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**Dott. Giuseppe Dal Ben
Direttore Generale AOUP**

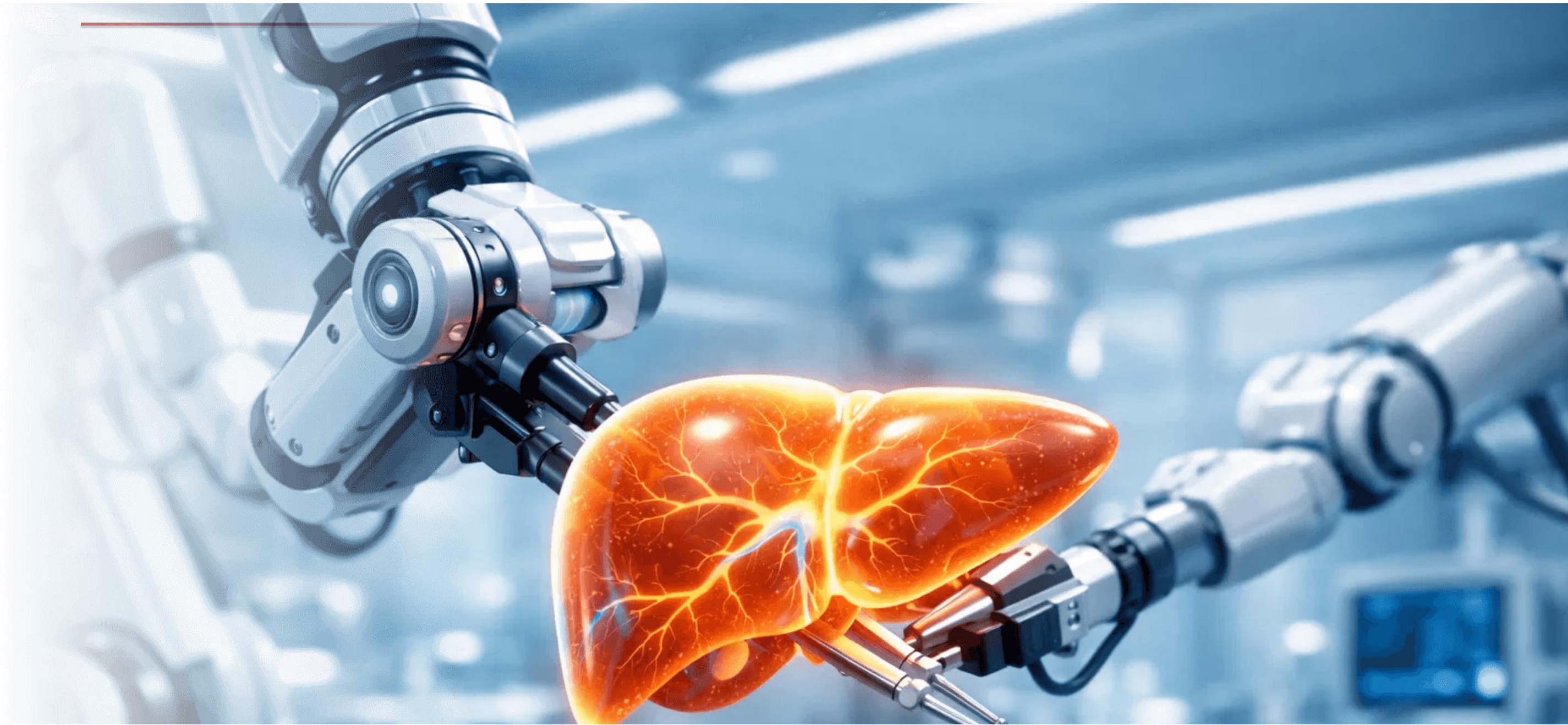


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**Prof. Umberto Cillo M.D. FEBS
Direttore UOC Clinica Chirurgica Generale
Epato-Bilio-Pancreatica e Centro Trapianto di Fegato AOUP**

TRAPIANTO DI FEGATO ROBOTICO



Umberto Cillo M.D. FEBS

Professor of General Surgery

Director, HPB Surgery and Liver Transplantation Unit

"Clinica Chirurgia Generale epatobiliopancreatica e trapianto di fegato"

Director, Department of Surgical Oncologic and Gastroenterologic Sciences

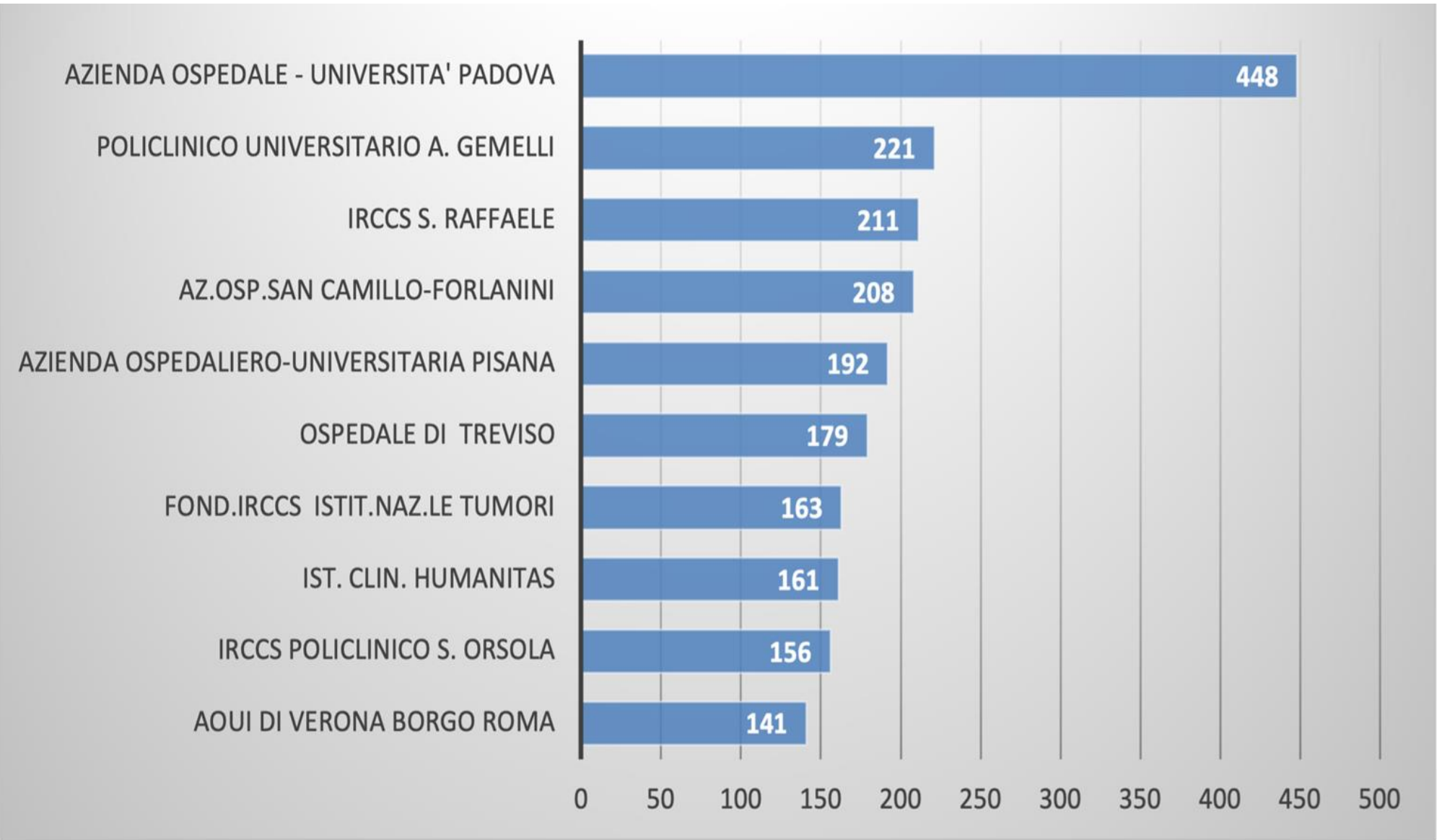
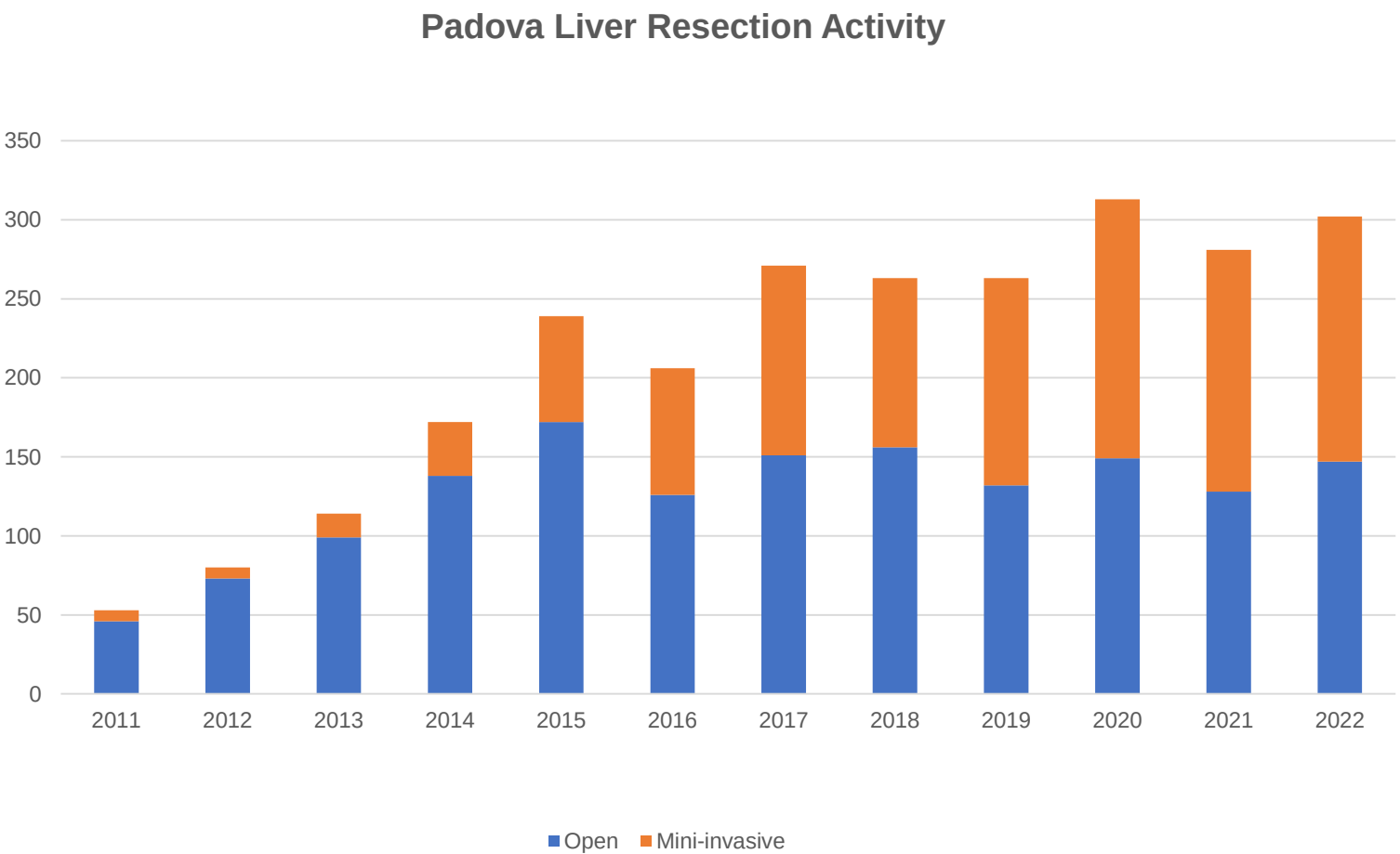
Padova University

