



CARDIOVASCULAR INTENSIVE CARE POINT OF CARE ULTRASOUND MASTERCLASS

EL MANAR UNIVERSITY; FACULTY OF MEDICINE OF TUNIS, TUNISIA

FACULTY

COURSE DIRECTORS

- Fathia Mghaieth, Tunisia
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- Hatem Soliman Aboumarie, UK
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E-LEARNING COORDINATOR

- Zeynab Jebberi, Tunisia
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EXPERTS

- Fathia Mghaieth, Tunisia
- Hatem Soliman Aboumarie, UK
- Olfa Hamzaoui, France
- Khadija Mzoughi, Tunisia

EXPERTS BIOGRAPHIES

Pr. Mghaieth .Zghal Fathia

Professor of Cardiology

Chief of the Echo laboratory and intensive care unit in the Cardiology department of Rabta University Hospital, of Tunis

Accredited by the European Association of Cardiovascular imaging (EACVI) and Fellow of EACVI

President of cardiology intensive care working group of the Tunisian society of Cardiology

Head of the master of intensive care and cardiovascular emergencies in the faculty of medicine of Tunis (FMT)

Past president of the Cardiology section and past president of Medicine B department in the FMT

Member of the Ethics committees of the FMT and la Rabta Hospital

President and foundation member of the Leadership for health Tunisian association

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Dr. Hatem Soliman Aboumarie, FEACVI, FASE, FHEA, FRCP

Consultant in Cardiothoracic Intensive Care and ECMO

Royal Brompton and Harefield Hospitals, London, UK.

Honorary Senior Lecturer, King's College London

Honorary Visiting Professor, Mayo Clinic Florida

Elected Member and General Secretary of the European Association of Cardiovascular Imaging

Educator and Senior Lecturer in Cardiothoracic

Intensive Care, Cardiology and Echocardiography. Advanced specialist training in Cardiothoracic Intensive Care, mechanical Circulatory Support, Echocardiography, Lung Ultrasound, Heart and Lung Transplantation.

Elected Member of the Board and Councillor for Echocardiography,

European Association of Cardiovascular Imaging, 2022-2024. Past

Associate Editor of the European Heart Journal - Case Reports. Editorial

Board member of The Ultrasound Journal, JACC-Cardiovascular Imaging

and Frontiers Cardiovascular Imaging. Clinical and research interests are

Critical Care Echocardiography, Mechanical Circulatory Support and Heart and Lung Transplantation.

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Pr.Olfa HAMZAOUI

professor of intensive care, Medical intensive care, Robert

Debré Hospital, University Hospital Reims, Reims, France

expertise field: Cardiovascular monitoring, echocardiography,

Assessment of volume status, Use of vasopressors in critically

ill patients, Gender inequity in critical care Membership in

professional societies

CO-chair of the national congress of the French Society of intensive care (SRLF)

French national representative in the Council of the European

society of intensive care (ESICM), Active member of the cardiovascular section of ESICM

Associate Editor in journal of critical care, Associate Editor of Annals of intensive care

Editor for Journal of intensive medicine (young journal)

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Pr. Khadija Mzoughi, MD

Professor of Cardiology

Head of the Cardiology Department at Habib Bougatfa
University Hospital

Member of the Echocardiography Working Group of the Tunisian
Society of Cardiology and Cardiovascular Surgery (STCCCV)

Elected member of the Scientific Council at the Faculty of
Medecine of Tunis

Third Cycle Student Coordinator at the FMT

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OBJECTIVE

After completing the course, learners should be able to:

- Evaluate haemodynamic instability using point-of-care ultrasound (POCUS).
- Incorporate cardiopulmonary ultrasound into their daily practice for managing acute cardiac care.
- Utilise systemic venous ultrasound to assess fluid status and guide fluid management effectively.
- Enhance the management of cardiovascular emergencies and critical care.

COURSE OVERVIEW AND AIMS

This course is designed for fellows in training at El Manar University, Faculty of Medicine of Tunis, Tunisia who manage acute cardiovascular conditions. It aims to equip participants with the skills to integrate advanced intensive care ultrasound techniques—including cardiac, lung, and systemic venous assessments—into their daily clinical practice. The approach is rooted in pathophysiological-based evaluation, supporting immediate therapeutic decisions at the bedside.

Point-of-care ultrasound (POCUS) has demonstrated its ability to enhance the quality of care provided to acutely ill patients when performed by appropriately trained professionals. Intensive care ultrasounds are tailored to specific clinical contexts and scenarios and can be utilised by cardiologists, intensivists, emergency physicians, and other acute care specialists who have completed dedicated training in basic and advanced ultrasound techniques.

Unlike comprehensive echocardiographic assessments, intensive care ultrasound is a focused, time-efficient examination designed to address specific clinical questions directly at the bedside. This targeted approach enhances bedside physical examination and supports clinical decision-making, rather than serving as a standalone diagnostic tool.

It is important to emphasise that intensive care ultrasound does not replace comprehensive diagnostic echocardiography conducted by fully trained cardiologists, which can be performed later as part of the patient's ongoing management.

