

PRESIDENTE DEL CONGRESSO
STEFANO BONILAURI

COMITATO SCIENTIFICO
M. CASADEI | F. SEBASTIANI

CONGRESSO SICOB

OBESITÀ

Tecnopolo di Reggio Emilia



18 APRILE 2026

***LA ROBOTICA
COME PIATTAFORMA
FORMATIVA:
opportunità, limiti e
prospettive future in
chirurgia bariatrica***

DR.SSA FRANCESCA BALSAMO

**SSD INTERAZIENDALE CHIRURGIA METABOLICA E
DELL'OBESITA'**

IRCCS Policlinico di Sant'Orsola, Bologna

AUSL Bologna, Ospedale di Bentivoglio



1888, Vienna
Dr. Billroth



2018, Bologna
Prof. Poggioli

...l'avvento della laparoscopia

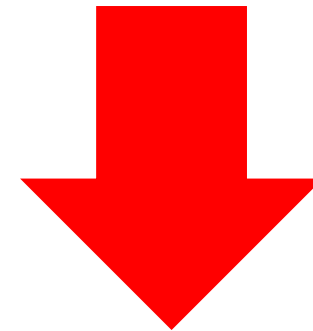


...l'avvento della laparoscopia

VISIBILITÀ
CONDIVISA



FACILITA'
GESTO TECNICO



...l'avvento della laparoscopia

L'innaturalità del gesto laparoscopico...

- Effetto fulcro e inversione
 - Demoltiplicazione dei movimenti
 - Limitazione dei gradi di libertà
 - Amplificazione del tremore
 - Perdita di percezione tattile

