



INTRAOPERATIVE ULTRASOUND NAVIGATION FOR LIVER RESECTION AND THERMOABLATION

2025

PROGRAMME

DATE

COURSE DIRECTORS

JULY 10 - 12

G. Torzilli (IT)

F. Giuliani (IT)

M. Giménez (AR)

COURSE ENDORSEMENT AND ACCREDITATION



This course is accredited by the European Accreditation Council for Continuing Medical Education (EACCME) to provide the following CME activity for medical specialists. The EACCME is an institution of the European Union of Medical Specialists (UEMS).

EACCME credits are also recognized by the American Medical Association towards the Physician's Recognition Award (PRA).



AMERICAN COLLEGE OF SURGEONS • DIVISION OF EDUCATION
ACCREDITED EDUCATION INSTITUTES
ENHANCING PATIENT SAFETY THROUGH SIMULATION
ACCREDITED EDUCATION INSTITUTE

COURSE OBJECTIVES

- Learn the basic and advanced principles of intraoperative ultrasound guided liver surgery and thermoablation
- Develop strategies to approach liver tumours under a parenchyma-sparing approach using the ultrasound as a live navigation system
- Understand how to move from classical hepatectomy such as right and left resections to advanced parenchyma-sparing surgery.
- Enhance the knowledge about thermoablation machines and techniques
- Learn how to centre a lesion and become proficient in performing a laparoscopic ablation of liver tumors
- Explore and understand how to do all the new advanced liver procedures developed by prof. Torzilli as the Liver Tunnel, the upper transversal hepatectomy, the Roller Coaster hepatectomy, etc.
- Learn from world-wide recognized experts the tips and tricks on advanced ultrasound guided surgery and thermoablation
- Collaborate with peers to share experiences, best practices, and innovative approaches in advanced liver surgery and thermoablation.
- Gain insight into emerging technologies and advancement in intraoperative navigation systems for liver tumors ablation and resection (laparoscopic and open)
- test yourself by experimenting with the advanced techniques proposed during the course through the use of phantoms and in-vivo models under the supervision of expert trainers.

