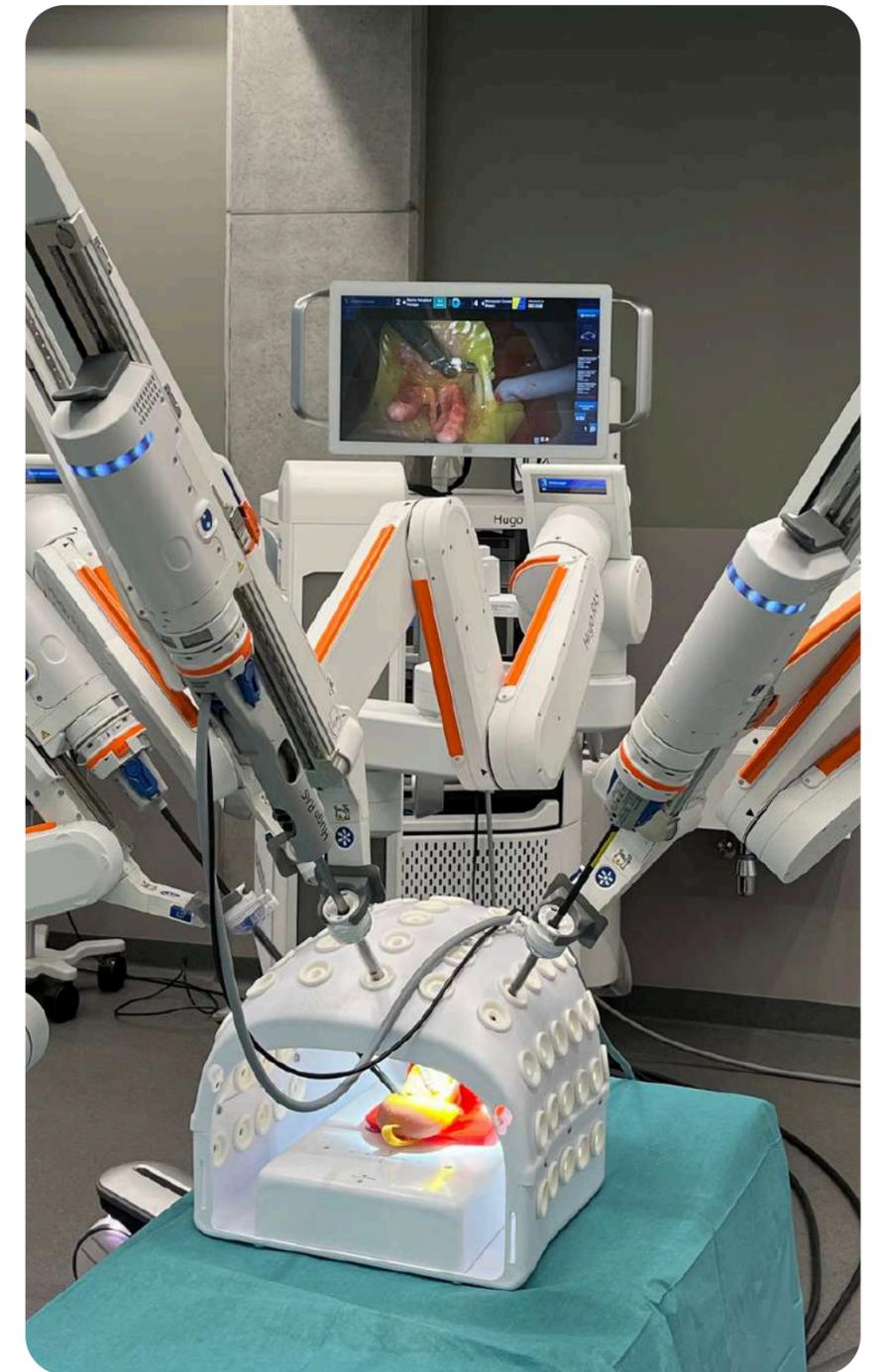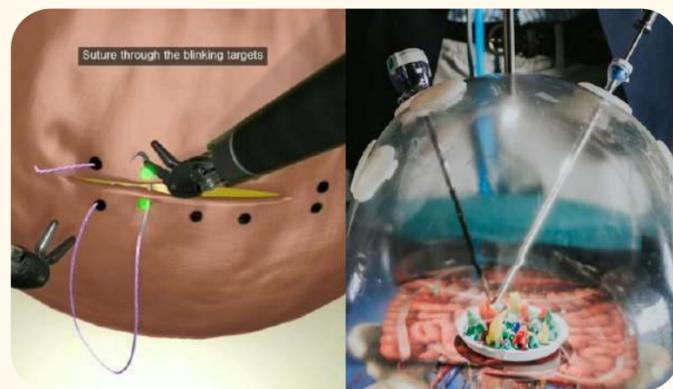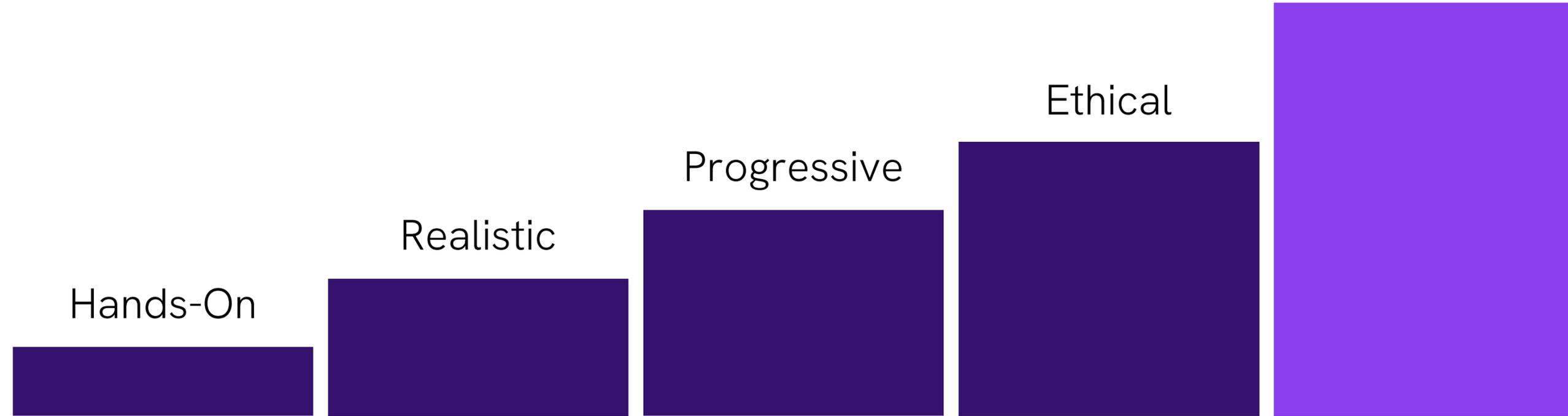
Miomectoy

Lobectomy

Colectomy

Why we do it?

Need for better surgical training tools

+ Standardized
+ Measurable (metrics)
+ Tele-training

Ethical

Progressive

Realistic

Hands-On
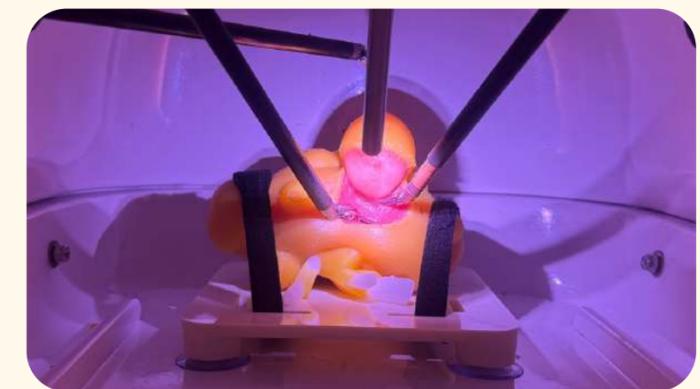
Basic skills ≫ Wet Lab ≫ Procedural skills on synthetic models

Our journey...

