

The essential step towards **FAMUS** accreditation and a first step towards **RCR L1 Thoracic US** accreditation

5th Thoracic Ultrasound

in the Assessment of the Acutely Unwell Patient

A practical course organised by Infomed Research & Training,
on **Thursday 6 and Friday 7 February 2020**,
at the Holiday Inn Cambridge, Lakeview,
Bridge Road, Cambridge CB24 9PH

FAMUS
approved course

Course Director

Dr Pasupathy Sivasothy,
Consultant in Respiratory Medicine,
Addenbrooke's Hospital, Cambridge

Target Audience

- Respiratory and Chest Physicians
 - Acute Medicine and Emergency Medicine Physicians
 - Anaesthetists and Intensivists
 - Also suitable for ACCS trainees
- Numbers strictly limited**

Visiting Faculty



Prof Dr Daniel Lichtenstein,
Medical Intensivist and Visiting Professor,
University Hospital Ambroise-Paré, Paris
author of the BLUE Protocol,
and widely considered as
“the father of lung ultrasound”

About the Course

The course builds on the success of Infomed's RCP-approved *RCR Level 1 Thoracic Ultrasound* course, which has been running since 2010, with excellent delegate feedback, and which is here augmented to cover all FAMUS curriculum components ([pdf](#)), as well as basic Echo (fluid status).

Offers a foundation in the ultrasound skills needed in the assessment of the acutely unwell patient (**no ultrasound knowledge or experience required**): an essential step towards **FAMUS accreditation**, and a first step towards **RCR Level 1 Thoracic Ultrasound accreditation**.

The Course Faculty 2019 includes

- **Dr Pradeep Madhivathanan**,
Consultant in Critical Care Medicine and ECMO,
Royal Papworth Hospital, Cambridge
- **Dr Matyas Andorka**,
Consultant in Anaesthesia and
Intensive Care Medicine,
East Surrey Hospital, Redhill
- **Ms Fiona Greenfield**,
Advanced Pleural
Interventional Practitioner,
Peterborough City Hospital
- **Dr Devesh Sharma**,
Consultant in Emergency Medicine
- **Dr Michael Obiako**,
Consultant in Emergency Medicine,
Prince Charles Hospital, Merthyr Tydfil
- **Dr Josip Stosic**,
Consultant in Critical Care and Acute Medicine,
Norwich University Hospitals NHS Foundation Trust

Gain the basic knowledge and skills that will allow you to start supervised practice at work: **setting up the scanner and maximising image quality, basic scanning techniques**, recognising **normal anatomy and pathologies**.

A **practical** course, designed to maximise opportunities for: **hands-on learning**, developing your **interpretation skills** and developing a **systematic approach** to ultrasound assessment (the **BLUE protocol**).

If you attended Infomed's Thoracic Ultrasound course, and are looking for a refresher, or additional competencies, then you will find that this course is for you.

Delegates attend hands-on ultrasound skills stations, scanning on normal models, mannequins and patients under Faculty supervision, as well as iMac workstations for additional opportunities for pathology recognition and clinical case scenarios.

Pre-course online lectures, review lectures on the day, and skills stations under expert supervision.

COURSE EQUIPMENT AND TECHNICAL SUPPORT
IS KINDLY PROVIDED BY

ABOUT THE COURSE

- ✓ Pre-course online access to lectures (video and slides), **required pre-course viewing**, covering the physics of ultrasound, knobology, anatomy and training pathways
- ✓ Short review lectures and live demos each day, followed by **skills stations** under expert supervision for scanning learning and practice on **normal** models, **mannequins** and **patients**

DAY 1: THURSDAY 6 FEBRUARY 2020

08.50 – 09.40 **Registration**

09.40 – 09.50 **Welcome and introduction**

09.50 – 10.30

Review: Ultrasound in the Assessment of the Acutely Unwell Patient

Dr Pasupathy Sivasothy,

Consultant in Respiratory Medicine,
Addenbrooke's Hospital, Cambridge

10.30 – 11.15

Group 1 <i>Lecture</i> The BLUE Protocol and Reporting Prof Dr Daniel Lichtenstein	Group 2: <i>Ultrasound scanning</i> Setting Up, Knobology and Scanning
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11.15 – 11.45 **Tea and coffee break**