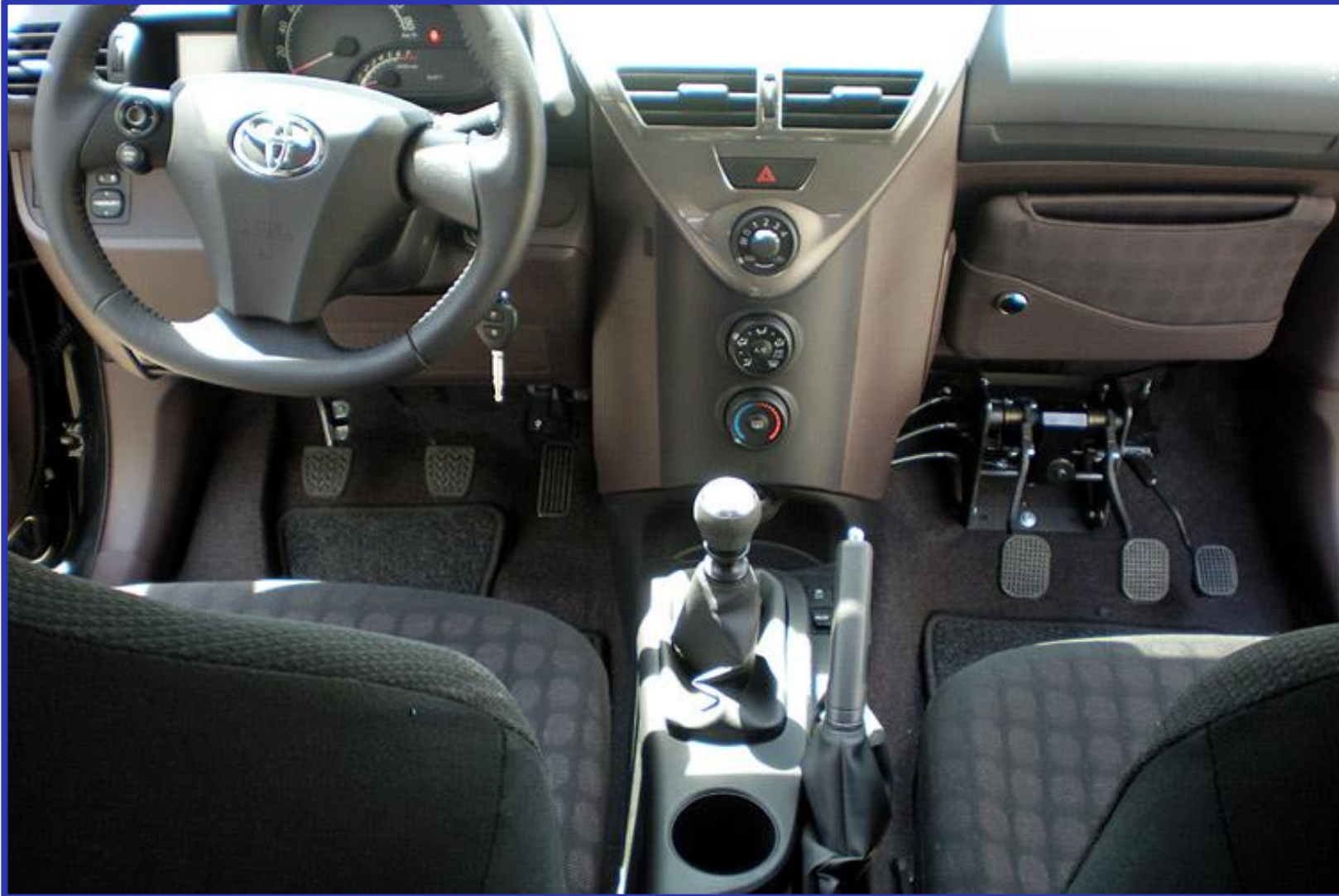




...l'avvento della laparoscopia



...l'avvento della laparoscopia

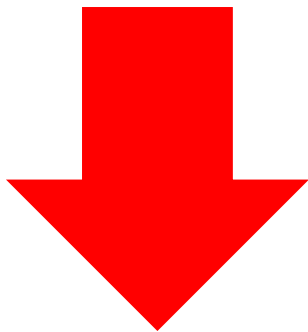


...l'avvento della chirurgia robotica

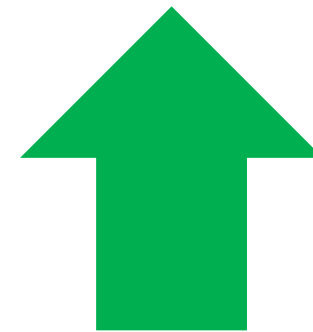


...l'avvento della chirurgia robotica

VISIBILITÀ
CONDIVISA



FACILITA'
GESTO TECNICO



...l'avvento della chirurgia robotica

La naturalzza del gesto robotico...

- Visualizzazione 3D magnificata
 - «Endowrist»
 - Autogestione camera
 - Eliminazione del tremore
 - Maggior precisione
 - Miglior ergonomia per il chirurgo



...l'avvento della chirurgia robotica



...dal «dito» al «dato»...

...l'avvento della chirurgia robotica

► J Robot Surg. 2026 Feb 24;20(1):286. doi: [10.1007/s11701-026-03247-2](https://doi.org/10.1007/s11701-026-03247-2) [↗](#)

Training pathways and formal curricula in robotic bariatric surgery: a systematic review

[Francesco Brucchi](#)^{1,5,*}, [Daqi Zhang](#)², [Simona Bertoli](#)^{3,4}, [Santo Colosimo](#)³, [Gianlorenzo Dionigi](#)^{5,6}

Early curricula were primarily based on stepwise intraoperative training, in which complex procedures—most notably robotic Roux-en-Y gastric bypass—were decomposed into discrete operative tasks progressively assigned under close supervision.

More recent programs have increasingly incorporated simulation-based components to standardize baseline skills and facilitate early console participation.

This shift reflects a transition from opportunistic learning toward more intentional curriculum design.

A central finding of this review is the inconsistent use of objective assessment and competency benchmarks

...l'avvento della chirurgia robotica

Review > J Laparoendosc Adv Surg Tech A. 2021 May;31(5):556-560.

doi: 10.1089/lap.2021.0082. Epub 2021 Apr 8.