2021: We focused on laparoscopic surgery (driven by Latin America demand)
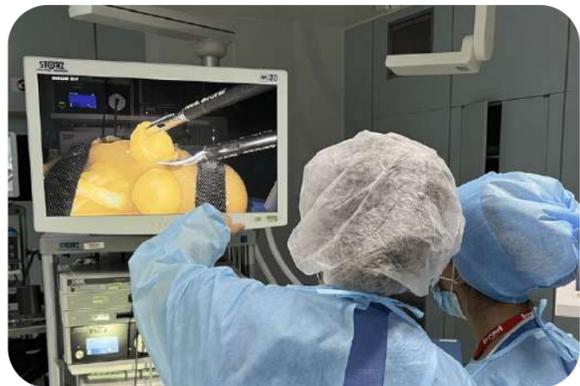

Chile

Mexico

Spain

Panama

Costa Rica

2024: We moved forward to address robotic surgery training needs (worldwide)
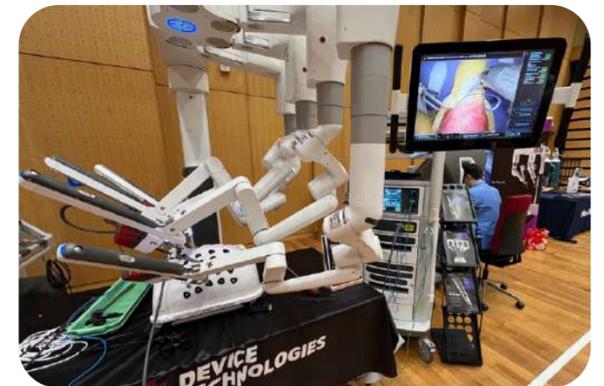

IRCAD (France)

ORSI Academy (Belgium)

Guy's Hospital (UK)

AAU Congress (Qatar)

SUA Workshop (Singapore)

Hands-on training models - URO

Prostate phantom for radical prostatectomy + radical cystectomy
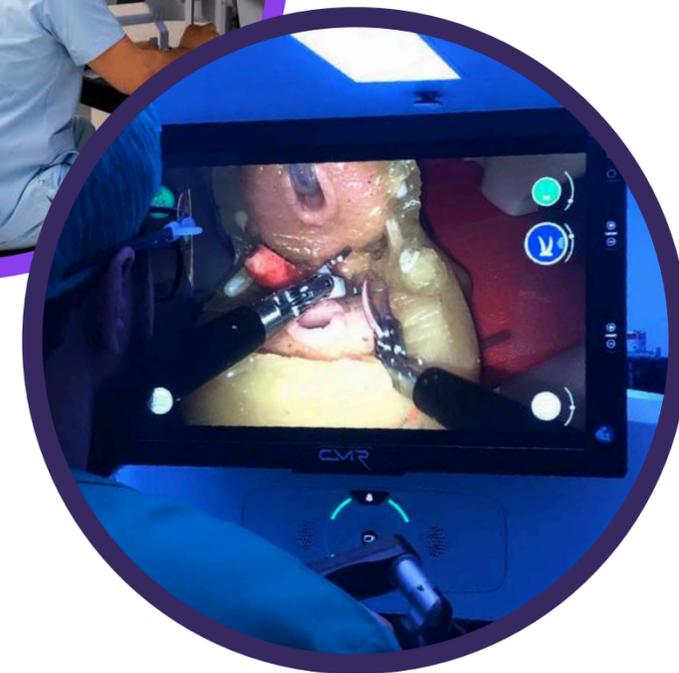
Watch surgery ▶

Includes the bladder, neurovascular bundles, seminal vesicles, prostatic pedicles, puboprostatic ligaments, and dorsal venous complex. Modular section to practice UV anastomosis.

Compatible with all Radical Prostatectomy approaches, including Retzius-Sparing.
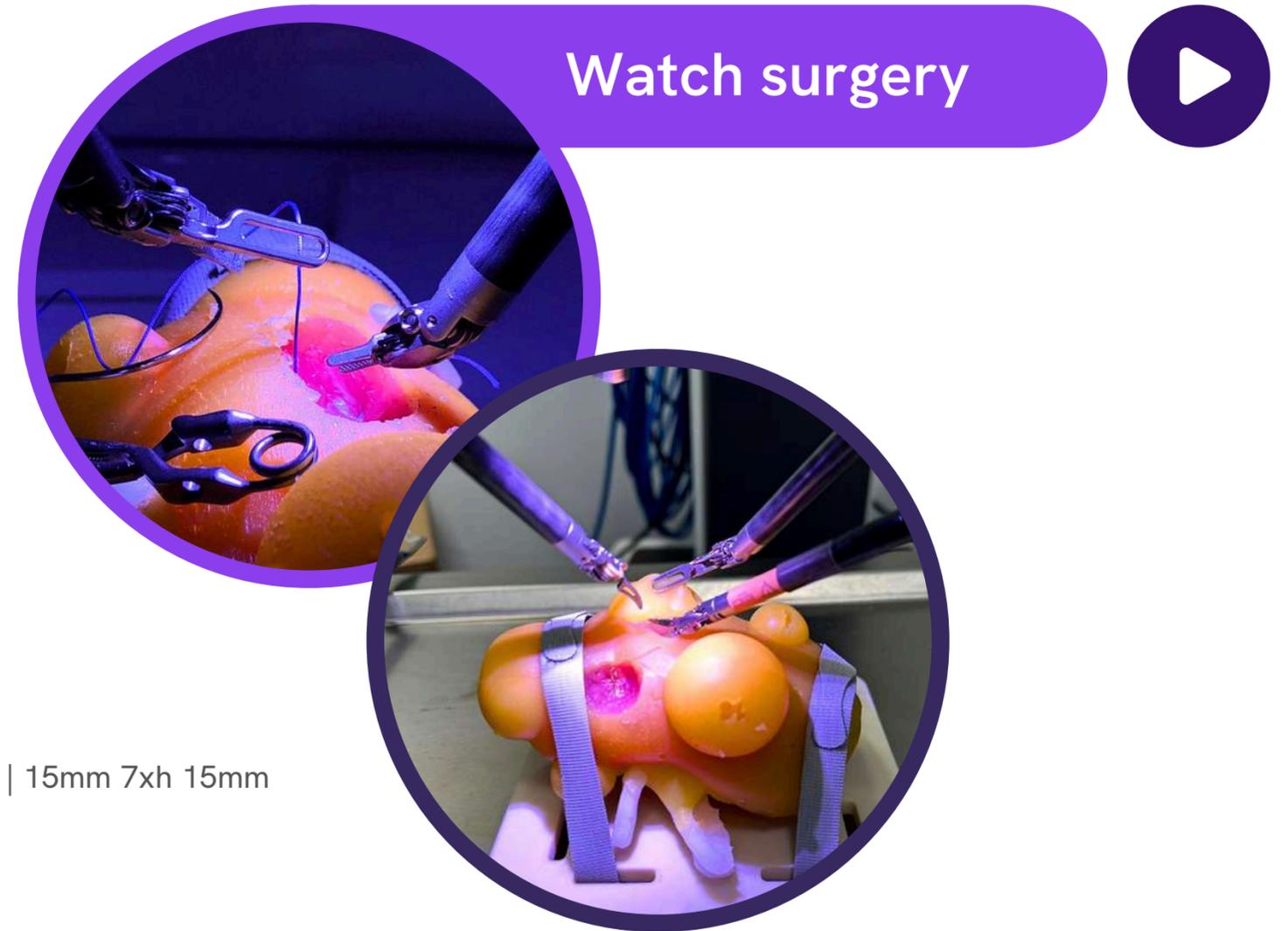
Hands-on training models - URO

Kidney phantom for partial nephrectomy - 11 tumors & 2 cysts

Watch surgery ▶

Contains 11 tumors and 2 cysts. Tumors RENAL scores are as follows: 15mm 4a | 20mm 10xh | 15mm 7xh 15mm 4a | 35mm 7x | 35mm 7a | 15mm 9x | 15mm 4p | 15 mm 5p | 16mm 7p | 15mm 4p

The model is completely surrounded by a fat layer offering multiple surgical scenarios.