11.45 – 12.30

Group 2 <i>Lecture</i> The BLUE Protocol and Reporting Prof Dr Daniel Lichtenstein	Group 1: <i>Ultrasound scanning</i> Setting Up, Knobology and Scanning
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About the 'Keynote Lecture'

The BLUE Protocol and Reporting

Prof Dr Daniel Lichtenstein, Medical Intensivist and Visiting Professor, Medical Intensive Care Unit, University Hospital Ambroise-Paré, Paris

- The BLUE [Bedside Lung Ultrasound in Emergency] protocol
- Identifying the Upper and Lower BLUE points
- Key points to remember during the day ahead



ABOUT THE PRACTICAL SESSION Setting Up, Knobology and Scanning

Each delegate is shown how to set up the scanner and asked to maximise image quality of one anatomical structure, with a focus on:

- probe selection and orientation
- ways to hold the probe (comfort, control, stability)
- ways to move the probe (sliding, tilting, rocking)
- depth, focus, gain – and centring the image
- scanning the whole structure
- other functions, inc. freezing, measuring, Doppler

12.30 – 13.15 **Lunch**

13.15 – 13.30

Review: Thoracic Ultrasound and Basic Echocardiography

Dr Pasupathy Sivasothy

- Why thoracic ultrasound
- Normal thoracic anatomy under ultrasound
- Identifying appropriate site for pleural procedure
- Identifying abnormalities and pathologies correctly
- Identifying basic cardiac structures and views

13.30 – 14.15

PRACTICAL SESSION Thoracic/Cardiac Scanning

Delegates split into groups.

In **Thoracic Scanning**, each delegate is asked to:

- Identify and maximise the image quality of **normal** thoracic anatomy: pleura and diaphragm; heart, liver and spleen).
- Demonstrate 'batwing' appearance of ribs and pleura
- Identify pleural sliding in 2D and M mode with lung pulse
- Identify A lines and B lines
- Demonstrate diaphragmatic movement with respiration

In **Cardiac Scanning**, each delegate is asked to:

Identify and maximise image quality of normal cardiac anatomy: PLAX, PSAX, A4C, SC views

14.15 – 14.35 **Tea and coffee break**

14.35 – 15.30

PRACTICAL SESSION Thoracic/Cardiac Scanning CONTINUED

15.30 – 15.45

Review: Abdominal/Renal Ultrasound

Dr Pasupathy Sivasothy

- Why abdominal/renal ultrasound
- Normal abdominal/renal anatomy under ultrasound
- Scanning techniques
- Pathologies:
 - Assessment of presence of ascites
 - Basic assessment of the urinary tract
 - Looking for evidence of obstruction
- Live demo (dual screen): What delegates will need to do during the Practical Session

15.45 – 16.50

PRACTICAL SESSION

Abdominal/Renal Ultrasound

Each delegate is asked to identify and maximise the image quality of:

- the abdominal cavity
- the urinary tract

16.50 – 17.30

LIVE Demos

The BLUE Protocol

Prof Dr Daniel Lichtenstein, Medical Intensivist and Visiting Professor, Medical Intensive Care Unit, University Hospital Ambroise-Paré, Paris

Live demos (dual screen) on patients

17.30

Close

DAY 2: FRIDAY 7 FEBRUARY 2020

08.30 – 09.00 **Registration and introduction**

09.00 – 09.20

Introduction to Ultrasound in Shock

Dr Pasupathy Sivasothy

09.20 – 09.40

Live demo on model/patient

(with dual screen)

Prof Dr Daniel Lichtenstein

09.40 – 10.45

Scanning for Pathologies: Abdo/Renal

Delegates split into groups.

Delegates rotate through different skills stations, covering different pathologies.

Stations include scanner and patient.