University Hospital Padova,

ESOT president elect

ATTIVITA' DI CHIRURGIA MINI INVASIVA

PRIMO CENTRO D'ITALIA PER TRATTAMENTO DI TUMORI DEL FEGATO

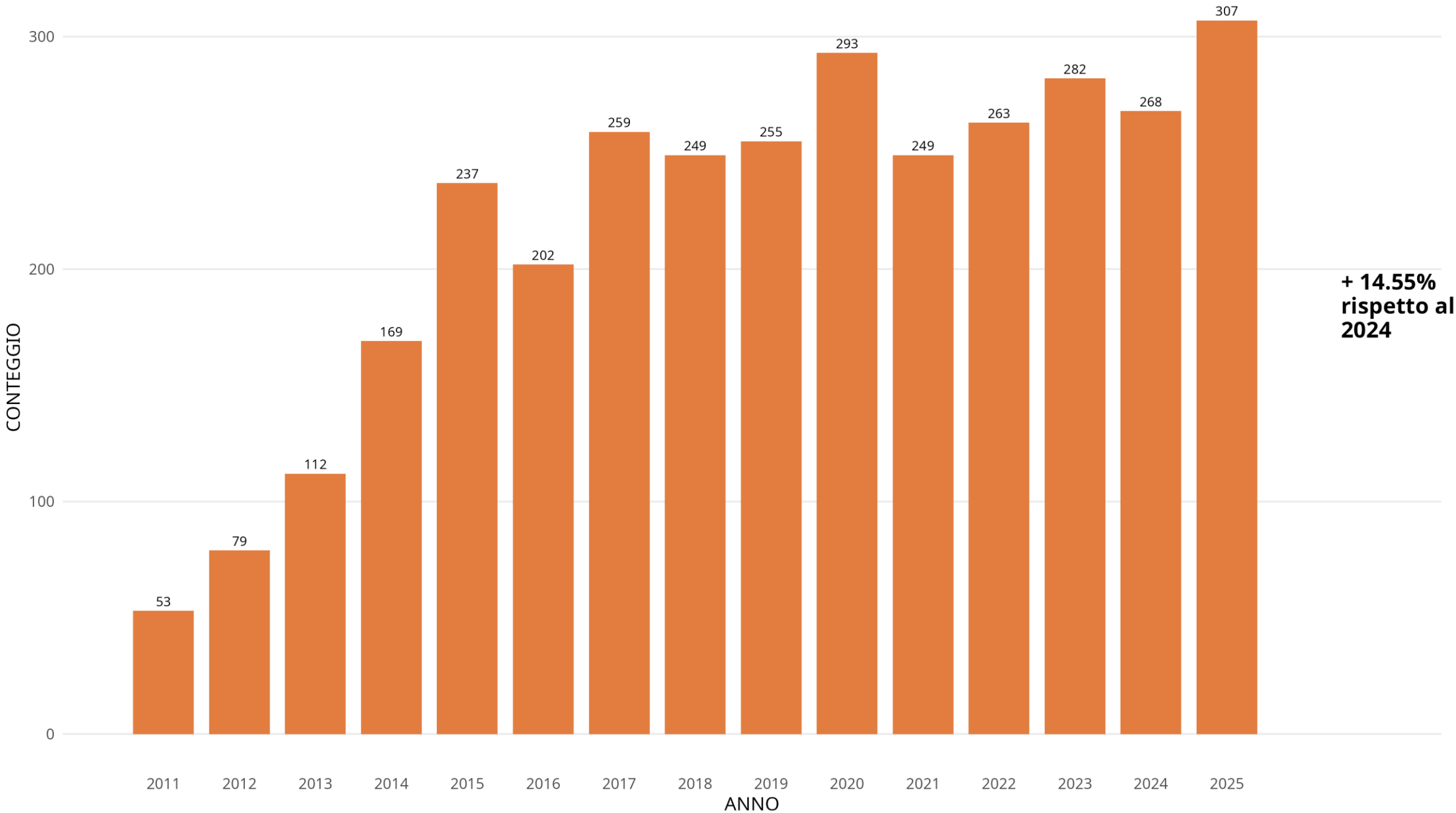


Umberto Cillo 2026

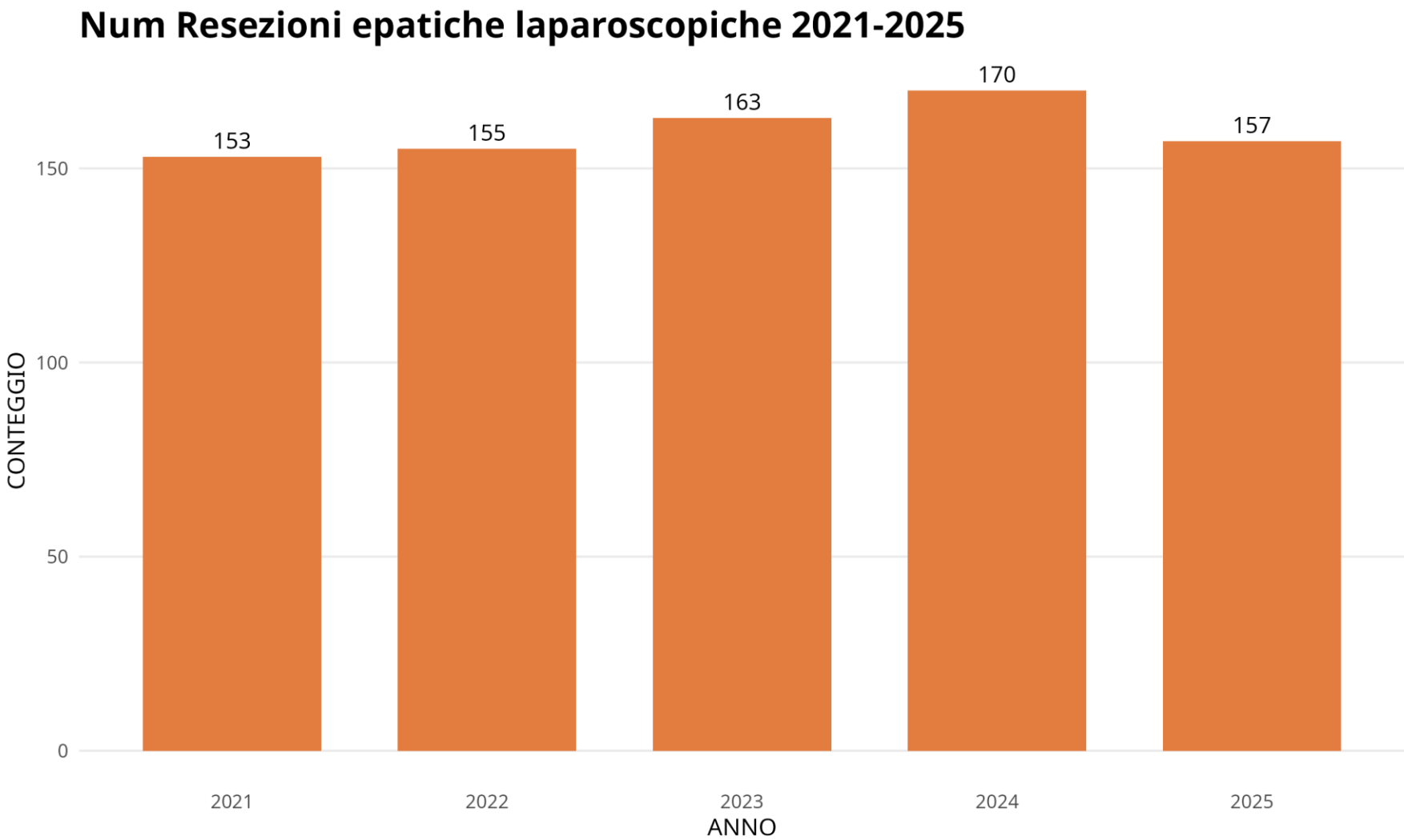