Simulation-Based Training in Robotic Surgery: Contemporary and Future Methods

- *The operating console experience in robotics is fully immersive: the learner must master new neural and coordination tasks that are not otherwise transferrable from previously learned tasks.*
- *Robotic instrument control presently only permits single-master/single-slave pairing. Although a dual console facilitates instrument switching and on-screen illustration, the instructor cannot guide or demonstrate a maneuver in real time without fully resuming control of the robot.*
- *Because of their inherent complexity, the learning curve for some robotic operations (e.g., pancreaticoduodenectomy) is sufficiently high to be both impractical and prohibitive to adopting the technique only in clinical practice*
- *A higher standard for simulation is predictive validity, which measures the extent to which performance in simulation reflects future performance in actual robotic surgery.*

INTUITIVE

Learning technologies

Learning technologies are designed to help you access training. We've built enabling technology that brings our innovative offerings to surgeons and care teams.

Solutions:

- Intuitive Learning online learning platform
- SimNow simulation platform
- Advanced Tissue Models
- Remote Case Observation
- Telementoring

Passport Training Program has two objectives

1. Develop a deeper technical knowledge of Intuitive technology through hands-on education with an Intuitive trainer
2. Apply technical knowledge to specific clinical applications through peer-to-peer interaction, hands-on lab work and other educational opportunities

TR 100⁺

Technology Training



Develop core da Vinci technical skills through focused instruction by an Intuitive trainer.[†]

TR 200⁺

Technology &
Physician-led
Procedure Training



Combine core Intuitive technology training with an introduction to the clinical application of technical skills.[†]

TR 300⁺

Physician-led
Procedure Training



Learn how to initially apply Intuitive technology to specific clinical procedures.

TR 400⁺

Physician-led
Procedure
Refinement Training



Further apply Intuitive technology to the clinical procedures you currently perform with the system.

TR 500⁺

Physician-led
Masters Training



Hone your technique while maximizing the application of Intuitive technology to the clinical procedures you currently perform with the system.



INTUITIVE

Piattaforma di simulazione SimNow2

INTUITIVE

Basic Technical Skills 75%

9 Courses **25 Exercises** Progress

Exercise 20
Needle Targeting

Safely pick up a needle and accurately drive the needle tip into a target location.

How to succeed: Complete every rep safely by avoiding penalties.

Passing score	Reps
80	10

[▶ Launch exercise](#)

Needle and Suturing
3 exercises

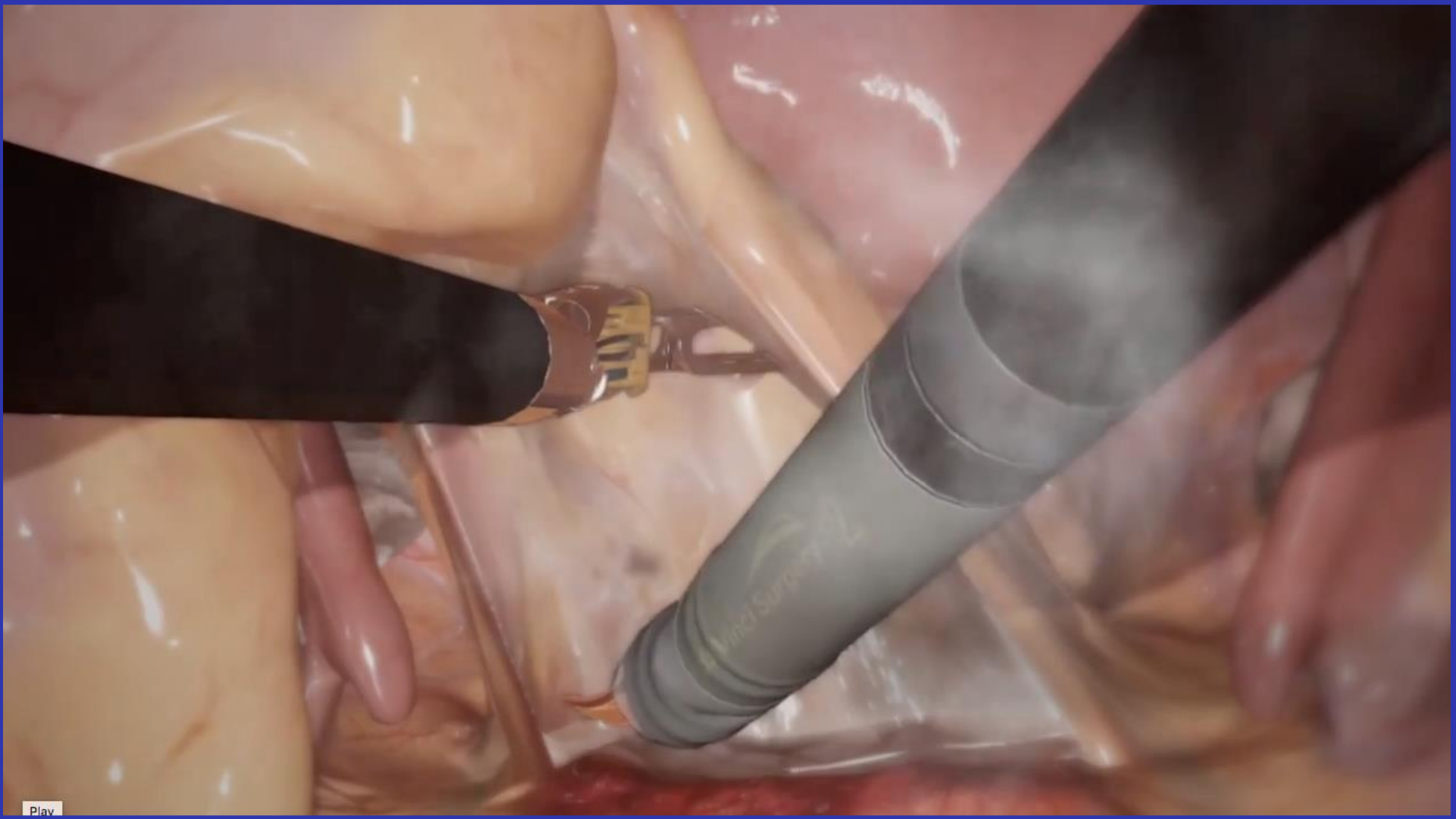
- Needle Targeting
- 21 Needle Throws
- 22 Surgeon Knots
- Needle and Suturing