10.45 – 11.00 **Tea and coffee break**

11.00 – 12.15

Scanning for Pathologies:

Thoracic and Cardiac

Delegates split into groups.

Delegates rotate through different skills stations, covering different pathologies.

Stations include scanner and patient.

12.15 – 13.00 **Lunch**

13.00 – 13.30

Live demo on model/patient
(with dual screen)

Prof Dr Daniel Lichtenstein

13.15 – 14.30

Scanning for Pathologies:
Thoracic and Cardiac

CONTINUED

14.30 – 14.45 **Tea and coffee break**

14.45 – 15.00

Review: Peripheral Vascular (inc. DVT) and
Ultrasound-Guided Procedures

Dr Pasupathy Sivasothy

- Why peripheral vascular ultrasound
- Normal peripheral vascular anatomy/structures
- Assessment of deep venous thrombosis
- Using Doppler
- Using ultrasound to guide peripheral venous cannulation, pleural aspiration and ascitic drainage

15.00 – 16.20

PRACTICAL SESSION

Peripheral Vascular (inc. DVT) and
Ultrasound-Guided Procedures (phantoms)

Each delegate is asked to:

- Identify the 'Mickey Mouse' sign (common femoral artery, common femoral vein and saphenofemoral junction)
- Find the common femoral vein (CFV)
- Find the superficial femoral vein (SFV)
- Find the popliteal vein (PV) and point of trifurcation
- Use compression to distinguish normal v abnormal
- Demonstrate technique for peripheral venous access [on blue phantoms]

16.20 – 17.00

Clinical Scenarios

Case scenarios, with immediate feedback, to help you assess what you've learned.

Each scenario challenges delegates to use their medical knowledge and adopt a systematic approach.

17.00

Completion of Feedback Forms
and Certificates of Attendance

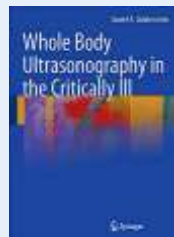
Visiting Faculty



Prof Dr Daniel Lichtenstein, Medical Intensivist and Visiting Professor, University Hospital Ambroise-Paré, Paris

Daniel is a Medical Intensivist and Visiting Professor who has worked at

the Medical ICU, Ambroise Paré University Hospital, since 1989. In 1991, he defined critical ultrasound, a whole-body approach to the critically ill, mainly focused around lung ultrasound with extensions to acute respiratory failure (the BLUE-protocol), circulatory failure (the FALLS-protocol) and interventional ultrasound. He has published widely, including the textbook, *Whole Body Ultrasonography in the Critically Ill* (Springer) and dozens of articles on critical, venous and lung ultrasound.



Pre-course learning materials

Lectures (videos and slides) are made available online:

- allowing delegates to view lectures at their leisure before the course (and revision after the course); and
- allowing **much more time for 'hands-on' learning and practice** on the course days proper

Delegates are given password-protected access.

NB For those seeking FAMUS accreditation, the first steps are: (1) register with the FAMUS administrator; (2) identify a Supervisor to oversee your training; (3) complete the e-learning module covering basic theory, [ICE-BLU online e-learning module](#); and (4) Enrol on a FAMUS approved course. See the [FAMUS Curriculum Pack](#) (pdf).

Please note that the online lectures are a requirement for the course and complement but **do not** replace the requirement to complete the ICE-BLU module. Most trainees will probably find the module a bit more challenging than the online lectures.

The online lectures

Introduction including Training Pathways (10 mins).

Physics of Ultrasound and Knobology (13 mins).

Ultrasound Anatomy (29 mins).

Thoracic Pathologies under US (33 mins).

Abdo/Renal US (28 mins).

Cardiac US (32 mins).

DVT/Vascular Peripheral (14 mins).