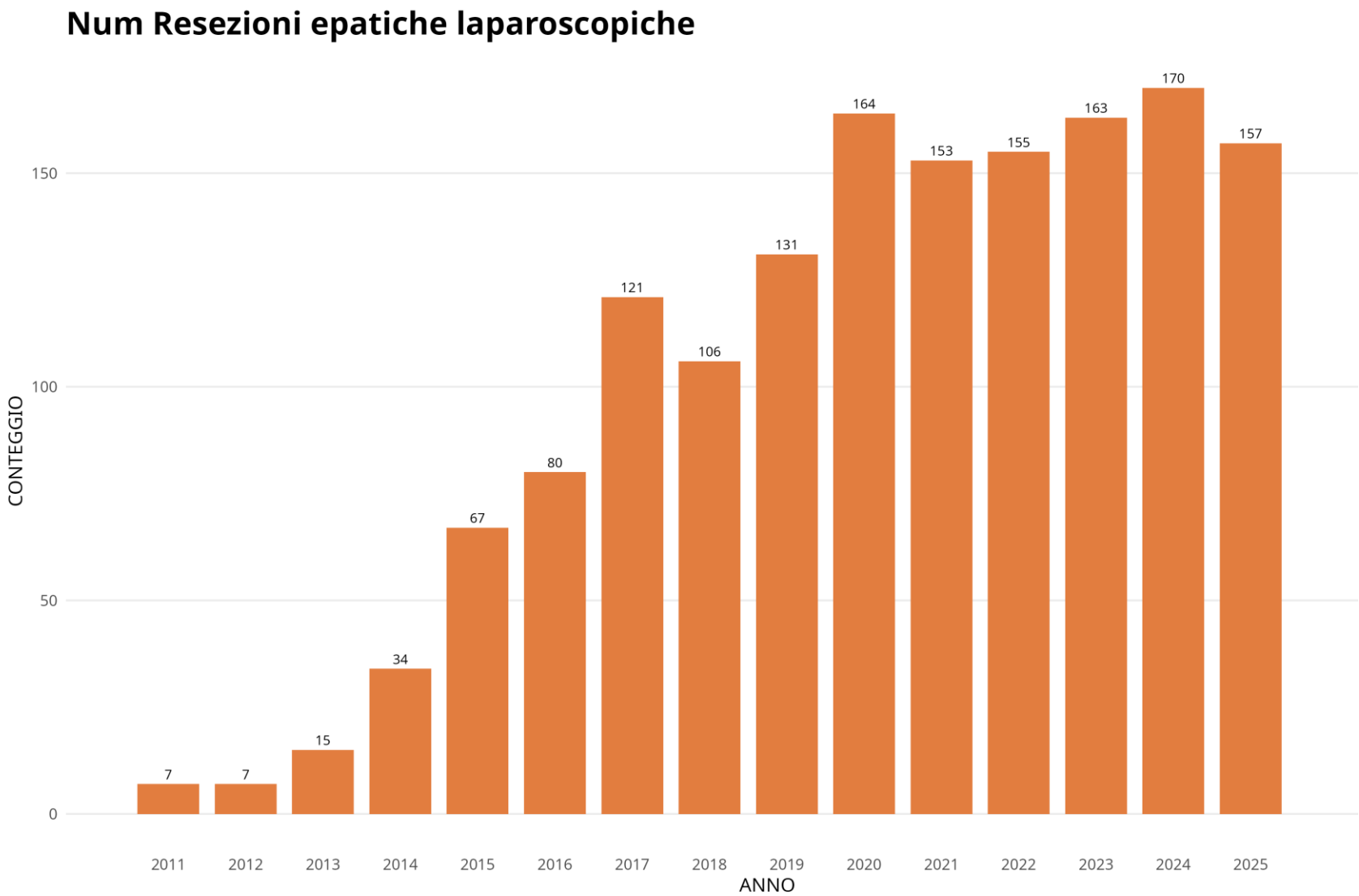


ATTIVITA' ASPORTAZIONE TUMORI DEL FEGATO

Num. Resezioni epatiche totali



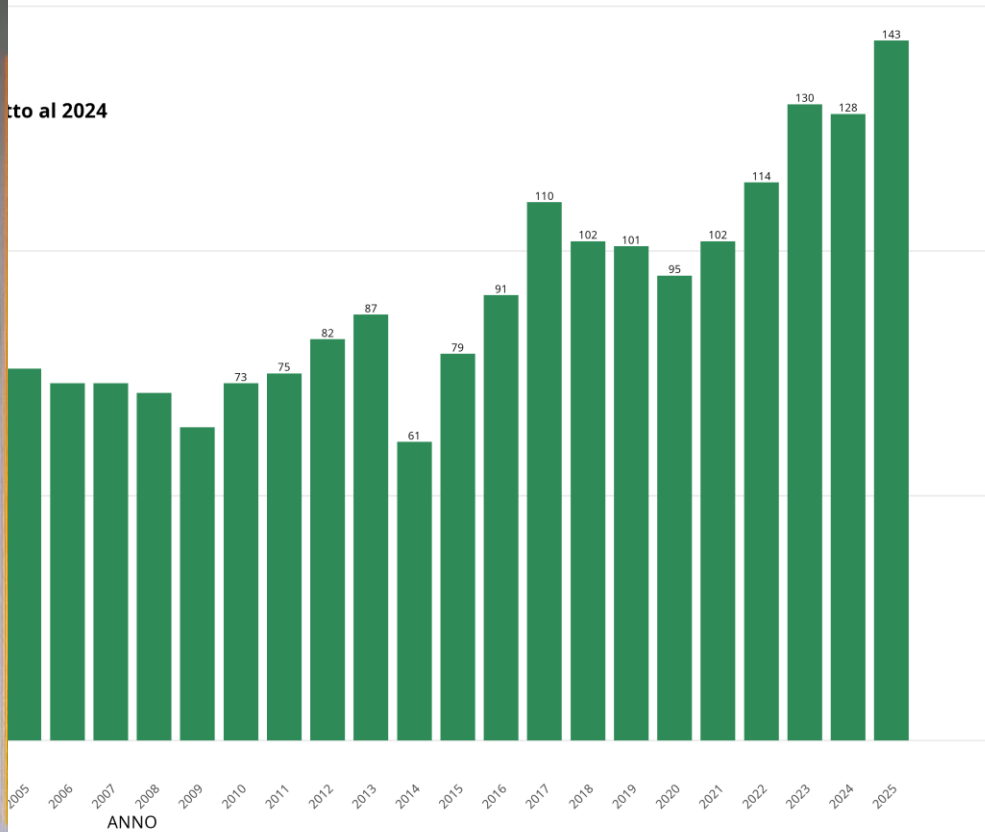
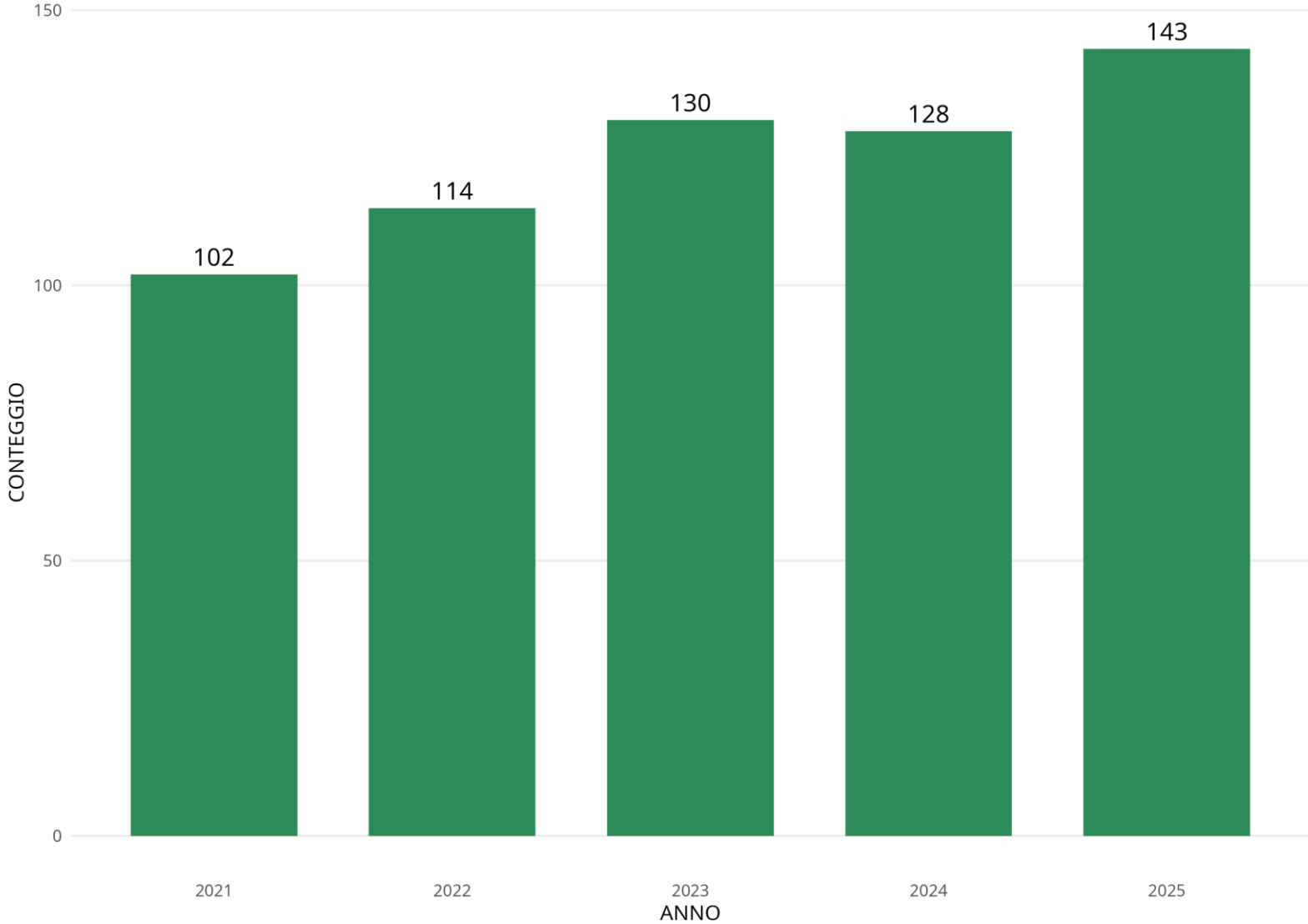
RESEZIONI EPATICHE MINI INVASIVE: LAPAROSCOPICHE o ROBOTICHE