Hands-on training models - URO

Hemi-Kidney model with perfusion for partial nephrectomy
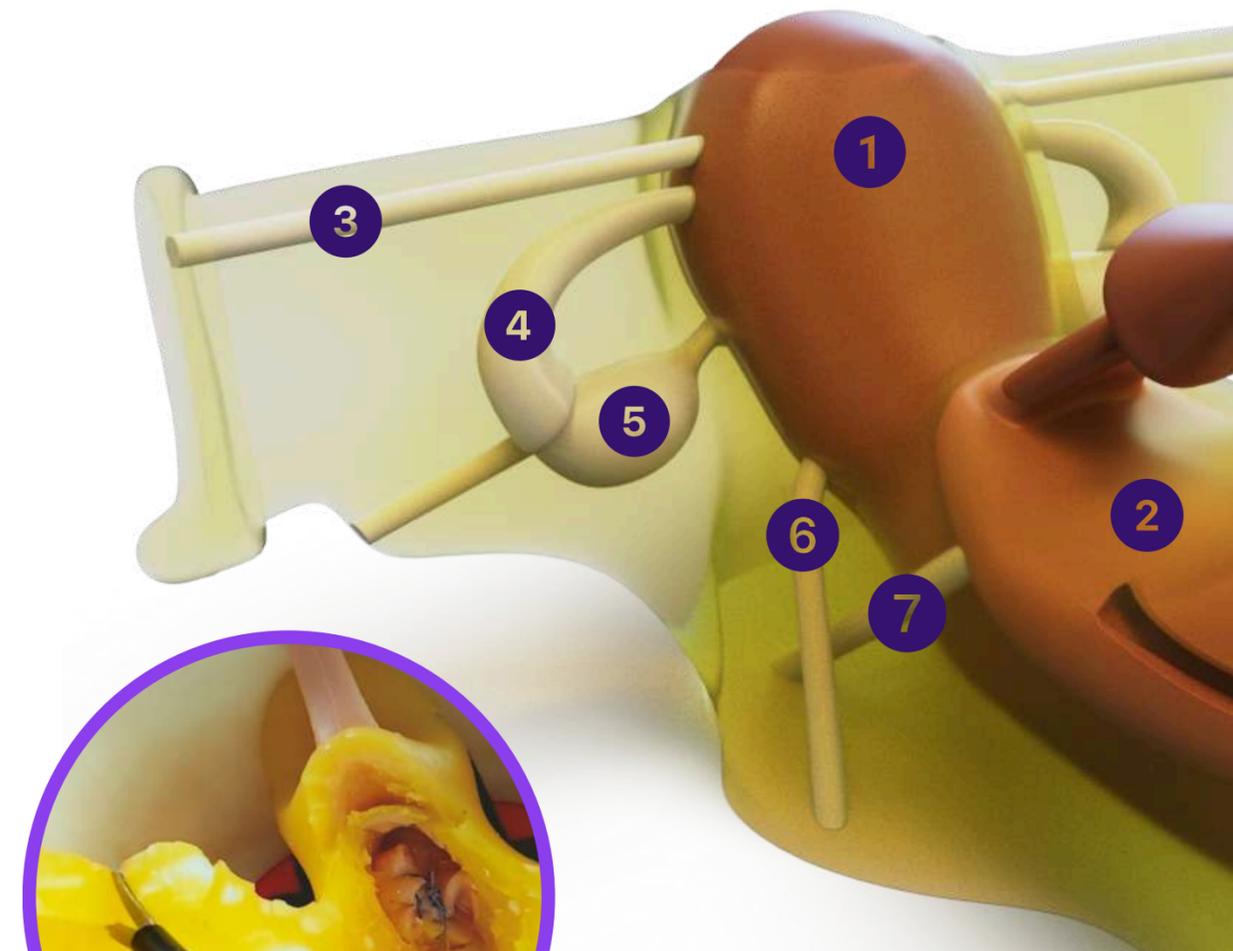
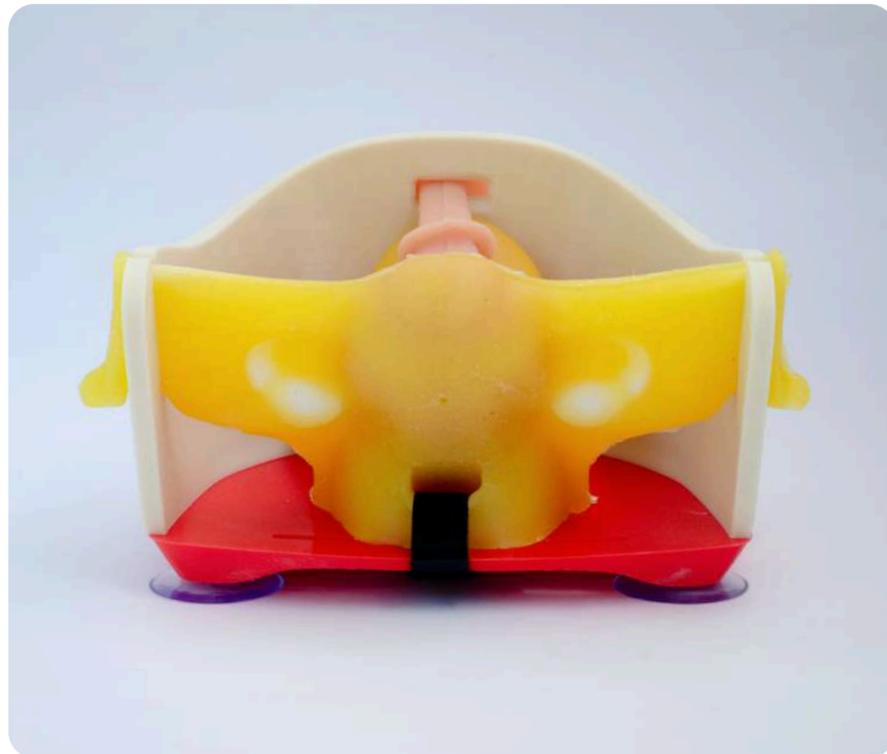

Watch surgery ▶

Includes 2x 25mm tumors RENAL score 7x and a connector for blood perfusion simulation.

The model has a modular plug-and-play design to allow standardized training for multiple trainees.

Hands-on training models - GYN

Uterus phantom for hysterectomy

1. Uterus
2. Bladder
3. Round ligament
4. Fallopian tube
5. Ovary
6. Uterine Artery
7. Ureter

Watch surgery ▶

Hands-on training models - GYN

Uterus phantom for myomectomy

Includes a uterus similar to the hysterectomy model with 8 myomas:

- **Basic level (anterior myomas):** M1 of 30mm (FIGO 5) and M2 of 21mm (FIGO 8)
- **Intermediate level (lateral myomas):** M3 of 15mm (FIGO 6), M4 of 21mm (FIGO 5), M5 of 15mm (FIGO 5) and M6 of 21mm (FIGO 6)
- **Advanced level (posterior myomas):** M7 of 21mm (FIGO 5) and M8 of 21mm (FIGO 5)
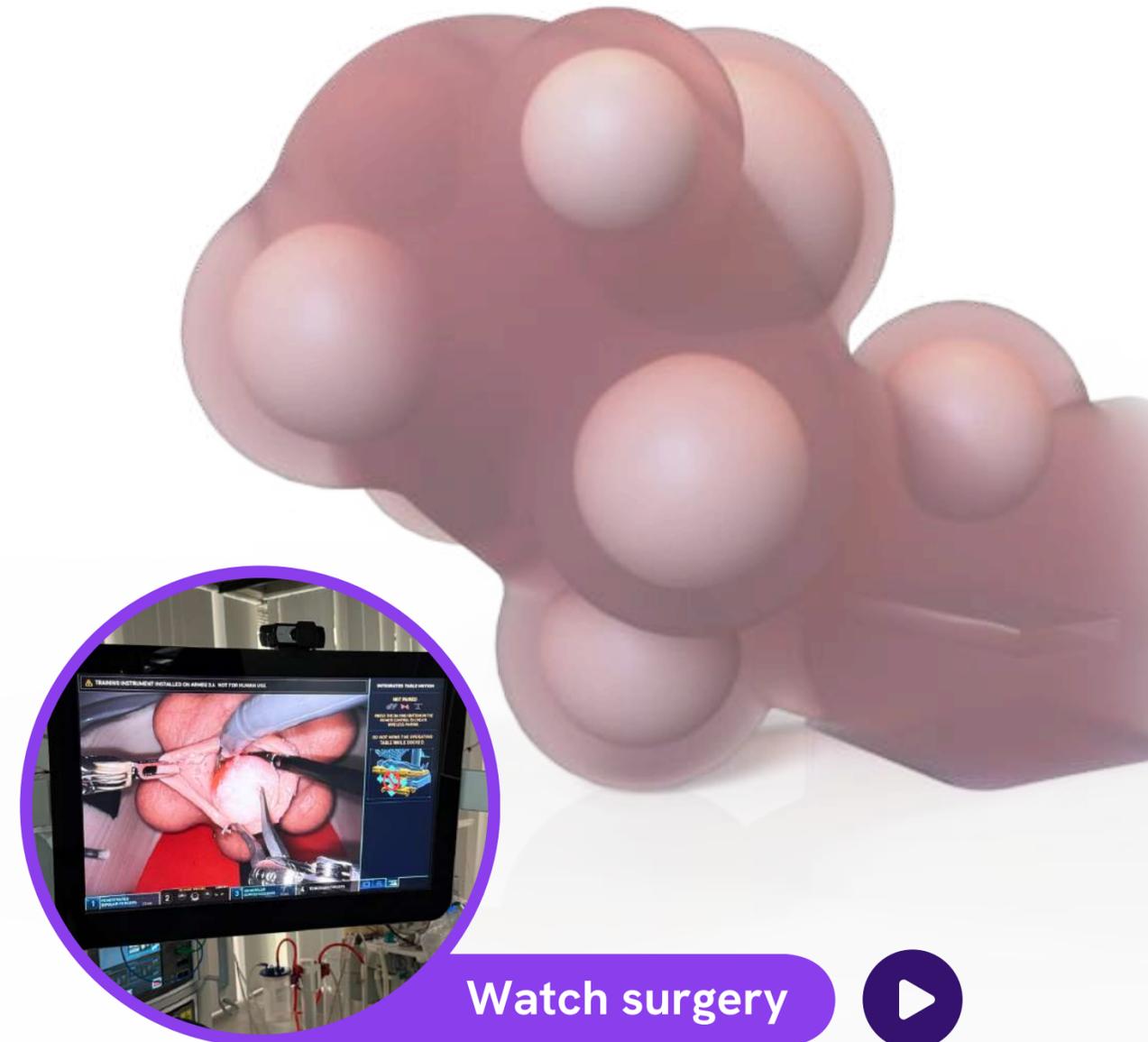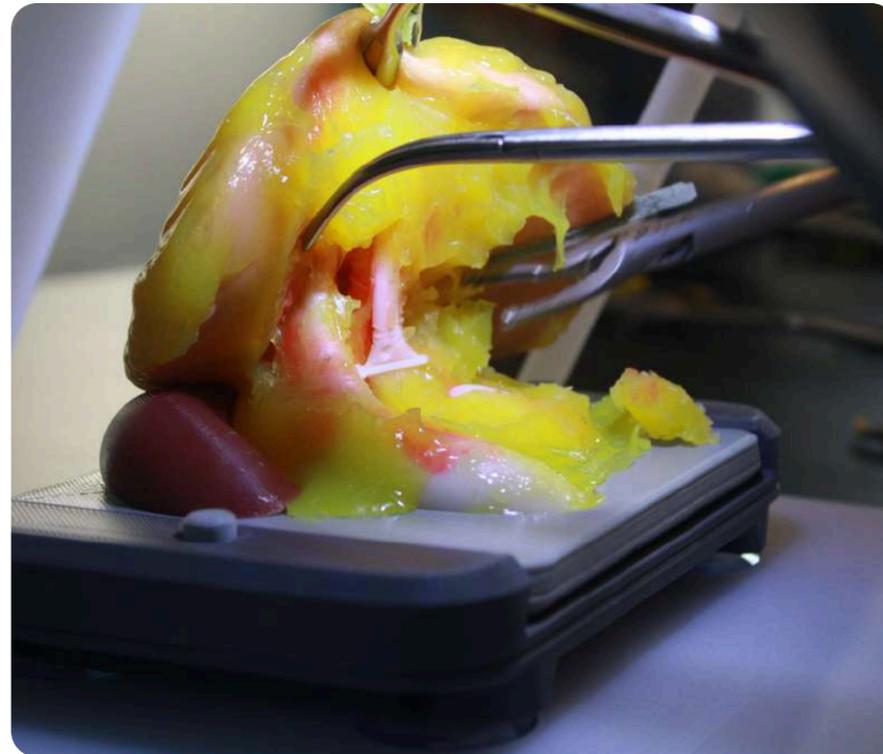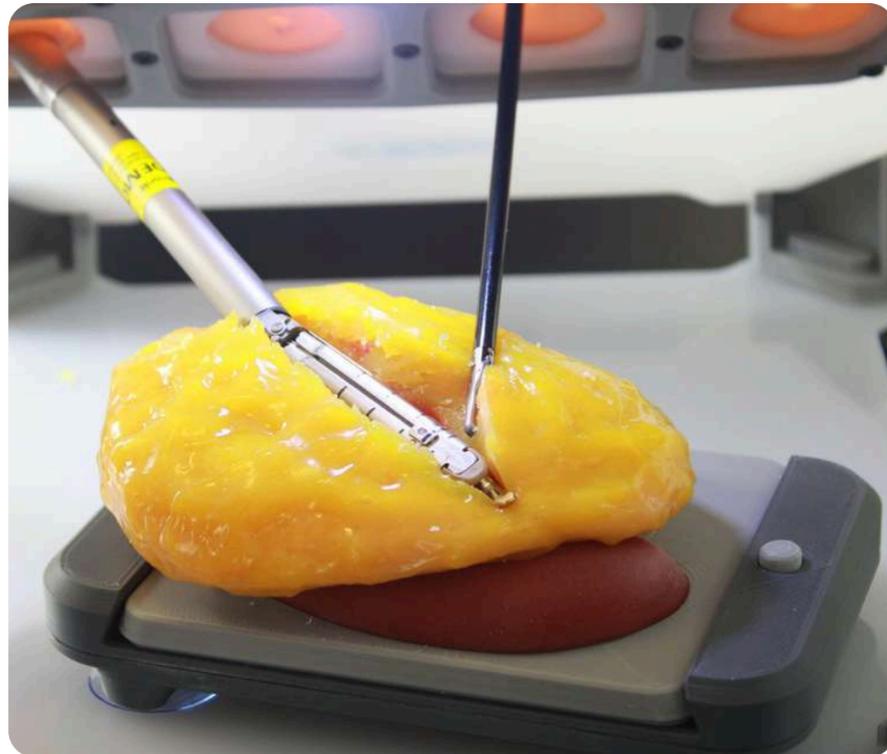
Watch surgery ▶

Hands-on training models - THORAX

Left lung phantom for upper/lower lobectomy

The left lung model includes all lobes for upper or inferior left lobectomy + lymph node resection :