COURSE DIRECTORS

Guido TORZILLI

Felice GIULIANTE

Mariano GIMENEZ

Humanitas Research Hospital, Milan, Italy

Policlinico A. Gemelli, Rome, Italy

Hospital de Clinicas Jose San Martin, Argentina

SCIENTIFIC DIRECTOR

Simone FAMULARO

Policlinico A. Gemelli, Rome, Italy

FACULTY

Pietro ADDEO

Francesco ARDITO

Guido COSTA

Matteo DONADON

Ender DULUNDU

Antonello FORGIONE

Yoshikuni KAWAGUCHI

Hugo Pinto MARQUES

Fabio PROCOPIO

Barbara SEELIGER

Alejandro SERRABLO

Olivier SOUBRANE

Go WAKABAYASHI

C.H.U. Hautepierre, Strasbourg, France

Policlinico A. Gemelli, Rome, Italy

Humanitas Research Hospital, Milan, Italy

Azienda Ospedale Maggiore, Novara, Italy

Cerrahpasa Medical School, Istanbul, Turkey

IRCAD, Strasbourg, France

University of Tokyo Hospital, Tokyo, Japan

Hospital Curry Cabral, Lisbon, Portugal

Humanitas San Pio X, Milan, Italy

IHU, Strasbourg, France

Hospital Miguel Servet, Zaragoza, Spain

Institut Mutualiste Montsouris, Paris, France

Ageo Central General Hospital, Ageo City, Japan

TRAINERS

Pio CORLEONE

Federico ESPINOLA SCHULZE

Flavio MILANA

Antonella RONCHI

Yuchuan YANG

CHU Bordeaux, Bordeaux, France

Facultad de Ciencias Medicas, Asuncion, Paraguay

Humanitas Hospital Rozzano, Milan, Italy

Fundacion Daicim, Buenos Aires, Argentina

IRCAD, Strasbourg, France

Thursday, July 10th, 2025

MORNING

07.45 am Registration

08.00 am Welcome to participants

J. Marescaux

08.15 am Course presentation

G. Torzilli
F. Giuliani
M. Gimenez

THEORETICAL SESSION

INTRAOPERATIVE ULTRASOUND: THE FUNDAMENTALS

Chairman:
G. Torzilli
F. Giuliani
M. Gimenez

08.20 am **Open Ultrasound**

A. Serrablo

08.40 am **Laparoscopic Ultrasound**

M. Gimenez

09.00 am **Hepatic nodule: How to recognize it?**

M. Donadon

09.20 am **Contrast enhanced ultrasound (CEIOUS):**

S. Famularo

- Principles and applications

09.40 am **Role of colour flow analysis**

P. Addeo

10.00 am **Discussion with participants**

10.10 am Break

THEORETICAL SESSION

THE IOUS IN LIVER SURGERY: TIPS AND TRICKS

Chairman:
S. Famularo
A. Serrablo
Y. Kawaguchi

10.30 am **IOUS & ICG injection**

Y. Kawaguchi

10.50 am	Cognitive liver map during open and mini-invasive liver resections	<i>F. Ardito</i>
11.10 am	The compression: from the open to a work in progress in MALS	<i>F. Procopio</i>
11.30 am	IOUS tricks: <ul style="list-style-type: none">• How to define the surgical area• How to check the resection line intraoperatively• How to identify an unknown vessel (hooking technique)• Post resectional control	<i>S. Famularo</i>
12.00 pm	Video session (pre-record) <ul style="list-style-type: none">• How I do it• Discussion	<i>F. Procopio</i> <i>A. Ronchi</i> <i>F. Ardito</i> <i>E. Dulundu</i>
01.00 pm	Lunch at the Institute	

Intraoperative ultrasound navigation for liver resection and thermoblation

AFTERNOON

02.00 pm **Lab presentation with Prof. Gimenez & Dr. Famularo**

EXPERIMENTAL LABORATORY

Beginning of the workshop rotation at **02.15 pm**

Rotation time: one hour per station

TASK	Table N° in the OR	TITLE	SETTING
Station 1	Table 1	Technical aspects of ablation devices + US needle insertion with freehand technique	Ex vivo liver
	Table 2		
	Table 3		
Station 2	Table 4	Percutaneous/Laparoscopic US: Probes manipulation	Phantom
	Table 5		
	Table 6		
Station 3	Table 7	IOUS- OPEN: Anatomy vascular recognition surgical tips and tricks	In vivo liver
	Table 8		
Station 4	Table 9	IOUS- LAPAROSCOPIC: Anatomy vascular recognition surgical tips and tricks	In vivo liver
	Table 10		

06.00 pm

End of session

08.30 pm

Dinner at the Restaurant “La Brasserie des Haras”,
23 Rue des Glacières in Strasbourg

Friday, July 11th, 2025

MORNING

07.45 am Evaluation of the previous day

THEORETICAL SESSION

INTRAOPERATIVE ULTRASOUND GUIDED LIVER SURGERY:
CLASSIC AND NEW ANATOMIC CONCEPTS

Chairmen:

G. Torzilli

H. Pinto Marques

M. Gimenez

08.00 am **R1 vascular surgery**

E. Dulundu

08.20 am **How to identify and how to use the collateral veins**

G. Torzilli

08.45 am **Laparoscopic thermoablation:**

- How to centre the lesion and how to proceed

M. Gimenez

09.05 am **Hilar approach: from Takasaki to MILS**

G. Wakabayashi
(visioconference)

09.25 am **The transparenchymal approach**

F. Giuliani

Chairmen:

A. Forgione

ADVANCE PARENCHYMA SPARING IOUS GUIDED LIVER SURGERY

09.45 am **From wedge to rollercoaster: quantum hepatectomies**

G. Torzilli

10.05 am Coffee Break

Intraoperative ultrasound navigation for liver resection and thermoblation

Chairmen:
O. Soubrane
A. Serrablo
F. Giuliani

10.30 am	From meso hepatectomy to mini-meso hepatectomy	S. Famularo
10.50 am	Transversal hepatectomy and the “roller-coaster”	F. Procopio
11.10 am	ALPPS and two stage hepatectomy	F. Ardito
11.30 am	IOUS in case of major hepatectomies	H. Pinto Marques
11.50 am	Combined laparoscopic resection and thermoablation, Evidence	M. Gimenez
12.10 pm	Robotic liver resection <ul style="list-style-type: none">• On the way to a new standard in liver resections?	O. Soubrane
12.30 pm	Cluster approach for parenchyma sparing major hepatectomy	G. Torzilli
01.00 pm	Lunch at the Institute	

AFTERNOON

02.00 pm

Lab presentation with Pr. Gimenez & Dr. Famularo

EXPERIMENTAL LABORATORY (PRACTICE ON LIVE TISSUE)

02.15 pm

- IOUS guided laparoscopic liver parenchyma sparing resection
- IOUS guided laparoscopic ablation
- IOUS guided open parenchyma sparing resection/ ablation

06.30 pm

End of the day session - Evening free

Intraoperative ultrasound navigation for liver resection and thermoblation

Saturday, July 12th, 2025

MORNING

07.45 am Evaluation of the previous day

THEORETICAL SESSION: INNOVATION AND FUTURE PERSPECTIVES

Chairman:
M. Gimenez
G. Torzilli
F. Giuliani

08.00 am **3D planning** G. Costa

- How to do it?
- Is its use mandatory?