TRAPIANTI DI FEGATO

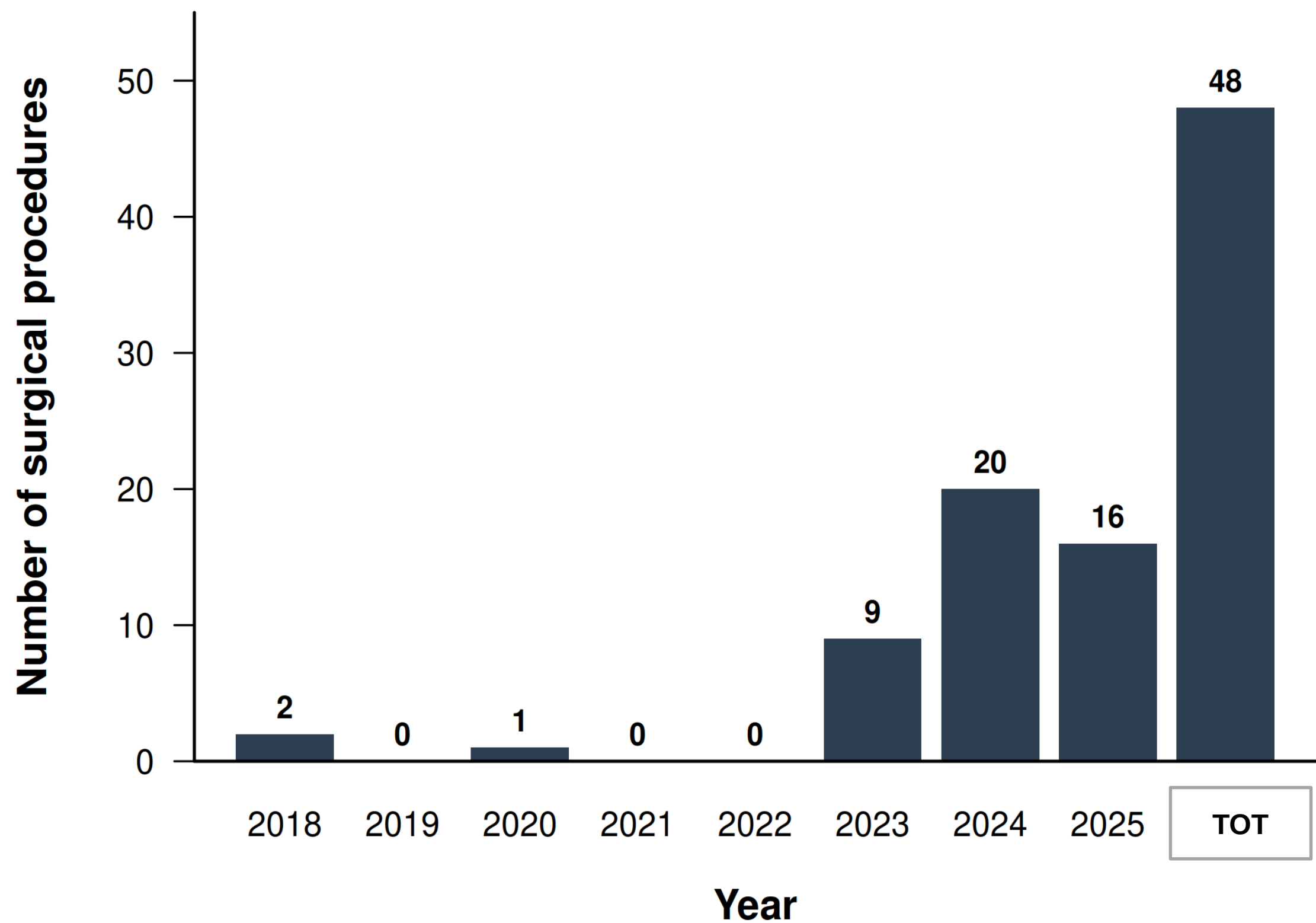
+11.7%

Num. Trapianti di Fegato 2021-2025



Torino	193
Pisa	162
Padova	143
MI-Niguarda	120
RM-S.Camillo	105
Bologna	103
Bergamo	102
Palermo	91
Modena	ND
MI-Policlinico	83
Napoli	81
Bari	68
Verona	67
Ancona	53
MI-INT	49
RM-Cattolica	40
Genova	39
Udine	35
Cagliari	ND
RM-TorVergata	35
RM-Policlinico	22
RM-BambinGesù	ND

CHIRURGIA ROBOTICA DEL FEGATO E VIE BILIARI

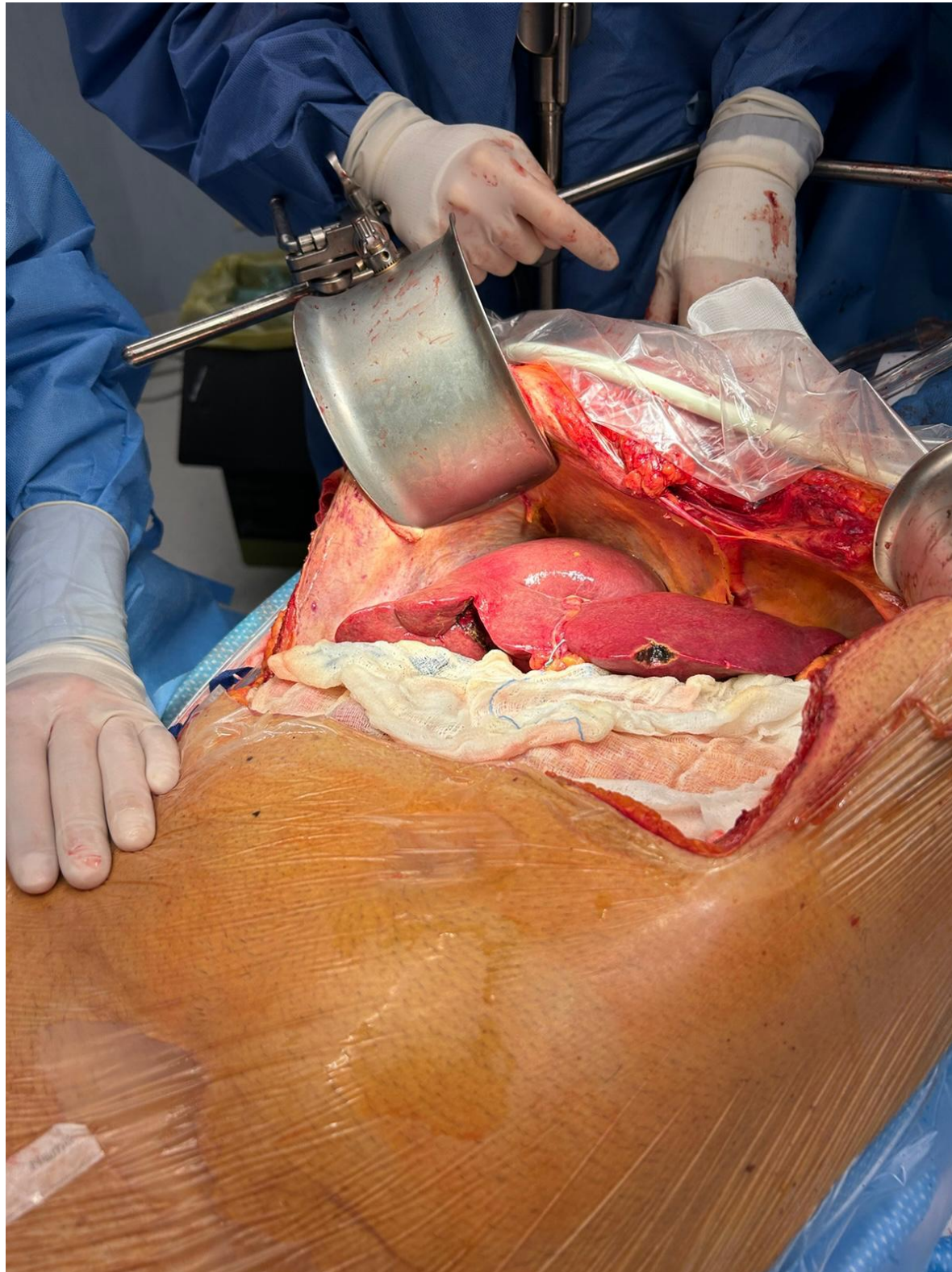


PERCHE' IL TRAPIANTO DI FEGATO IN MININVASIVITA' (ROBOTICA) ERA UNA SFIDA CONSIDERATA IMPOSSIBILE?

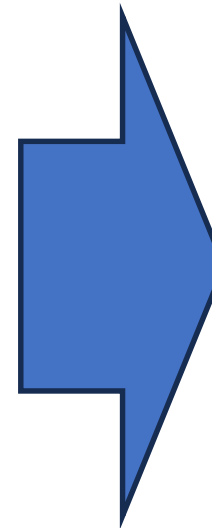


PERCHE' IL TRAPIANTO DI FEGATO IN MININVASIVITA' (ROBOTICA) ERA UNA SFIDA CONSIDERATA IMPOSSIBILE?