- Left pulmonary artery
- Left pulmonary vein
- Aorta
- Bronchi

Watch surgery ▶

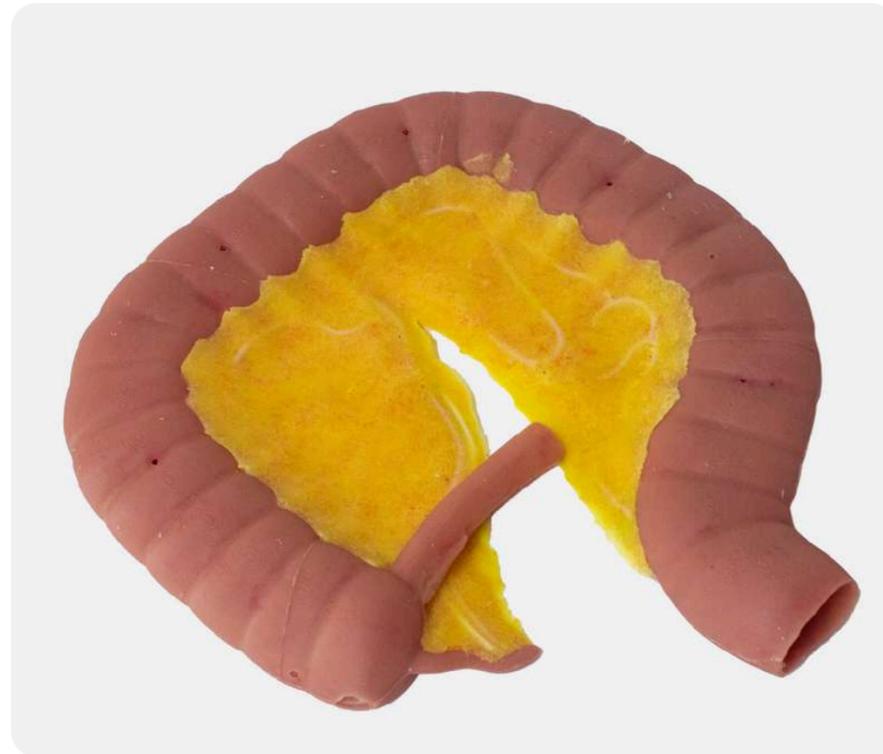# Hands-on training models - COLORECTAL

Colon phantom for right/left hemicolectomy + Segmental resection + Appendectomy

The colon model includes almost the entire digestive anatomy to practice right and left hemicolectomy / Sigmoidectomy / Segmental resection / Appendectomy:

- Colon
- Appendix
- Rectum
- Ileum
- Mesocolon
- Superior and inferior mesenteric arteries and veins

Watch surgery ▶

USERS | UROTRAINER

HTAL. ÁNGELES
(MONTERREY)

UHEALTH (MIAMI)

UCL (LONDON)

MARIA REGINA HOSP.
(CLUJ-NAPOCA)

DISTALMOTION
(GENEVA)

SS INNOVATIONS
(NEW DELHI)

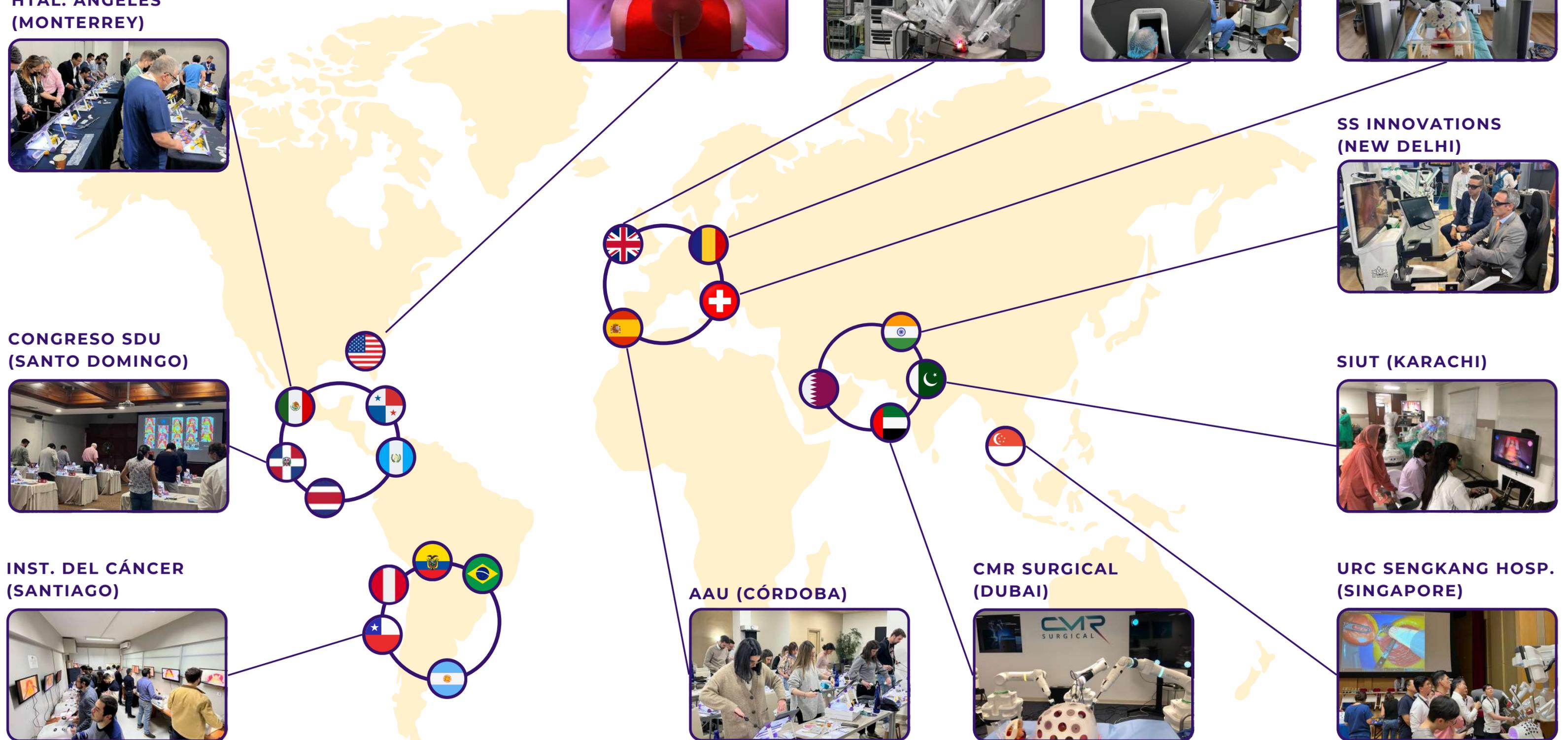CONGRESO SDU
(SANTO DOMINGO)

SIUT (KARACHI)

INST. DEL CÁNCER
(SANTIAGO)

AAU (CÓRDOBA)

CMR SURGICAL
(DUBAI)

URC SENGKANG HOSP.
(SINGAPORE)

URO - Suggested Academic Programs

Partial Nephrectomy Training

1 kidney model for every 3 trainees

Approx. 3hs hands-on training

Trainee #1
- PN 1 - Tumor #4 15mm RENAL 4a
- PN 2 - Tumor #5 35mm RENAL 7x
- PN 3 - Tumor #2 20mm RENAL 10xh

Trainee #2
- PN 1 - Tumor #9 15mm RENAL 5p
- PN 2 - Tumor #6 35mm RENAL 7a
- PN 3 - Tumor #1 15mm RENAL 5a

Trainee #3
- PN 1 - Tumor #12 15mm RENAL 4p
- PN 2 - Tumor #10 16mm RENAL 7p
- PN 3 - Tumor #7 15mm RENAL 9x

Radical Prostatectomy Training

1 prostate model for each trainee

Approx. 4hs hands-on training

- Periprostatic fat dissection
- Dorsal vein suturing
- Identifying the plane between prostate & bladder
- Bladder cuff dissection
- Performing neurovascular bundle (NVB) sparing
- Performing prostatic pedicle dissection
- Completing radical prostatectomy
- Urethro-vesical anastomosis

Suitable for both anterior, posterior (Retzius-sparing), and combined RP approaches.