Stapling and Sealing
2 exercises

- 23 Stapling
- 24 Vessel Sealing

Piattaforma di simulazione SimNow2

INTUITIVE





Remote case observation and telementoring

Remotely observe a case or
broadcast a live procedure.

Telepresence technology enables
surgeon-led training and
collaboration without the need to
travel.

INTUITIVE

The ASCEND Pathway

A well-defined path to success for your entire team

The Hugo™ ASCEND Training Pathway provides a comprehensive curriculum of technical and procedural training to support site certification requirements. A blend of both virtual and in-person training is designed to drive:

- ✓ Integration into the hospital's care pathway
- ✓ Confidence for OR team members
- ✓ Skill building and best practice implementation
- ✓ Comprehensive program awareness
- ✓ Ongoing access to pre-recorded video library case observations

Medtronic

Engineering the extraordinary

Medtronic

Engineering the extraordinary

The pathway includes:



Team technical training

Robotic surgical team technical training, including elearning prework and hands-on labs (for surgeons, first assistants, and nurses)



Procedural experience

Proficiency-based procedural training, including wet labs and hands-on experiences, as well as procedure and task simulations available for a supplemental fee (for surgeons)



Coaching

Coaching, including proctored cases by an experienced surgeon (for surgeons)

Touch Surgery™ Live Stream



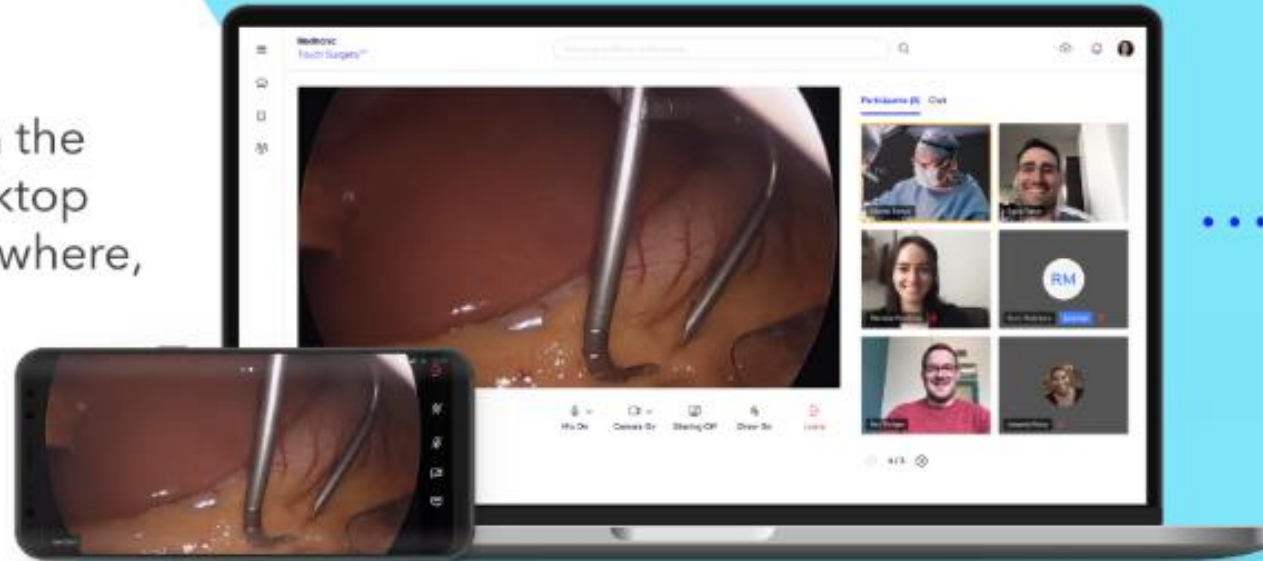
1

Mobile touchscreen connects procedure room and clinical team with remote attendees.

Touch Surgery™ Live Stream

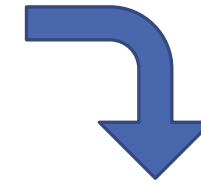
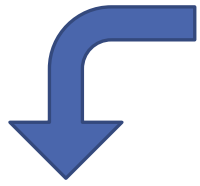
2

Participants can join the stream on their desktop or mobile, from anywhere, with one tap.



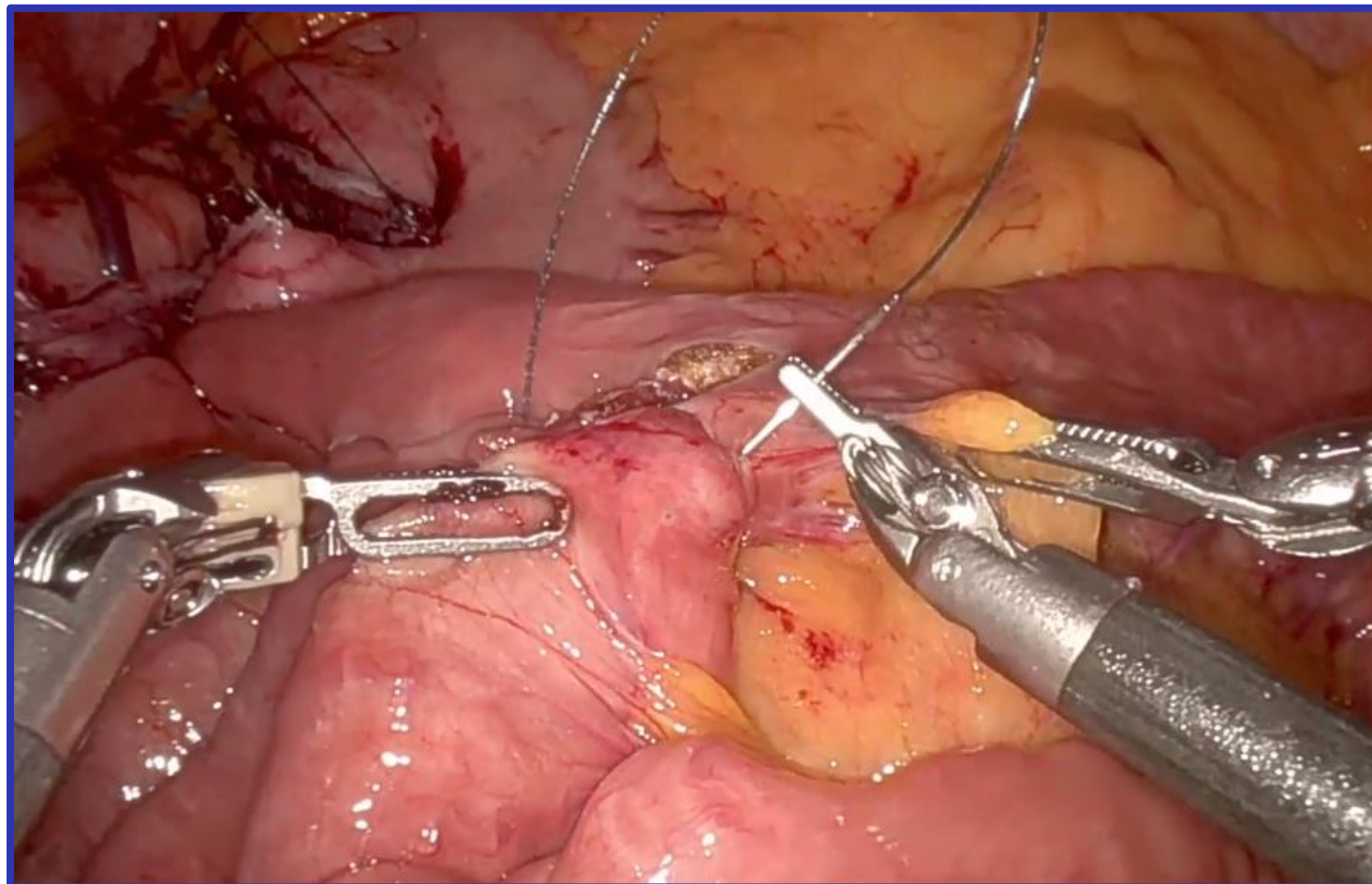
*Può essere la chirurgia robotica
un buon modo per imparare
la chirurgia bariatrica?*





