The Cardiac Bootcamp Self Study Course

Total time to complete the whole course is 1960 minutes ie 32.6 hours Plus 2 hours of quizzes and an ongoing commitment to the weekly ECG (20 minutes per week= 17.3 hours total)

Total time for the annual membership is:
34.6 hours for the course including quizzes
PLUS **17.3 hours of weekly ECG Blog teaching** ongoing throughout the 12 month membership
Total time: 52 Hours.

TOPICS

1.RESUSCITATION *(450 min to complete)*

1.1 Cardiac Arrest Pearls (100 minutes to complete)
This section looks at the advances in resuscitation as well as covering the latest resuscitation guidelines.
Topics covered include:

- CPR: Looking at low vs no flow and the quality of CPR
    - Rate of compressions and the evidence
    - Depth of compressions
    - The Duty Cycle
- Airway
    - End title CO2
    - The evidence for
        - Endotracheal intubation vs
        - Supraglottic Devices vs
        - Bag Valve Mask
- Breathing: Avoiding hyperventilation
- Circulation
    - Adrenaline and it's use in cardiac arrest

Plus there are 3 videos to watch:

1. Cardiac Resuscitation (20.06min) A/Prof Peter Kas
2. Advances in resuscitation (12.19 min) A/Prof Peter Kas
3. Thrombolysis in Cardiac Arrest: Case Studies (28.13 min) A/Prof Peter Kas

1.2 Electrical Storm (60 minutes to complete)
Looks in detail at this catecholamine driven entity of electrical storm It covers

- Monomorphic VT
- Polymorphic VT

This section also looks at the various treatment strategies including:

- Beta blockers
- Propofol
- Double Sequential External Defibrillation

Video: 'Electrical Storm' (19.47 min) Dr Will Davies

1.3 Cardiogenic Shock (70 minutes to complete)

A real case is used to define cardiogenic shock and then look at the treatment for one particular patient. The section covers:

- Which vasopressor or inotrope to use?
    - Adrenaline
    - Noradrenaline
    - Dobutamine
    - Dopamine
- Mechanical Devices

Video on 'Drugs in Cardiogenic shock' (12.16 min)
'Shock: Causes and Pressors' (37.56 min) A/Prof Peter Kas

1.4 Heart Failure (60 minutes to complete)

This section looks at the various treatments in heart failure via several videos:
'Opiates in Heart Failure' (00.48 min)
'Diuretics in Acute heart Failure' (02.47 min)
'Oxygen in Heart Failure' (02.26 min)
'Ultrasound in Heart Failure' (01.42 min)
'New Drugs in Heart Failure' (01.59 min)
'Acute Heart Failure: Is there anything new?' (32.16 min) Dr Will Davies

We then present a video case of a 65 yo patient who presents with SOB, sats of 80% on 15L of O2, HR of 155bpm and BP of 170/76

1.5 Hypertensive Emergencies (60 minutes to complete)

5 cases looking at Hypertensive Emergencies:

1. Aortic Dissection
2. Intracerebral Bleed
3. Stroke
4. Pre-eclampsia
5. Cocaine overdose

Video: 'Hypertensive Emergencies' (14.56 min) A/Prof Peter Kas

1.6 'SHOCKED': A Mnemonic (40 minutes to complete)

The shocked mnemonic is a way to look at all patients with shock and not get fixated only on sepsis.
The "SHOCKED' mnemonic is worked through, with 7 real cases.

1.7 Thoracic Aortic Dissection (60 minutes to complete)

Risk Factors and the 'Chest pain PLUS' rules
A case study of an acute dissection with Inferior infarction
Video: 'Aortic Dissection' (34.07 min) Dr James Edwards

2.ISCHAEMIA *(210 minutes to complete)*

2.1 ECG's of Ischaemia (90 minutes to complete)

This lecture covers subtle ischaemic changes that are sometimes missed and gives the 'rules' of subtle changes.
Video: 'Ischaemic changes not to be missed' (15.49 min) A /Prof Louise Cullen
'Sneaky Ischaemia and some mimics' (37.07 min) A/Prof Peter kas

2.2 Chest Pain and Troponin (120 minutes to complete)

Covers the likelihood ratios of different presentations of ischaemia. Looks at the use of troponins in chest pain. Assesses the Heart Association algorithm to chest pain
Videos
'Chest Pain and Gestalt'(18.24 min) A/Prof Louise Cullen
'Troponins and the Delta' (16.29 min) A/Prof Louise Culllen
'2,6, 10 hour Troponins: Which do I do?' (14.13 min) A/Prof Louise Cullen
'Sex differences in acute coronary syndrome' (15.34 min) A/Prof Louise Cullen
'Troponins and Rapid Rule Out' (30.24 min) A/Prof Louise Cullen

3.ARRHYTHMIAS *(340 minutes to complete)*

3.1 Sgarbossa Criteria (10 minutes to complete)

Looks at the Sgarbossa criteria

3.2 Mobitz Blocks (50 minutes to complete)

Gives an algorithmic approach to diagnosing Mobitz BLOCKS
Plus 7 cases to learn from
Video:'How to Diagnose a Mobitz Block' (00:54 min) A/Prof Peter kas

3.3 Narrow Complex Tachycardias (90 minutes to complete)

- AVNRT
- AVT
- Orthodromic tachycardias
- 4 cases to learn from
- An algorithmic approach to diagnosing tachycardias

Video: 'PSVT' (08.29 min) A/Prof Peter Kas
'Brady-Tachy arrhythmias' (48.18 min) A/Prof Peter Kas

3.4 Wide Complex Tachycardias (100 minutes to complete)

Covers the rules for diagnosing wide complex tachycardias including:

- Brugada
- Vereckei
- Griffith

Multiple case studies for diagnosing wide complex tachycardias
Using the '120CRAM'formula
Videos: 'Diagnosing VT' (18.38 min) A/Prof Peter Kas
'Wide Complex Nightmares' (33.03 min) A/Prof Peter kas

3.5 Atrial Fibrillation (60 minutes to complete)

Stable vs Unstable patient
Cardioversion in ED in patient with AF for < 48 hours
Risk factors
Who to anticoagulated
Who to cardiovert
Rate and Rhythm control
Video: 'AF' (05.07 min) Dr Adam Michaels.