Da così



A così



PERCHE' E' COMPLESSO

Le «prime» della chirurgia robotica

Primi casi pubblicati di chirurgia robotica



PERCHE' IL TRAPIANTO DI FEGATO E' COSI' COMPLESSO?



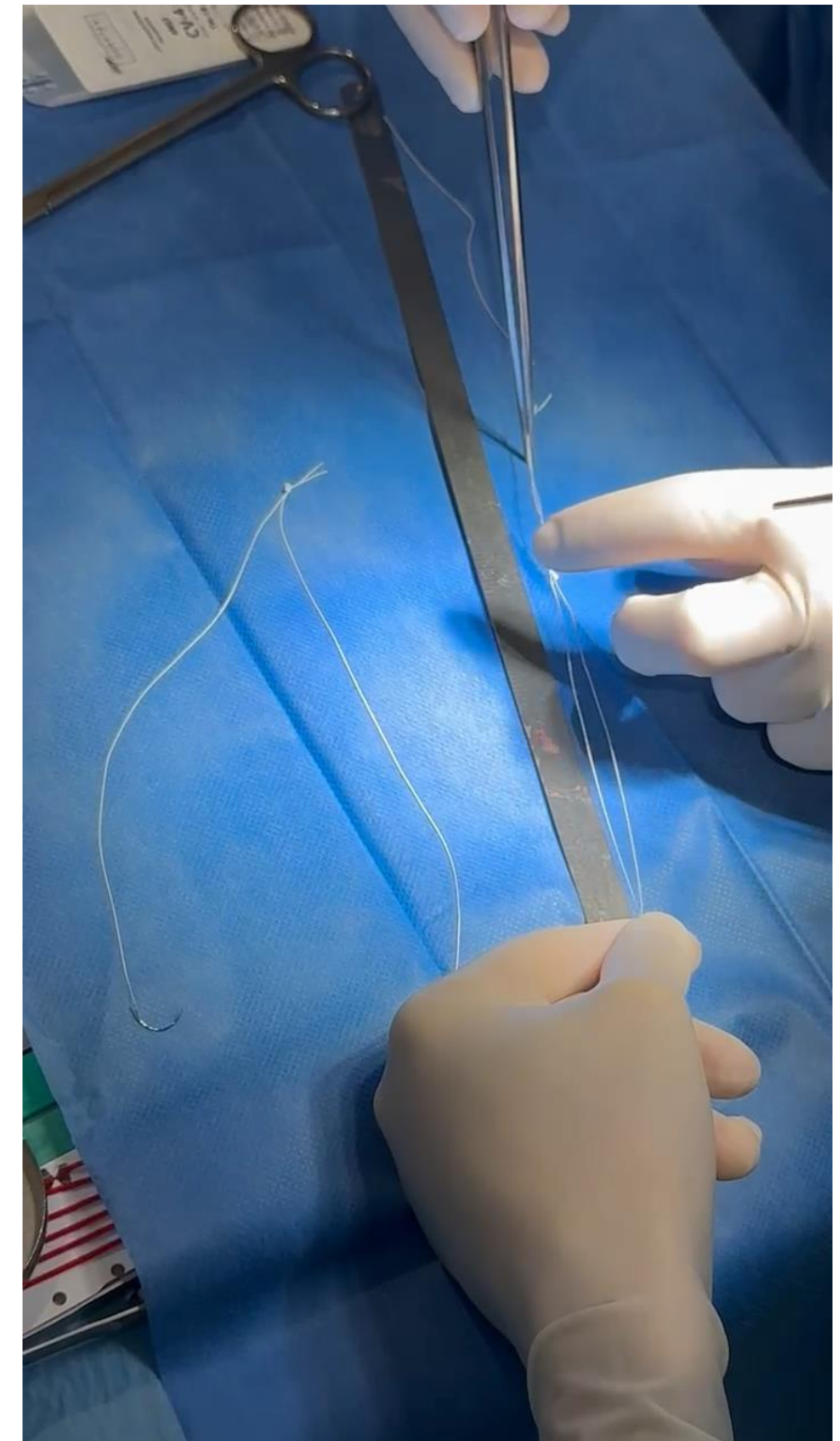
ASSENZA DI MACCHINE CHE SOSTITUISCANO IL FEGATO IN CASO DI MALFUNZIONE

VOLUME DEL FEGATO (organo piu grande del corpo)



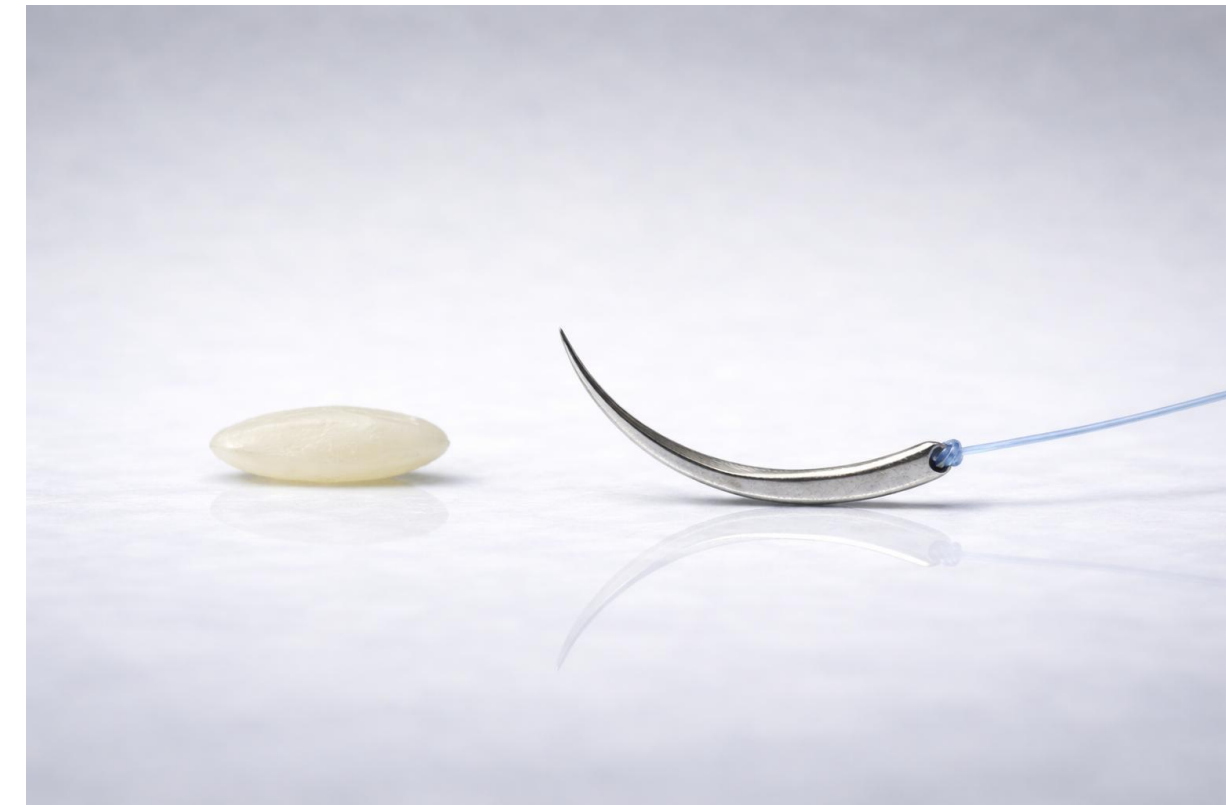
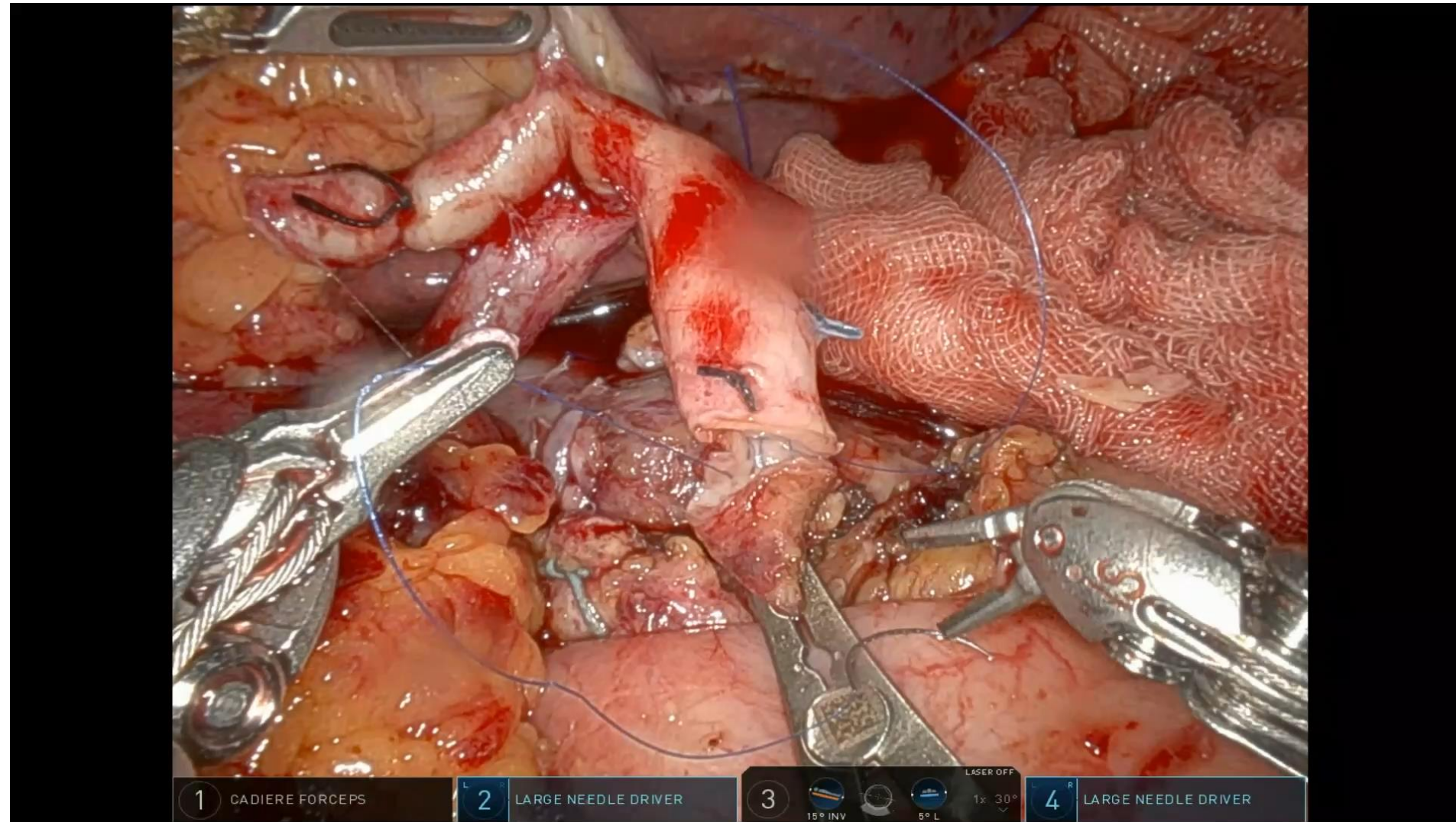
TEMPI DI IMPIANTO LIMITATI