Supporto all'ergonomia chirurgica





Supporto alla «destrezza chirurgica»



doppia console

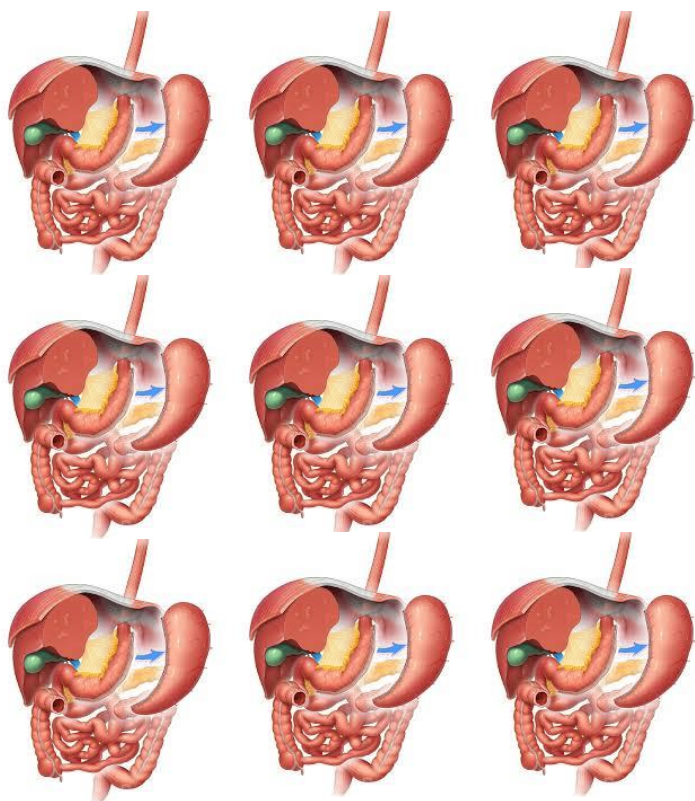
Supporto alla sicurezza in interventi complessi