GYN - Suggested Academic Programs

Hysterectomy Training

1 hysterectomy model for each trainee

Approx. 3hs hands-on training

- Identification of anatomical reference points.
- Dissection and cutting of the round ligaments, fallopian tube, and ovarian ligament.
- Dissection and cutting of the uterine artery.
- Identification and preservation of the ureter.
- Separation and dissection of the uterus from the bladder and identification of the upper part of the vagina.
- Uterus resection and closure of the vaginal cuff.

Myomectomy Training

1 myomectomy model for every 2 trainees

Approx. 4hs hands-on training

Basic level:
- Trainee #1 – Anterior myoma of 30mm
- Trainee #2 – Anterior myoma of 21mm

Intermediate level:
- Trainee #1 – Lateral myoma of 15mm
- Trainee #2 – Lateral myoma of 15mm
- Trainee #1 – Lateral myoma of 21mm
- Trainee #2 – Lateral myoma of 21mm

Advanced level:
- Trainee #1 – Posterior myoma of 21mm
- Trainee #2 – Posterior myoma of 21mm

THORAX - Suggested Academic Program

Left Lobectomy Training

1 lung model for each trainee

Approx. 3hs hands-on training

Pulmonary Fissure Dissection
- Visual identification of the oblique fissure.
- Partial dissection to expose the junction between lobes.

Identification of Anterior and Posterior Lobar Junctions
- Visual identification of the connections between lobes.

Clipping and Separation of Lobar Junctions

Dissection of Pulmonary Artery Branches, Pulmonary Vein, and Bronchi
- Identification of the structures.
- Differentiation of vessels and bronchi using anatomical landmarks.

Clipping and Division of the Bronchus, Pulmonary Artery, and Pulmonary Vein

Lobe Removal and Final Check
- Extraction of the lower lobe using a retrieval bag.
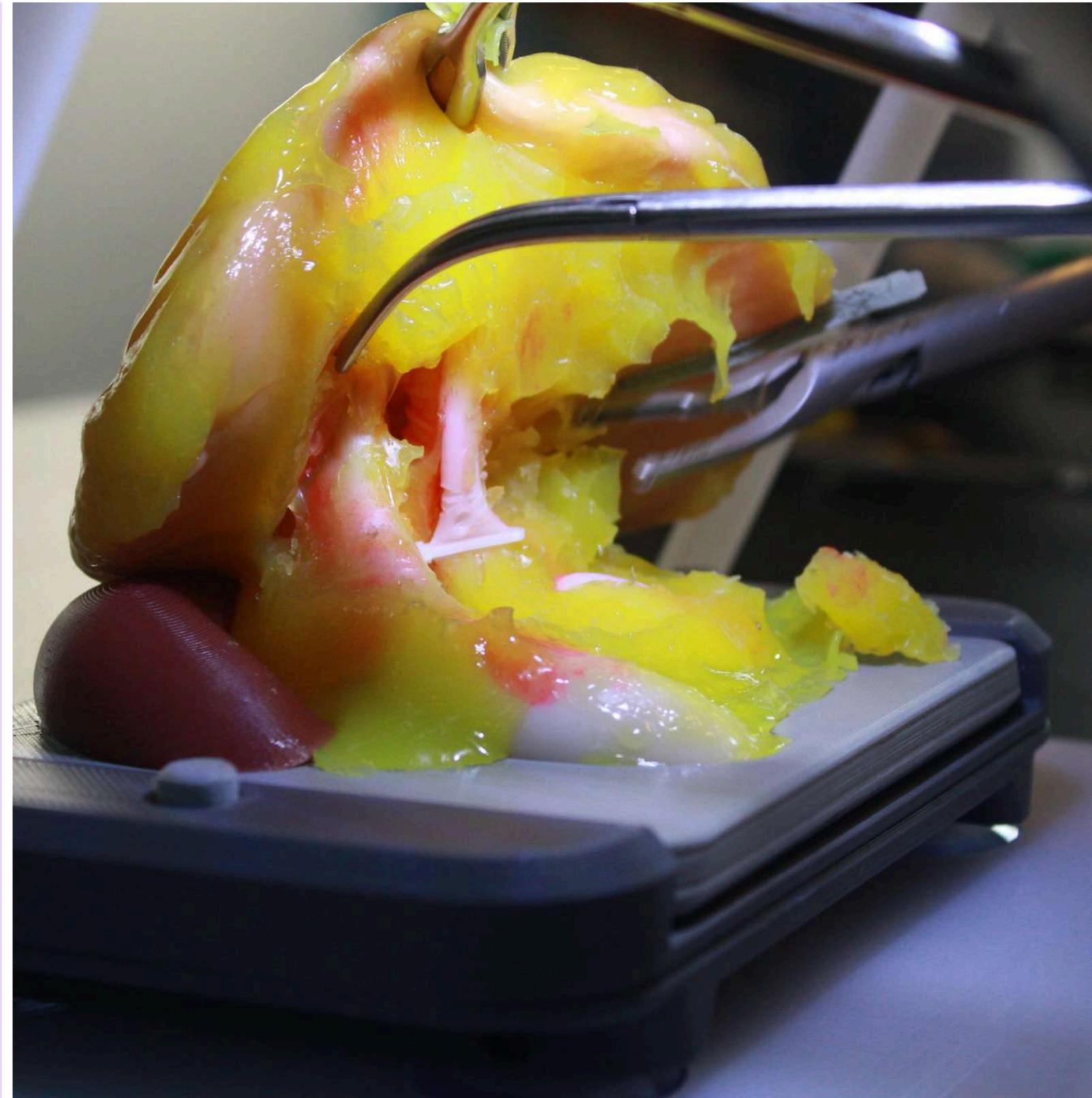
Success Cases

University of Miami
USA

Chad Ryan Ritch, MD

Prostate models have been used in hands-on exercises to introduce the new daVinci SP system to the urology team

**University College London**
UK

Ashwin Sridhar, MD

The Robotic Radical Prostatectomy fellowship includes 5 Urotrainer's prostate models for each fellow to guarantee continuous and standardized training

Regina Maria Hospital
Romania

Iulia Andras, MD

Running an annual Course for Robot-Assisted Partial Nephrectomy that includes every year +10 urology residents from multiple cities
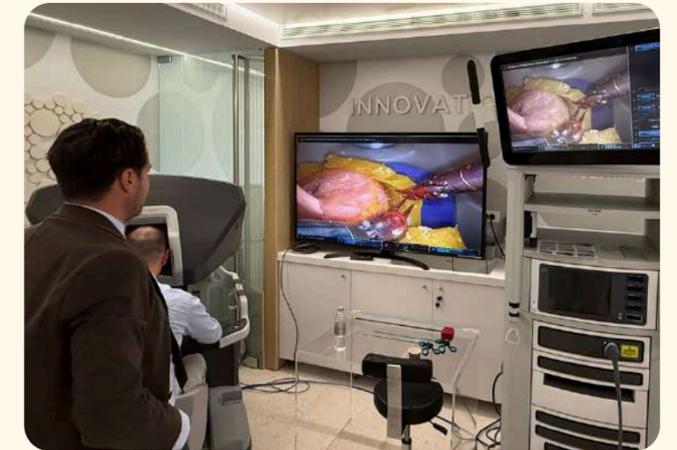
ISLE Academy
Greece

Georgios Kyriakou, MD

Hands-on uro-oncology course on Da Vinci systems. Surgeons practiced radical prostatectomy and partial nephrectomy with models, combined with live surgery

WHY Urotrainer ?