MOLTE COMPLESSE ANASTOMOSI (cuciture)
ALCUNE MICROCHIRURGICHE



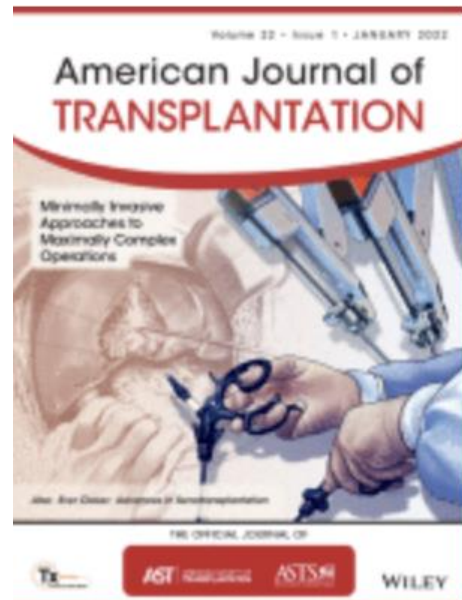
PERCHE' E' COMPLESSO

COMPLESSITA' DELLE ANASTOMOSI



2022

First report of Minimally invasive Liver Transplant (Right Graft for LDLT)



BRIEF COMMUNICATION

AJT

Pure laparoscopic living donor liver transplantation: Dreams come true

Kyung-Suk Suh¹  | Suk Kyun Hong¹  | Sola Lee¹ | Su young Hong¹ | Sanggyun Suh¹ |
Eui Soo Han¹ | Seong-Mi Yang² | YoungRok Choi¹  | Nam-Joon Yi¹  |
Kwang-Woong Lee¹ 

Am J Transplant. 2022;22:260–265.

First robotic liver transplant in U.S.
performed by Washington University
surgeons

Groundbreaking surgery performed at Barnes-Jewish Hospital in St. Louis

by **Tamara Bhandari** • July 12, 2023

FEGATO INTERO

PRIMI REPORT

First robotic liver transplant in U.S. performed by Washington University surgeons

Groundbreaking surgery performed at Barnes-Jewish Hospital in St. Louis

by **Tamara Bhandari** • July 12, 2023



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14 mar 2024

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Trapianti: a Modena nuovo fegato con tecnica robotica. Primo caso in Italia e tra i primi tre al mondo



American Journal of Transplantation
April 2022 , Volume 22 (4) , p 1230 – 1235

Laparoscopic donor and recipient hepatectomy followed by robot-assisted liver graft implantation in living donor liver transplantation

Lee, Kwang-Woong; Choi, YoungRok; Hong, Suk Kyun; Lee, Sola; Hong, Su young; Suh, Sanggyun; Han, Eui Soo; Yi, Nam-Joon; Suh, Kyung-Suk [Informazioni sull'autore](#) ▾

EURACTIV

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Portuguese hospital performs Europe's first robotic liver transplant

By **Helena Neves** | Lusa.pt ⌚ Est. 1min

📅 23 feb 2024

Advertisement

Content-Type: News

Pioneering fully robotic donor hepatectomy and robotic recipient liver graft implantation – a new horizon in liver transplantation

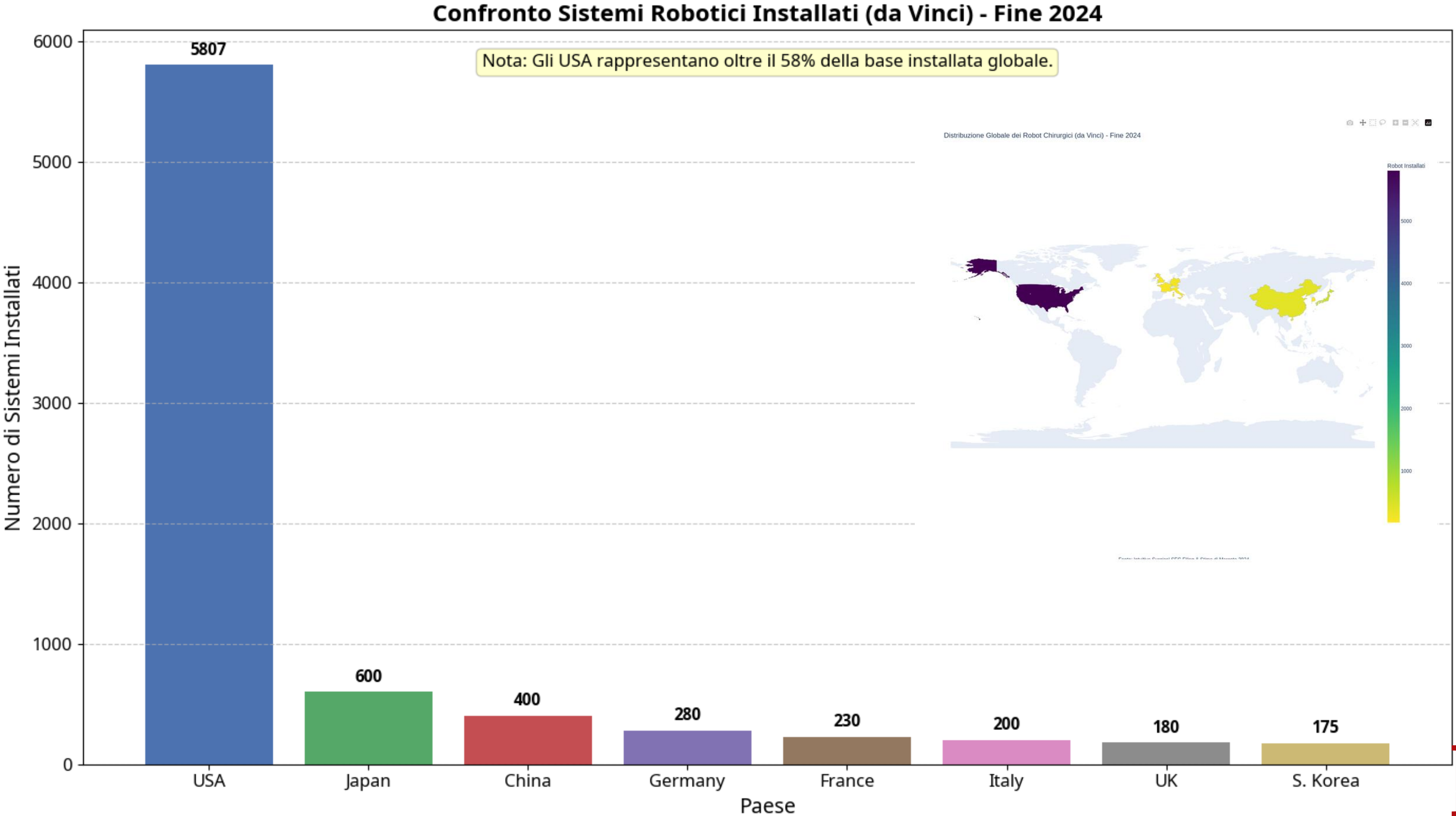
Broering, Dieter C. PhD; Raptis, Dimitri A. PhD; Elsheikh, Yasser MD



TRAPIANTO DI FEGATO INTERO PUBBLICATI NEL MONDO OGGI



Mercato dei robot chirurgici: analisi e crescita



ROAD MAP AL TRAPIANTO ROBOTICO

Clinica Chirurgica Epatobiliopancreatica e Trapianti di Fegato Padova

Updates in Surgery
<https://doi.org/10.1007/s13304-021-01041-3>

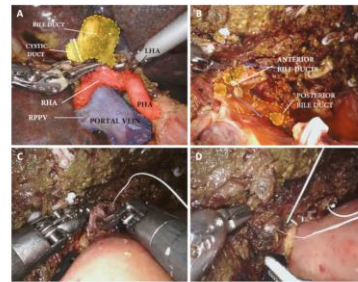
ORIGINAL ARTICLE

Robotic hepatectomy and biliary reconstruction for perihilar
cholangiocarcinoma: a pioneer western case series