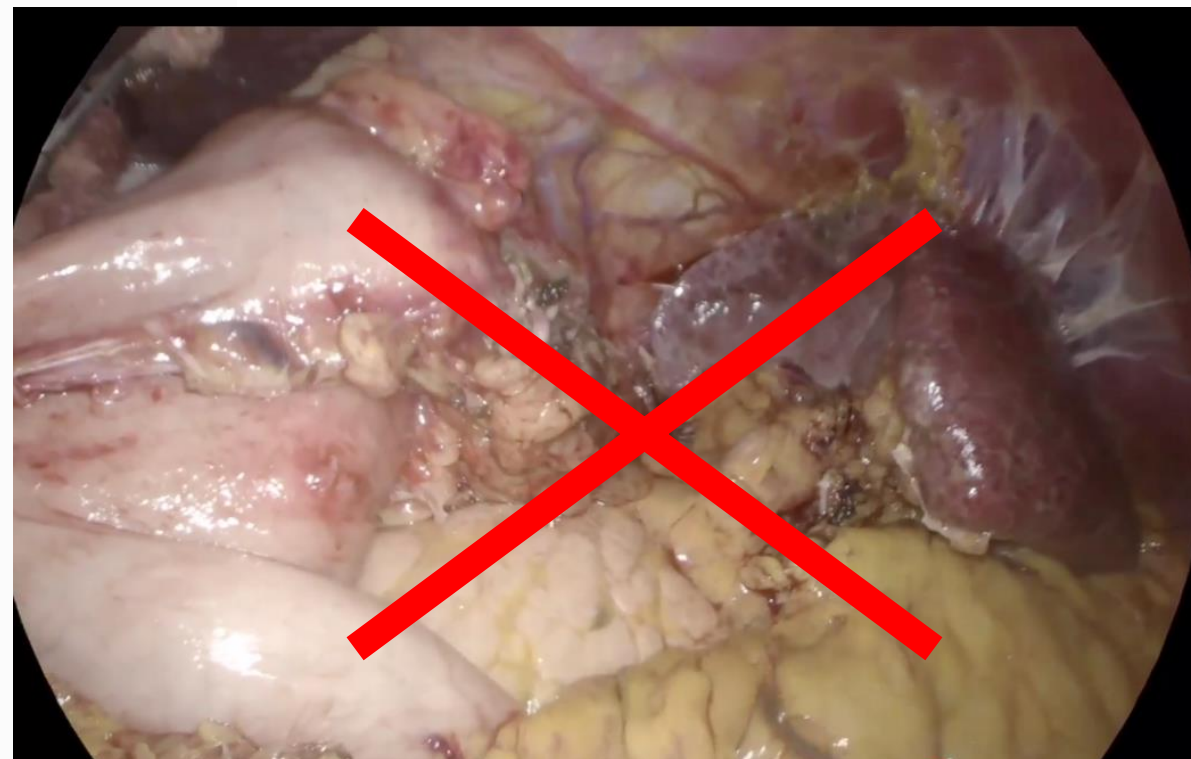
Tutoraggio da remoto

*Può essere la chirurgia bariatrica
un buon campo per imparare
la chirurgia robotica?*





ripetitività



Assenza distorsioni tissutali da neoplasie o tp neoadiuvanti

In sintesi:

- *La «digitalizzazione» della chirurgia apre nuovi infiniti orizzonti sulle capacità di simulazione in VR e sul telemonitoraggio*
- *La chirurgia bariatrica, con la sua riproducibilità anatomica e tecnica, si presta come promettente campo di pratica*
- *Tuttavia l'assetto «single player» del setting robotico, spesso scelto per procedure ad alto grado di complessità, e la dispendiosità del sistema rendono spesso difficile la transposizione in real life delle eventuali skills acquisite in simulazione.*
- *E' auspicabile un crescente impegno da parte dei centri ospedalieri, congiuntamente ad aziende e sponsor, nella formazione dei giovani e futuri chirurghi*

PRESIDENTE DEL CONGRESSO
STEFANO BONILAUDI

COMITATO SCIENTIFICO
M. CASADEI | F. SEBASTIANI

CONGRESSO SICOB

OBESITÀ

Tecnopolo di Reggio Emilia



Eventi Regionali 2026

REGGIO EMILIA

18 APRILE 2026

Grazie