08.20 am **What surgical robotic systems exist today?** B. Seeliger

08.40 am **Percutaneous ablation of liver tumors. Navigation guide. Robotics. Role of the HPB surgeon?** M. Gimenez

09.00 am **The future of parenchyma-sparing surgery: will robotic surgery substitute the open advanced approach?** G. Torzilli

09.30 am **What do we still need to know about liver tumour ablation?** M. Gimenez

10.10 am Coffee Break

10.30 am **Robotic and AI in Ultrasound – IRCAD R&D** A. Hostettler

11.00 am **Computer assisted surgery. Everything changed again?** M. Gimenez

11.30 am **Final discussion**

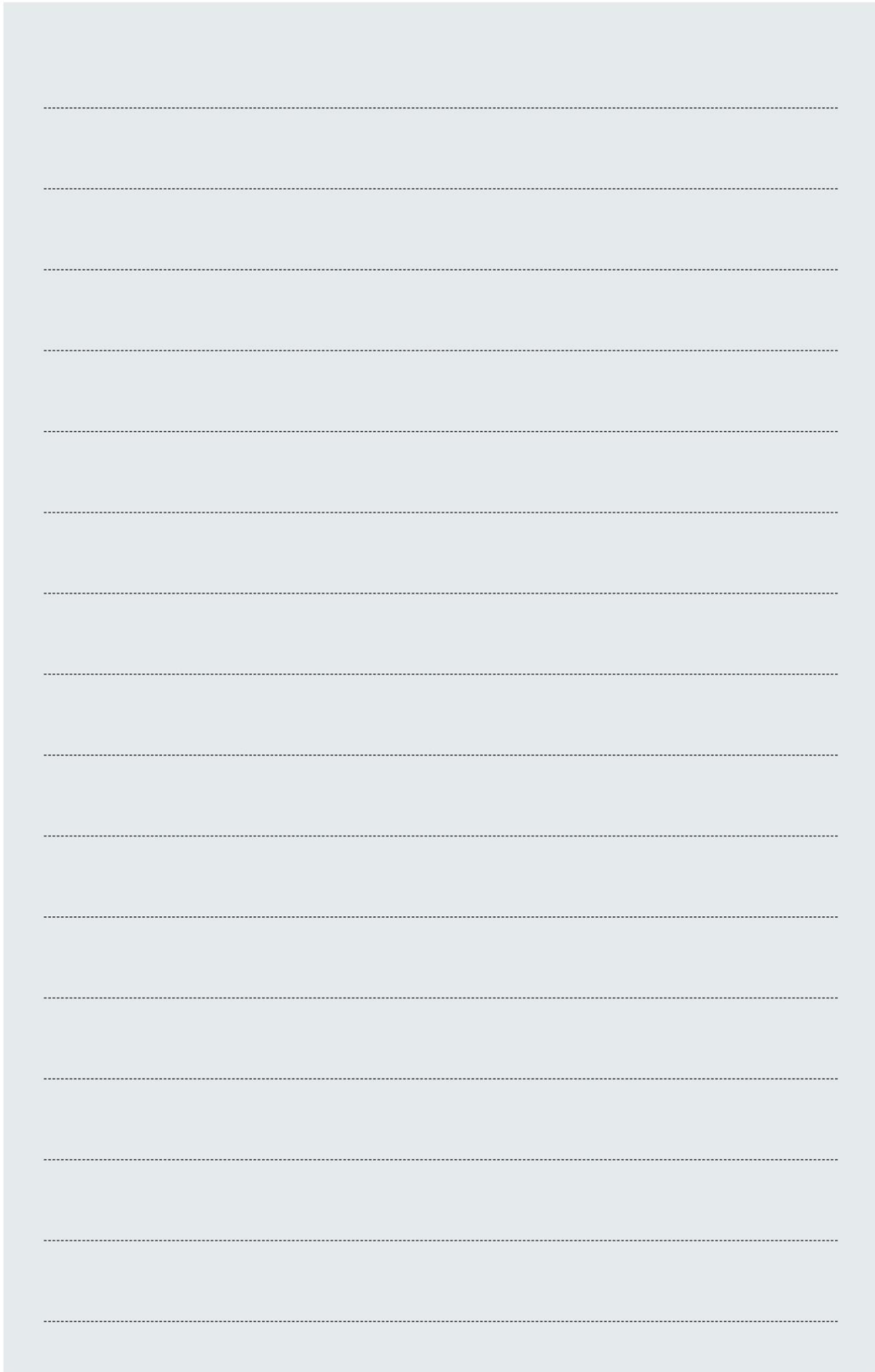
12.15 pm **Course closure**

12.30 pm **Course evaluation**

Delivery of Certificate of attendance

01.00 pm Lunch at the Institute

NOTE PAD

A large rectangular area with a light gray background, containing 20 horizontal dashed lines for writing. The lines are evenly spaced and extend across the width of the rectangle.