The online lectures are **required viewing** before the course:

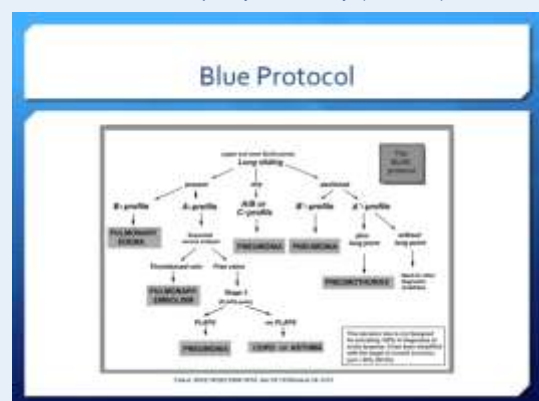
- After booking, the participant will receive a link, username and password, allowing immediate online access for up to six months after the course.
- After viewing, the participant can obtain an Online Learning Certificate.
- On the course days proper, participants will have opportunities to ask questions during the Review sessions before each practical session.



▼ **Thoracic Ultrasound:** Dr Pasupathy Sivasothy (20 mins).



▼ **BLUE Protocol:** Dr Pasupathy Sivasothy (20 mins).



References

Suggested resource:

- The Ohio State University ultrasound app, [POC Ultrasound Guide](#): a free guide to obtaining high quality ultrasounds of patients at the Point Of Care. For iPhones and iPad.

Suggested publications for further study:

- Echo Made Easy, 3rd Edition. Sam Kaddoura. Elsevier, 2016.
- Point of Care Ultrasound. Nilam J Soni, Pierre Kory, and Robert Arntfield. Elsevier, 2015.
- Practical Ultrasound: An Illustrated Guide, 2nd Edition. Jane Alty and Edward Hoey. CRC Press, 2014.

BOOKING FORM

Focused Acute Medicine Ultrasound **Thoracic Ultrasound in the Assessment of the Acutely Unwell Patient**

A practical course organised by Infomed Research & Training,
on **Thursday 6 and Friday 7 February 2020**,
at the Holiday Inn Cambridge, Lakeview,
Bridge Road, Cambridge CB24 9PH

COURSE FEE

£545 (inc. VAT)

Course fee includes password protected web access to lecture slides (pdf), lunch and refreshments and attendance certificate.

How To Book

You can **BOOK ONLINE** at: www.infomedltd.co.uk
or **BOOK OVER THE PHONE** on **020 3236 0810**.

Alternatively, complete delegate and payment details, below, and post to:

Infomed Research & Training Ltd
Suite 2, Langford House
7-7A High Street
Chislehurst BR7 5AB

Confirmation, venue map and receipt will follow by email.
General queries: e-mail courses@infomedltd.co.uk.

For a copy of this programme: www.infomedltd.co.uk
For information on accommodation: www.infomedltd.co.uk

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Surname

Job Title

Hospital

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.....

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Post Code Country

Tel

Email *

* *Required for confirmation*

Special needs and special dietary requirements

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Expiry Date / CVV Number

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Sort code: 20-12-26 Account: 43929159

TERMS AND CONDITIONS

1) The subscription fee includes password protected web access to lecture slides (pdf), lunch and refreshments. 2) The completed booking form together with full payment must be sent to Infomed Research and Training Limited to secure a booking. Submission of this booking constitutes a legally binding agreement. 3) Payment must be received in full prior to the event. Course details will be issued subject to receipt of payment. We cannot be held responsible for the non-arrival of registration information. If you have not heard from us within 7 days prior to the Course, please contact us. 4) Bookings can be made by telephone but payment must be made in full by credit card at time of booking. 5) Written cancellations received 6 weeks prior to the Course will be accepted and refunded minus an administration charge of £70. We regret that no refunds can be made for cancellations received after that date, for whatever reason, although substitutions will be accepted if notified in writing 5 days or more prior to the event. 6) The Company reserves the right to alter the date, content and timing of the programme or the identity of the speakers due to reasons beyond its control. Under these circumstances, The Company will not refund delegates any expenditure made on pre-booked accommodation or travelling. 7) The Company does not accept responsibility for loss/damage delegates' property/personal effects whilst at the Course.

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