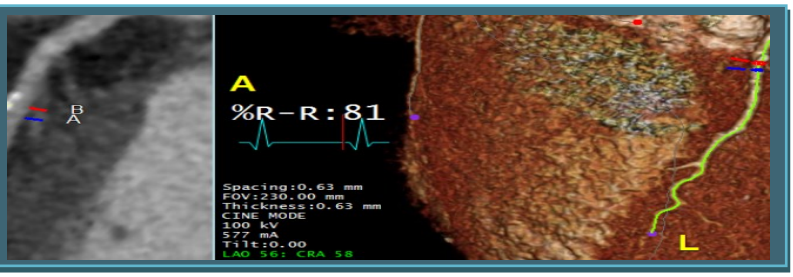
Cardiac CT eLearning (Part A)



This two part course is designed for trainees (as well as consultants) in both Radiology and Cardiology (and for anyone else interested) to provide a comprehensive didactic learning towards the required CPD. The lectures have been provided by expert **Radiographers, Medical Physicists, Consultant Radiologists and Cardiologists,** involved in the practice of **cardiac CT**.

Understanding Cardiac CT Physics: Understand the basic components of a modern CT scanner, factors that determine image quality (spatial and temporal resolution), ECG-gating methods single-beat cardiac CT scanning. **Duration:** 50 min and quiz

Radiation dose in Cardiac CT: Understand the risks of radiation with CT, factors that determine radiation dose in cardiac CT, methods to reduce radiation risks with cardiac CT, results of local audit. **Duration:** 50 min and quiz

Delivered by: Dr Andrew Shah, Medical Physicist and Head of Radiation Protection, East and North Herts

Clinical indications for Cardiac CT-Overview: Understand the best use of Cardiac CT in: Stable symptoms - chest pain and breathlessness, acute chest pain, patients with known coronary artery disease i.e, previous PCI and CABG, heart failure, heart transplantation, valvular heart disease, congenital heart disease, pericardial diseases and cardiac masses. **Duration:** 31 min and quiz

Delivered by: Dr Tarun K. Mittal, Consultant Cardiothoracic Radiologist, GSTT

Cardiac CT contrast and drugs: To understand the indications, contraindications, and overdose management algorithms for medications used in cardiac CT. **Duration:** 20 min and quiz

Delivered by: Dr Carol Ridge, Consultant Cardiothoracic Radiologist, GSTT

Cardiac CT performing of the scan: Brief introduction to Cardiac CT, principles of ECG gating, patient preparation techniques, some commonly administered medications, principles of Scan Acquisition, introduction to common Contrast Timing techniques, some applications of cardiac CT, principles of post procedure care. **Duration:** 40 min and quiz

Delivered by: Dr Mona Sriharan, Consultant Cardiothoracic Radiologist, Princess Royal Hospital, KCH

Anatomy of heart on Cardiac CT: Orientation of the heart as seen on CT, anatomy of non-coronary cardiac structures and anatomy of coronary arteries and veins. **Duration:** 2 Parts 77 min and quiz

Systemic assessment of coronary and non-coronary structures on Cardiac CT: Learn a systematic method to review cardiac CT images, including: calcium scoring, non-coronary cardiac structures, coronary arteries, non-cardiac structures , to learn how to measure different cardiac structures, aortic root, and the aorta, to learn the normal measurements of the cardiac structures, aortic root, and the aorta. **Duration:** 60 min and quiz

Cardiac CT assessment of cardiovascular risk in asymptomatic individuals: Basis of Cardiovascular risk assessment in asymptomatic people, role and use of CT coronary artery calcification in risk assessment, Role and use of CT cardiac angiogram in risk assessment. **Duration:** 47 min and quiz

Delivered by: Dr Tarun K. Mittal, Consultant Cardiothoracic Radiologist, GSTT

Cardiac CT in stable chest pain: Understand and acknowledge the evidence beyond the guidelines on CTCA use in stable chest pain, acquire knowledge of the guidelines on CTCA use in stable chest pain, implement appropriateness criteria for CTCA and FFR CT in clinical practice according to society's guidelines on stable chest pain, understand the clinical implications of CTCA use in stable chest pain, gain knowledge in the diagnostic accuracy, additive value in patients management and outcome, current use, and cost effectiveness of HeartFlow FFR CT technique. **Duration:** 41 min and quiz

Delivered by : Dr Alexandros Papachristidis, Consultant Cardiologist, KHP

Cardiac CT in acute chest pain: To briefly understand the different acute coronary syndromes (ACS), conditions that presenting as ACS but have non-obstructive coronary arteries, how CT can be best used in different ACS and performing and reporting CT in ACS. **Duration:** 23 min and quiz

Analysis and reporting of Cardiac CT: Become familiar with the international guidelines regarding analysis and reporting of Cardiac CT, understanding a systematic method of reviewing and interpreting coronary artery disease on CT, understand the CAD-RADS 2.0 method of grading CAD and reporting, learn to report cardiac CT in daily practice. **Duration:** 32 min and quiz

Delivered by: Dr Tarun K. Mittal, Consultant Cardiothoracic Radiologist, GSTT

Use of Cardiac CT to assess ischaemia (including FFR-CT): To understand the importance of assessing the functional significance of coronary artery stenosis, the methods and evaluation of CT myocardial perfusion and the technique and accuracy of FFR-CT. **Duration:** 2 Parts 30 min and quiz

Delivered by: Dr Saeed Mirsadraee, Consultant Cardiothoracic Radiologist, GSTT

Evaluation of coronary artery bypass grafts with Cardiac CT : Indications and technique of CT in patients with coronary artery bypass grafts, understand the evaluation of coronary artery bypass grafts on CT, accuracy of coronary artery bypass grafts on CT. **Duration:** 22 min and quiz

Delivered by: Dr Evangelos Skondras, Consultant Cardiothoracic Radiologist, GSTT

Cardiac CT for TAVI planning : Understand the anatomy of aortic root and valve, technique of performing CT for TAVI planning, analysis and interpretation of CT for TAVI planning. **Duration:** 25 min and quiz

Delivered by: Dr Saeed Mirsadraee, Consultant Cardiothoracic Radiologist, GSTT

This is a self paced on line course that is available on demand. Each module consists of a lecture and a knowledge test (quiz). The course aims to deliver 9 hours of lecture time and approximately 4 hours of knowledge testing, total course time approximately 13 hours. This course provides 13 CPD credits in accordance with the CPD Scheme of The Royal College of Radiologists.