Superior training experience and flexibility
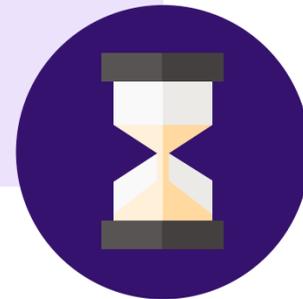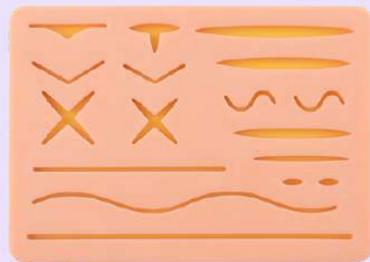
+ Multiple realistic scenarios with advanced levels for experienced surgeons.
Suture pads or E-BLUS exercises are practical but not motivating.

+ Easy to manipulate and to stock compared to hydrogel models.
Long expiration date (+12 months) and no refrigeration needed.

+ Cost-effective: Designed to train full surgical procedures step by step. Includes all anatomical structures and mimics real tissue properties.

+ Best way to showcase surgical equipment.
High-realism and non-organic waste. Ethical cadaver-free simulation.
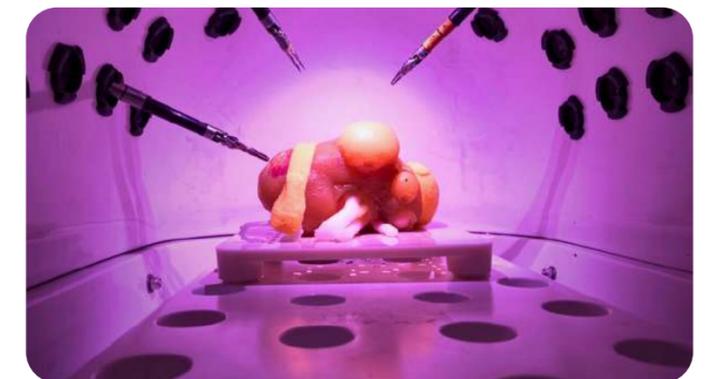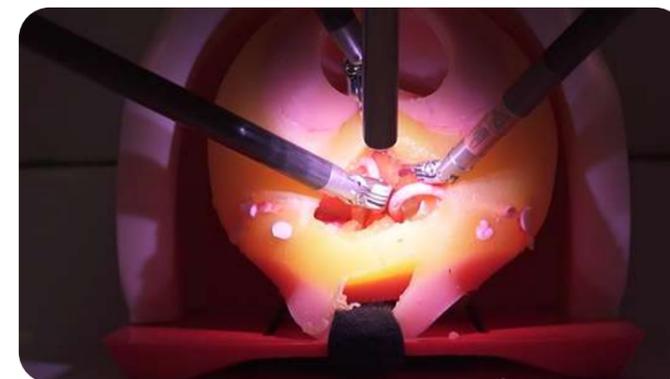
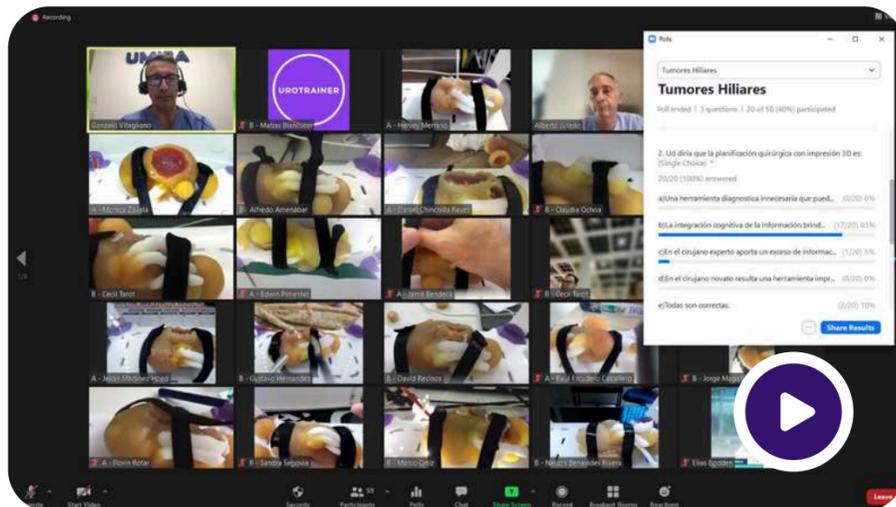# Surgical simulation videos

ROBOTIC SURGERY TRAINING
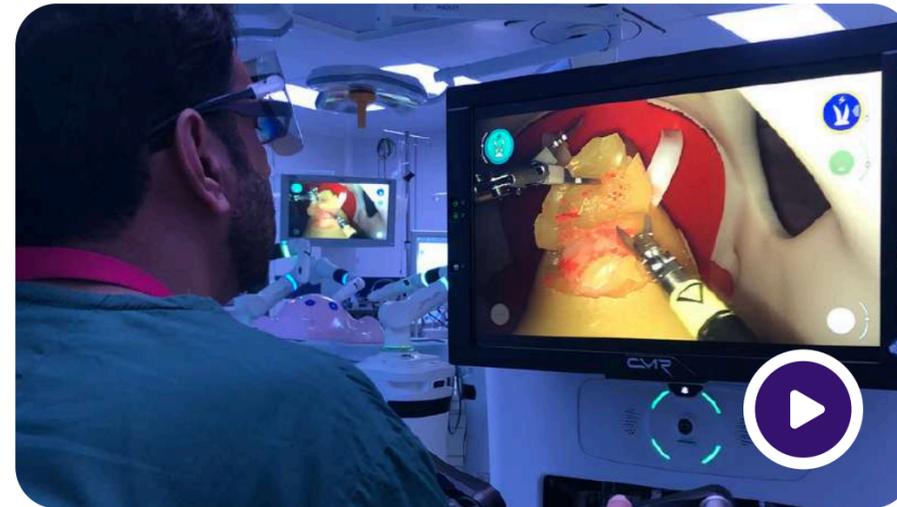
ROBOT-ASSISTED RADICAL PROSTATECTOMY

ROBOT-ASSISTED PARTIAL NEPHRECTOMY
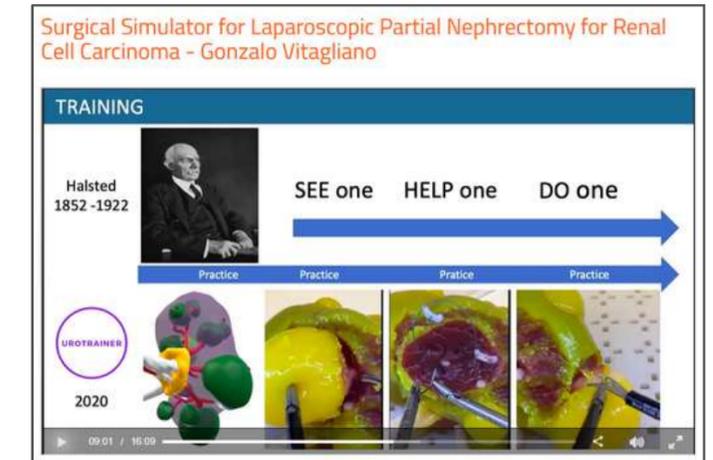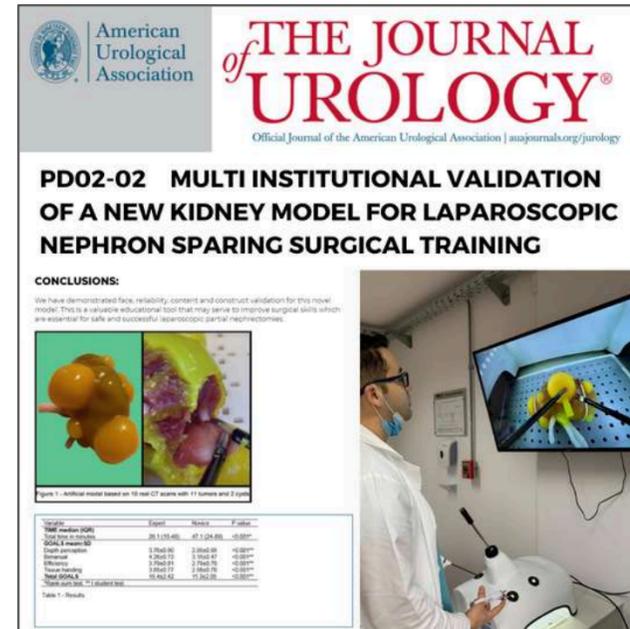
REMOTE HANDS-ON METHODOLOGY

UROTRAINER HANDS-ON COURSES

RETZIUS-SPARING RADICAL PROSTATECTOMY

International & Scientific Validation

Users & Clients

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🐦 @urotrainer

Do you want to see Urotrainer in action?