TARGET AUDIENCE

- Doctors in training / Early career doctors in Cardiology, Emergency medicine, Anaesthesiology and/or Intensive Care.

REQUIREMENTS FOR ENROLMENT

- Basic knowledge of cardiovascular diseases
- Basic knowledge and experience in transthoracic echocardiography
- Some experience in emergency and/or critical care (one semester at least)
- Enthusiastic and ready to commit to the programme

THE FACULTY OF MEDICINE OF TUNIS,
TUNIS EL MANAR UNIVERSITY

COM-AF-01

**MASTERCLASS
IN CARDIOVASCULAR
INTENSIVE CARE
ECHOCARDIOGRAPHY**

With a Certificate

Course director : Pr Mghaieth Fathia
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16th-18th of May 2025

**Renewed International
Faculty**

Pr MGHAIETH
FATHIA,
Tunisia

Pr SOLIMAN
HATEM,
UK

Pr HAMZA OUI
OLFA,
France

PR MZOUGH
KHADIJA,
Tunisia

Target audience: Residents and Early career doctors in cardiology, emergency medicine, anesthesiology and intensive care with a good basic knowledge in Cardiac Ultrasounds

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CORE CURRICULUM

DAY 1

16TH OF MAY 2025

BASIC ECHOCARDIOGRAPHIC ANATOMY AND PHYSIOLOGY

Lecture Title	Hour	Speaker
Introduction to point of care ultrasound	08h-08h15	Hatem Soliman
Pre-test	08h15-08h30	Fathia Mghaieth
Fundamentals of ultrasound physics and Doppler	08h30-08h45	Hatem Soliman
Echocardiographic anatomy, physiology		
Assessment of the Left Ventricle	08h45-09h15	Olfa Hamzaoui
Assessment of the Right Ventricle and Pulmonary Artery	09h15-09h45	Olfa Hamzaoui
Coffee Break	09h45-10h	
Basic assessment of Valves	10h-10h30	Khadija Mzoughi
Pericardial effusion and tamponade	10h30-11h	Hatem Soliman
Lunch	11h-12h	
Assessment of systemic venous congestion	12h-12h30	Hatem Soliman
Assessment for Intracardiac masses	12h30-13h	Khadija Mzoughi
Coffee break	13h-13h15	
Fundamentals of parenchymal LUS	13h15-13h30	Hatem Soliman
Fundamentals of pleural LUS	13h30-13h45	Hatem Soliman
Echo in mechanically ventilated patients	13h45-14h15	Olfa Hamzaoui
Assessment of preload responsiveness	14h15-14h45	Olfa Hamzaoui
Assessment of dynamic outflow obstruction	14h45-15h15	Hatem Soliman
Q& A and demonstrations	15h15-16h	

DAY 2

17TH OF MAY 2025

INTENSIVE CARE ULTRASOUNDS IN SPECIFIC SCENARIOS, TIPS AND TRICKS AND WRAP UP.

Lecture Title	Hour	Speaker
Echo for Shock assessment	08h-08h30	Olfa Hamzaoui
Echo for Cardiac arrest and CPR	08h30-09h	Hatem Soliman
Echo for Syncope	09h-09h30	Khadija Mzoughi
Coffee break	09h30-10h	
Echo for dyspnoea, 15 minutes each Echo for decompensated HF Ultrasound for pneumothorax Ultrasound for respiratory failure	10h-11h30	Olfa Hamzaoui Hatem Soliman Hatem Soliman
Echo for acute heart failure, 15 minutes each Echo Post-MI Mechanical complications Echo for stress cardiomyopathy Echo for Myocarditis		Fathia Mghaieth Khadija Mzoughi Hatem Soliman
Lunch	11h30-12h30	
Echo for chest pain, 15 minutes each Echo for acute coronary syndrome Echo for acute aortic dissection Echo for pulmonary embolism Echo for pericarditis, effusion and tamponade	12h30-13h30	Fathia Mghaieth Khadija Mzoughi Fathia Mghaieth Hatem Soliman
Coffee break	13h30-13h45	
Patients with IABP and ECMO	13h45-14h15	Hatem Soliman
Assessment of valves by POCUS	14h15-14h45	Khadija Mzoughi
Assessment of masses and vegetations	14h45-15h15	Fathia Mghaieth
Quizzes, wrap up, tips and tricks	15h15-15h15	All faculty
Post test	15h15-15h30	Fathia Mghaieth
Q&A , demonstrations	15h30-16h30	

DAY 3

18TH OF MAY 2025

LIVE SCANNING ON PATIENTS



09h-12h am

La Rabta hospital, Echo laboratory

Pr Mghaieth.F, Pr Soliman.H , Pr Hamzaoui.O, Pr Mzoughi.K

COURSE VALIDATION REQUIREMENTS

- Pre-recorded cases review (30%)
- Post-course proctored ultrasound examinations in real-life scenarios (30%)
- Written examination (40%)

REFERENCE

Neskovic AN, Skinner H, Price S, Via G, De Hert S, Stankovic I et al. Focus cardiac ultrasound core curriculum and core syllabus of the European Association of Cardiovascular Imaging. Eur. Heart J. Cardiovasc. Imaging. 2018;19: 475–481