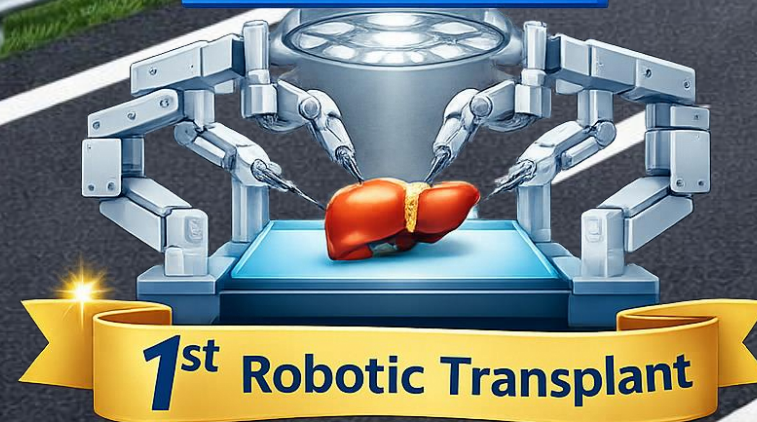
Umberto Cillo¹ 

Received: 16 November 2020 / Accepted: 22 March 2021
© The Author(s) 2021

1° serie occidentale
al mondo



26° caso Robotico
di
colangiocarcinoma

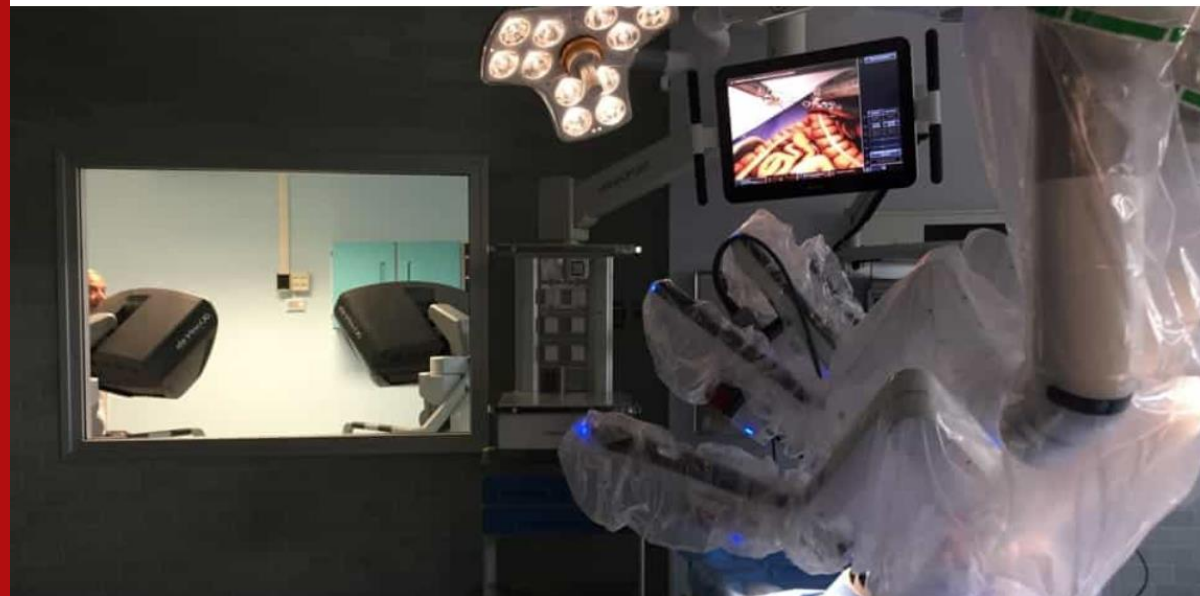


SET UP DI SALA OPERATORIA

IL TEAM CONSOLE

Prof. Cillo su console attiva

1° Assistente su seconda console attiva



W
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L

IL TEAM AL LETTO

- Secondo Assistente sul campo operativo
- Team di anestesia
- Strumentista
- Infermiera circolante