🎥 Prostatectomy Simulation
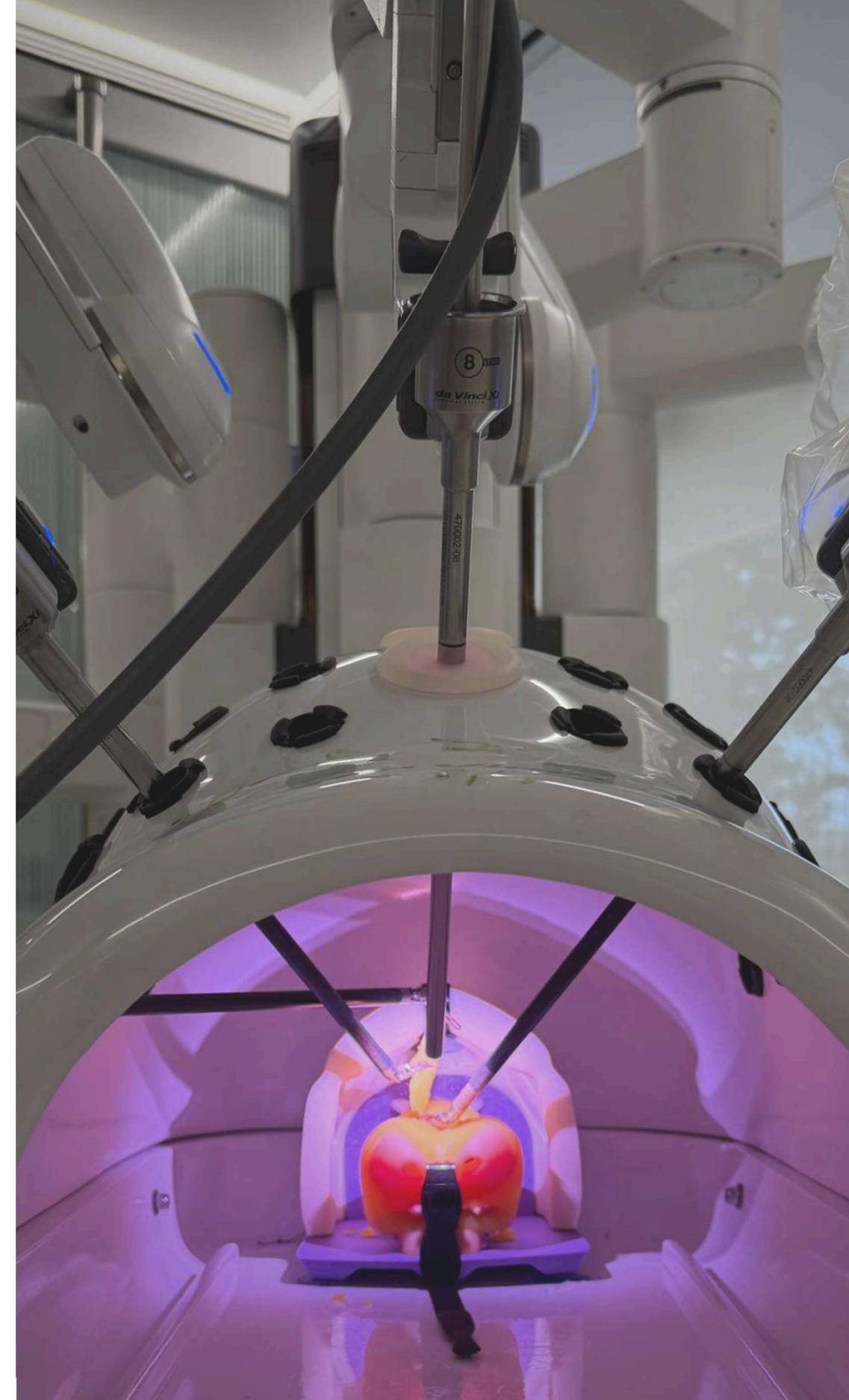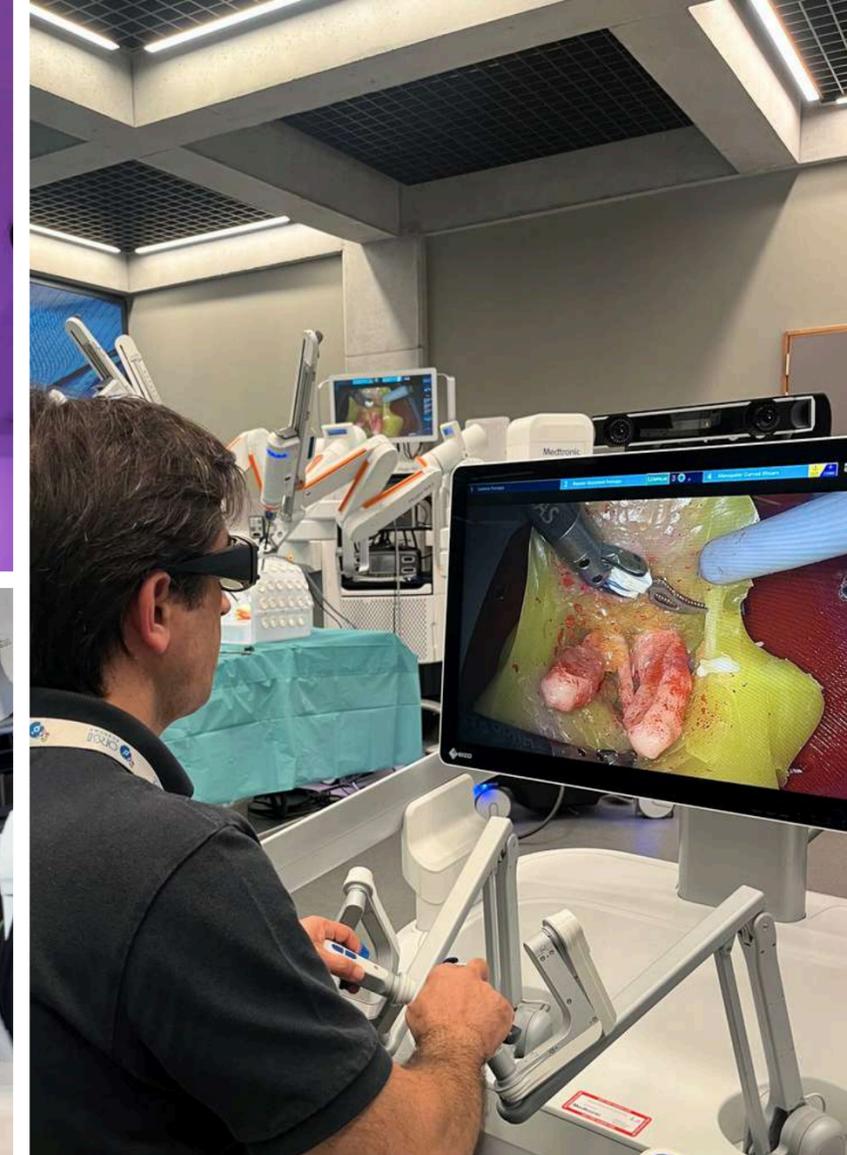
UROTRAINER

Training is caring