

# Radiology in the Assessment of the Critically Ill Patient: CT and XR Interpretation

## What the Consultant Intensivist needs to know

An intensive and interactive case-based course, with short lectures, to develop further your CT and XR interpretation practice

organised by Infomed Research & Training  
on **Monday 18 and Tuesday 19 September 2017**,  
at The Royal College of Radiologists,  
63 Lincoln's Inn Fields, **London WC2A 3JW**



### Target Audience

The course is aimed at **Consultants** and **SASGs in Intensive Care**, and **Consultant and SASG Anaesthetists** covering Intensive Care sessions.  
Suitable also for **senior STs**.

### Course Director

**Dr Justin Kirk-Bayley**,  
Consultant Anaesthetist and Intensivist,  
Royal Surrey County Hospital, Guildford

### Course Advisor

**Dr Elizabeth Dick**,  
Consultant Radiologist and Honorary Senior Lecturer,  
Imperial College Healthcare NHS Trust

### Course Faculty

**Leading Consultant Radiologists and experienced in advancing the skills of other specialists**

- **Dr Christen Barras**, Consultant Neuroradiologist, National Hospital for Neurology and Neurosurgery
- **Dr Calvin Soh**, Consultant Radiologist, Salford Royal NHS Foundation Trust
- **Dr Sa Tran**, Consultant Radiologist, King's College Hospital, London
- **Dr Raj Das**, Consultant Radiologist, Glenfield Hospital, Leicester
- **Dr Tim Yusuf**, Consultant Radiologist, King's College Hospital, London
- **Dr Mohammad Daneshi**, Consultant Radiologist, Croydon University Hospital, London
- **Dr Ana Nicolescu**, Consultant Radiologist, Barts Health NHS Trust
- **Dr Maureen Dumba**, Senior Fellow, Imperial College Healthcare NHS Trust

### About this unique Course

- ☑ **Numbers strictly limited. Two attendees per iMac workstation for peer interaction and learning**
- ☑ Case based learning with short introductory lectures, offering guidance and practical knowledge
- ☑ **Interactive discussions, what is relevant and significant, tips and take home messages that will change your interpreting practice**

### The Course will assist the Intensivist

- ☑ to understand **how radiological investigations can best be used** to assist in the management of critically ill patients (covering head and spine, chest, abdomen)
- ☑ to **interpret** radiological investigations performed on critically ill patients
- ☑ to acquire **a systematic approach** to image interpretation
- ☑ to understand **what not to miss and why**, including life threatening problems, and **common errors to avoid**
- ☑ to know **what investigation to ask** from the Radiologists and **when to ask for help!**
- ☑ to understand the **key guidelines and protocols**
- ☑ to understand the roles, advantages, disadvantages of modalities, i.e. Plain XR, US, CT and MR

## Course aim and learning outcomes

To provide the busy, 'hands-on' Consultant Intensivist with a practical, stimulating and comprehensive update on imaging interpretation and reporting:

- (i) **practical** (workstation based learning);
- (ii) **stimulating** (interactive, high tutor-delegate ratio, challenging, real-life cases, immediate feedback); and
- (iii) **comprehensive** (head, chest and abdomen).

**By the end of the course, the delegate will have:**

- (1) a comprehensive understanding of good/best imaging interpretation and reporting practice in intensive care;
- (2) improved imaging interpretation and reporting skills;
- (3) greater confidence in advanced practice; and
- (4) identified skills and knowledge gaps, if any, relevant to his/her practice, and clear ways by which these can be addressed.

## Day 1: Monday 18 September 2017

08.30 – 09.15 **Registration, tea and coffee**

09.15 – 09.45

### Introduction and OsiriX Briefing

- Aims of course
  - Understanding how radiological investigations can be used to aid management of critically ill patients
  - Interpreting radiological investigations performed on critically ill patients
- How to use OsiriX (for viewing DICOM images)

## Head and Spine

09.45 – 10.15

### Lecture: Head and Spine Radiology

**Dr Christen Barras**,  
Consultant Neuroradiologist,  
National Hospital for Neurology and Neurosurgery

- Key anatomy
- Clearing the C-Spine in the unconscious patient
- When to take off the collar – NICE guidelines?
- Acute Non-Traumatic CT Head
- When is it safe to LP?
- Role of perfusion CT

10.15 – 11.00

### Cases: Acute Non-Traumatic CT Head

**Dr Christen Barras**,  
Consultant Neuroradiologist,  
National Hospital for Neurology and Neurosurgery

Cases including:

- Meningitis
- Raised intracranial pressure
- Subarachnoid haemorrhage
- Normal variants
- CVA – timing of pathological changes

11.00 – 11.45

### Cases: Trauma CT Head

**Dr Calvin Soh**, Consultant Radiologist,  
Salford Royal NHS Foundation Trust

Cases including:

- Cranial vault and cranial base fractures
- Intracranial extra-axial injury
- Subarachnoid and intraventricular haemorrhage
- Cerebral contusion
- Brain herniation

11.45 – 12.15 **Tea and coffee**

12.15 – 13.00

### Cases: Trauma CT Head *CONTINUED*

**Dr Calvin Soh**, Consultant Radiologist,  
Salford Royal NHS Foundation Trust

13.00 – 13.40 **Lunch**

13.40 – 14.30

### Cases: Cervical spine

**Dr Maureen Dumba**, Senior Fellow,  
Imperial College Healthcare NHS Trust

Cases including:

- Differentiating between stable and unstable injuries
- Common injury patterns of the cervical spine
- Associated injuries, e.g. vascular dissection
- Patterns of prognosis according to level affected

## Chest

14.30 – 15.00

### Lecture: Chest Radiology

**Dr Sa Tran**,  
Consultant Radiologist, King's College Hospital, London

- Key anatomy
- Synergism of CXR, USS and CT in chest diseases
- Systematic approach to interpretation
- Misplaced lines and tubes
- Supine CXR
  - Supine CXR vs. Erect
  - Lines and nodules
  - Life threatening problems

15.00 – 15.15 **Tea and coffee**

15.15 – 16.15

### Cases: Supine CXR [compared to CT, US]

**Dr Raj Das**, Consultant Radiologist,  
Glenfield Hospital, Leicester

Cases including:

- Collapse
- Heart failure
- Pleural effusions/empyema/Hx
- Px/tension Px
- Supine PTx
- Consolidation
- ARDS vs pulmonary oedema

16.15 – 17.15

### Cases: CT Chest

**Dr Sa Tran,**  
Consultant Radiologist,  
King's College Hospital, London

Cases including:

- Chest wall injury
- Trauma to the lung
- Mediastinal and vascular Injury
- Trauma to the heart and pericardium
- Diaphragm damage/dysfunction
- Considerations in penetrating vs blunt injury (King's)
- Aneurysms
- Fibrosis
- Bronchiectasis & airway disease
- ARDS
- Pulmonary embolism
- Barotrauma and ballistics
- Patterns of infections

17.15                      **Close**

## Day 2: Tuesday 19 September 2017

08.30 – 09.15            **Registration, tea and coffee**

09.15 – 09.30

### Introduction

09.30 – 11.00

### Cases: CT Chest [CONTINUED]

**Dr Emma Helm,**  
Consultant Radiologist,  
University Hospitals Coventry and Warwickshire NHS Trust

11.00 – 11.30            **Tea and coffee**

## Abdo

11.30 – 12.00

### Lecture: Abdo Radiology

**Dr Tim Yusuf,** Consultant Radiologist,  
King's College Hospital, London

- Key anatomy
- DD of gallstones/cholecystitis
- Renal tract
- Renal calculi – investigations
- AAA – stable/rupture
- Ovarian cysts and masses
- Uterus fibroids

12.00 – 13.00

### Cases: Abdo XR

**Dr Mohammad Daneshi,**  
Consultant Radiologist,  
Croydon University Hospital, London

Cases including:

- Renal calculi
- Bowel obstruction/volvulus
- Faecal loading
- Bowel oedema and ascites

13.00 – 13.45            **Lunch**

13.45 – 15.15

### Cases: CT Abdo

**Dr Ana Nicolescu,**  
Consultant Radiologist,  
Barts Health NHS Trust

Cases including:

- Trauma:
  - Hepatobiliary and pancreatic trauma
  - Splenic trauma
  - Injuries to the urinary system and retroperitoneum
  - Vascular injuries
  - Bowel and mesenteric injury (the seat belt injury)
- Non-trauma:
  - Infections
  - Air in the wall
  - Abscesses/collections/ascites
  - Renal calculi
  - Renal problems
  - Bowel problems
  - Pancreatitis

15.15 – 15.40            **Tea and coffee**

## Review

15.40 – 16.45

### Cases: Chest and Abdo Multi-Modality

Cases:

- Pneumothorax
- Pleural effusion
- Pulmonary edema
- Pneumonia

16.45

**Feedback,  
collection of Certificates of  
Attendance and close**