SET UP DI SALA OPERATORIA



Monitor 4K with ICG fluorescence

Intraoperative US

Monopolar energy device

Bipolar forceps

Vascular stapler

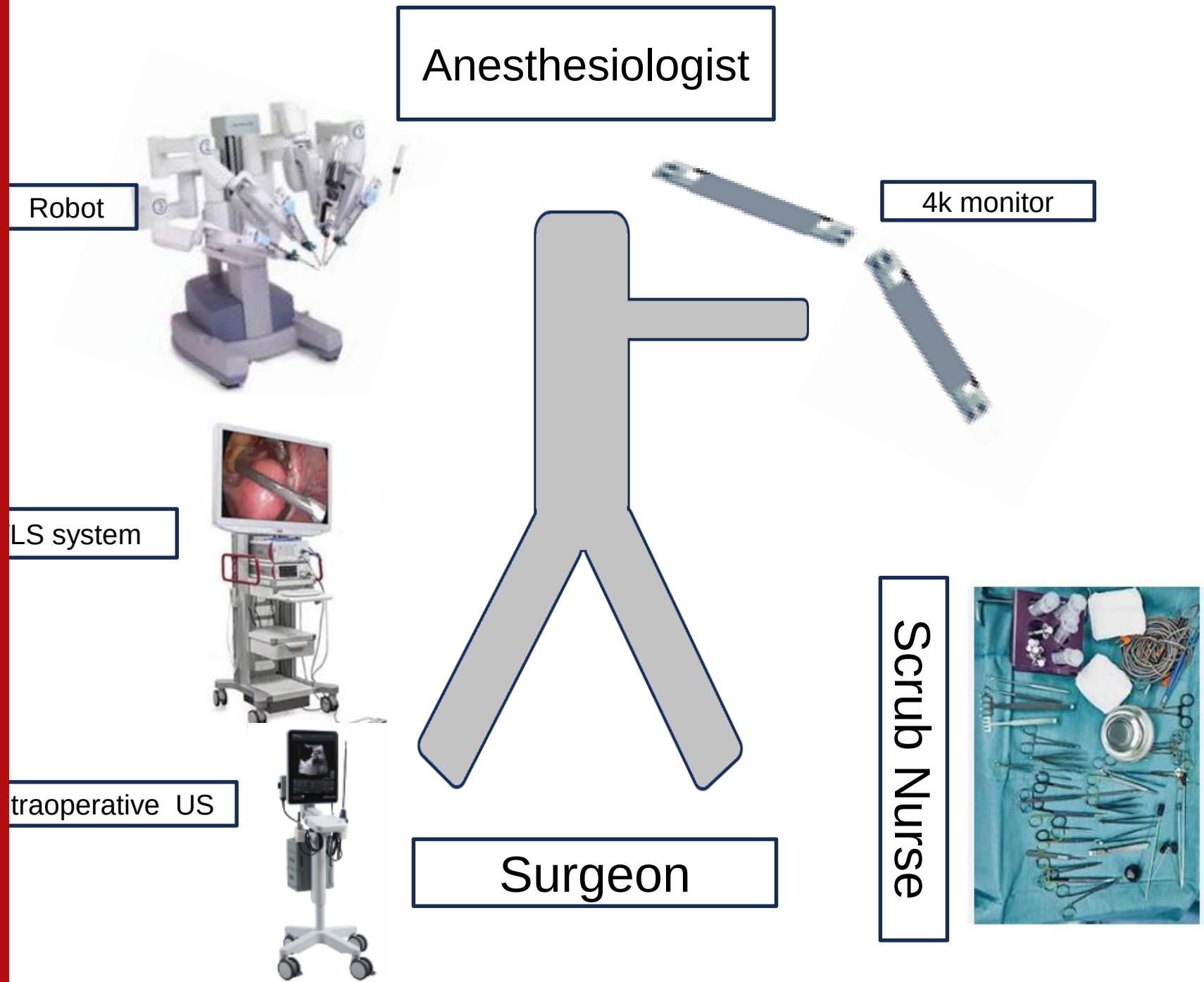
Operative US

Ultrasonic dissector

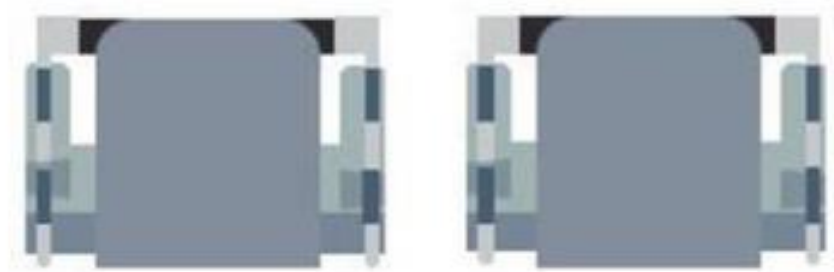
Energy device

Hem-o-loks – 3/0 -4/0 prolene ready

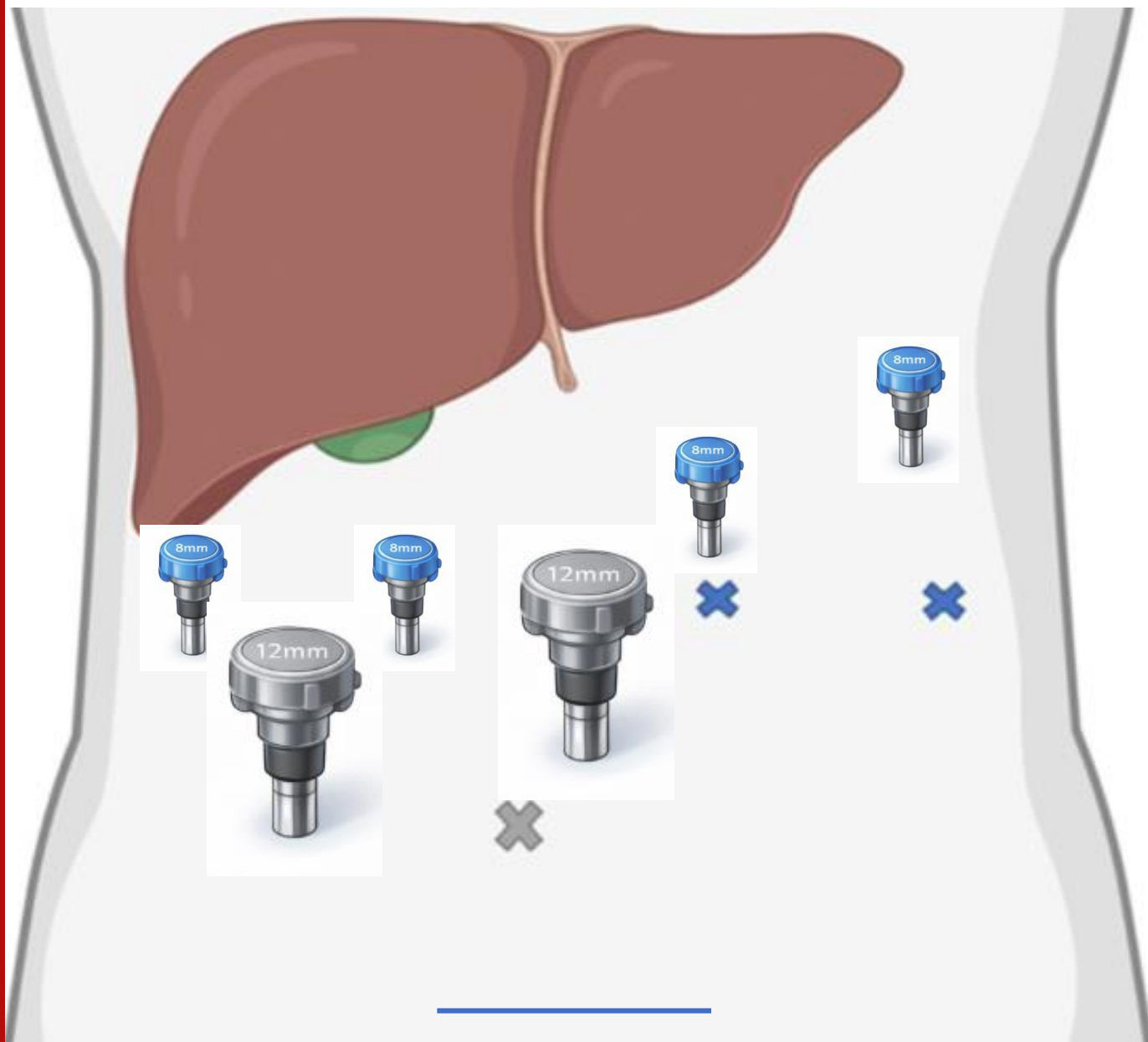
Suction for open surgery ready



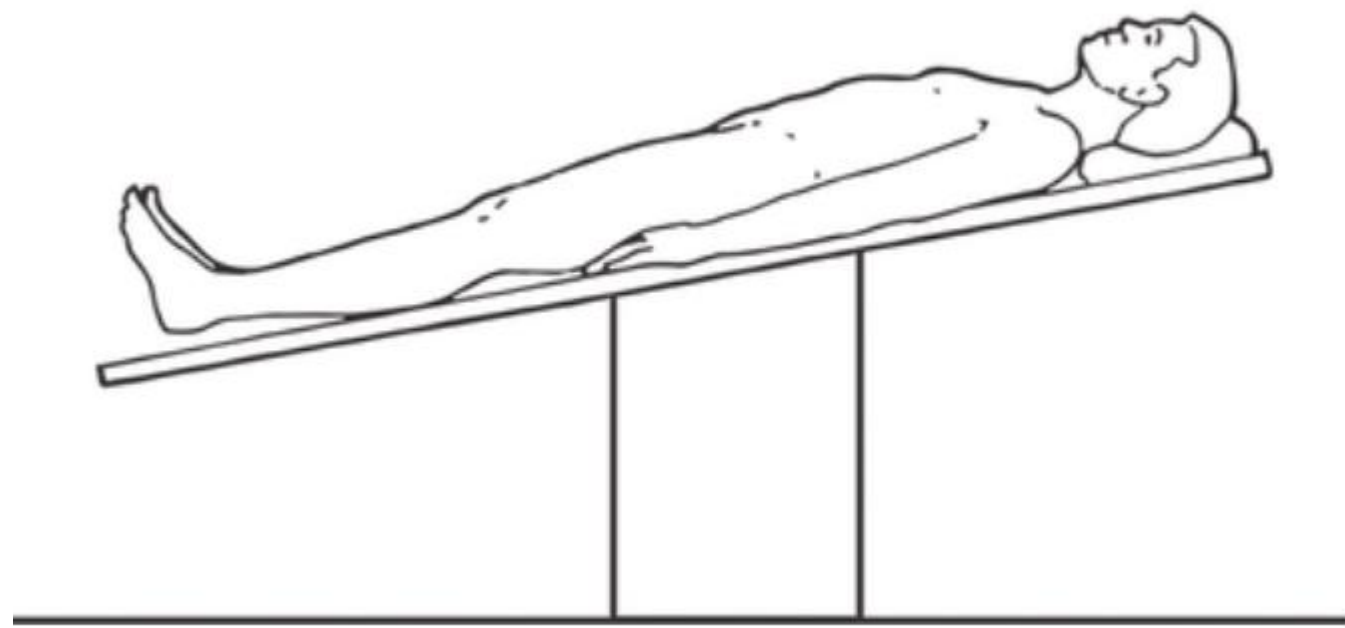
SET UP DI SALA OPERATORIA



Double console



- × 8mm trocar
- × 12mm assistant trocar
- × 5mm trocar (optional)



Reverse **Trendelenburg** position: 10 – 15 degrees

Left side bed rotation 5– 10 degrees



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da
SURGICAL

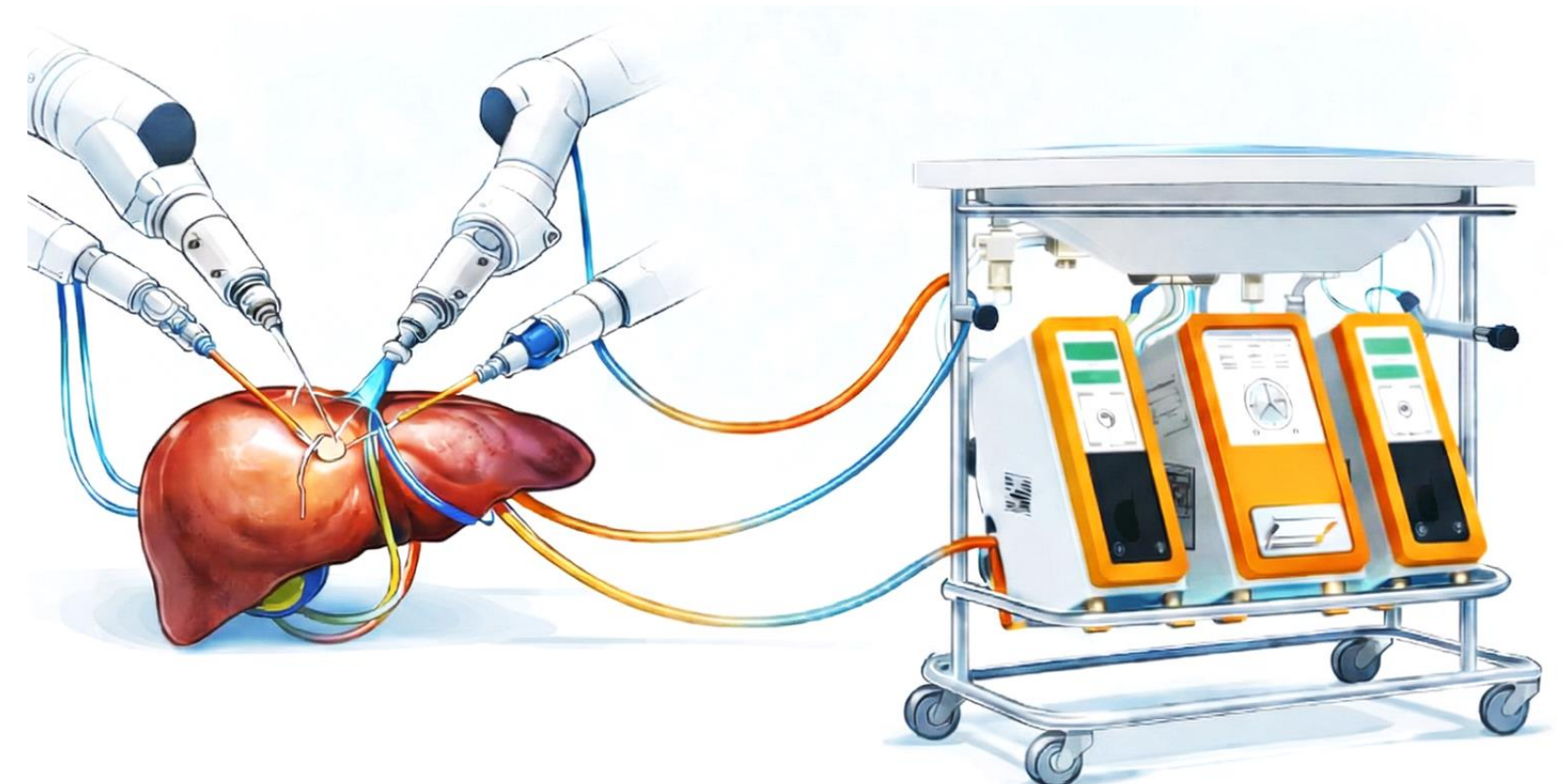
vinci
SYSTEM



L'INNOVAZIONE TECNICA (1° assoluta al mondo)



**TRAPIANTO ROBOTICO
MACHINE PERFUSION ASSISTITO**





DEL VENETO
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VANTAGGI POTENZIALI PER IL PAZIENTE

1. Degenza ridotta in terapia intensiva e in ospedale
2. Dolore postoperatorio più breve e meglio controllato
3. Minor rischio di complicanze di parete
4. Minor rischio infettivo
5. Miglior risultato estetico



IL FUTURO