3.6 Atrial Flutter (15 minutes to complete)
Causes
Management of stable and unstable patients
Anticoagulation)

3.7 Fascicular Blocks (15 minutes to complete)
Complete and Incomplete trifascicular blocks

4.SYNDROMES AND SIGNS *(240 minutes to complete)*

4.1 Brugada Syndrome (40 minutes to complete)
Cases in diagnosing Brugada
Patterns and Clinical pictures
Videos: 'Brugada Cases' (02.53 min) A/Prof Peter Kas
'Brugada Patterns' (01.28 min) A/Prof Peter Kas
'Diagnosing Brugada' (02.17 min) A/Prof Peter Kas
'Brugada Syndrome' (15.22 min) A/Prof Peter Kas

4.2 ECG of the Athlete (12 minutes to complete)
Video 'ECG of the Athlete' (11.38 min)

4.3 de Winter's T Waves (15 minutes to complete)
A review of de Winter's T waves

4.4 Spodick's Sign (5 minutes to complete)
A review

4.5 Takotsubo Cardiomyopathy (60 minutes to complete)
- Cases in Takotsubo
- Epidemiology
- Diagnostic Criteria
- Pathophysiology
- Triggers
- Types
- Investigations
- Complications
- Treatment

Video: 'Takotsubo' (00.50 min) A/Prof Peter Kas
'Takotsubo and Ultrasound' (22.09 min) Dr James Dent

4.6 Ventricular Bigeminy (15 minutes to complete)
- Terminology
- Causes
- Investigation
- Treatment

4.7 Wellen's Syndrome (40 minutes to complete)
6 cases describing the morphology and characteristics of Wellen's and the Type A and B patterns
Video summary:'Wellen's Syndrome' (03.44 min) A/Prof Peter Kas

4.8 Wolf-Parkinson-White Syndrome (30 minutes to complete)
A review of the types of WPW, how they behave and the ECG morphologies that may result.

4.9 Electrolytes and The Heart (5 minutes to complete)
The QRS complex and how it is affected by elelctrolytes

4.10 Hypokalemia (20 minutes to complete)
- Causes of hypokalaemia
- Morphology of hypokalaemia

Video: 'Hypokalaemia' (09.59 min) A/Prof Peter Kas

5.SYNCOPE *(250 minutes to complete)*

5.1 Syncope in Adults (90 minutes to complete)
- Definition
- Causes of Syncope
- High Risk Patients
- History findings
- Examination findings

Video: 'Seizure Syncope and Sudden Collapse' (25.42 min) A/Prof Peter Kas
'5 Things to do with the Syncope Patient' (26.41 min) A/Prof Peter Kas

5.2 Syncope in Children (30 minutes to complete)
An approach to diagnosing syncope in children
Video: 'Syncope in Children' (11.54 min) A/Prof Peter Kas

5.3 ECG's of Syncope (90 minutes to complete)
8 Cases looking at the ECG's of Syncope
Video: 'Syncope and the ECG' (29.25 min) A/Prof Peter Kas

5.4 Syncope Rules (40 minutes to complete)
A review of the Syncope prediction rules including:
- San Francisco Syncope Rule
- ROSE Score
- Boston Syncope Rules
- OESIL Risk Score
- STePS Study
- Canadian Syncope Risk Score

6.PULMONARY EMBOLISM *(110 minutes to complete)*

6.1 Pulmonary Embolism (90 minutes to complete)
- Diagnosing PE
- Massive vs Submassive PE
- MOPETT Trial and PEITHO Trial
- Thrombolysis in PE
- PE in Pregnancy

Videos: 'Thrombolysis and pulmonary embolism' (13.57 min) Dr James Edwards
'Chest and pulmonary embolism in pregnancy' (10.53 min) Dr Adam Michael

6.2 ECG's of Pulmonary Embolism (20 minutes to complete)

The ECGs of PE
The Daniel Score of severity

7.OTHER CAUSES OF ST CHANGES *(30 minutes to complete)*

7.1 Benign Early Repolarisation (10 minutes to complete)

- Causes of STE
- Distinguishing BER from AMI and Pericarditis

7.2 Pericarditis (20 minutes to complete)

- Diagnosing Pericarditis
- Stages of Pericarditis
- Treatment of pericarditis
- Who can we send home?

8.PACEMAKERS *(70 minutes to complete)*

8.1 Pacemakers (70 minutes to complete)

The naming of pacemakers
What can go wrong with pacemakers
8 cases to learn from Video solutions 11 minutes
Video: 'Pacemakers' (19.59 min) A Prof Peter Kas

9.PAEDIATRICS *(120 minutes to complete)*

9.1 The Paediatric ECG (60 minutes to complete)

- Differences between adult and paediatric ECGs
- Video Lectures (05.30 min):
    - P and PR
    - QRS
    - Axis
    - T waves
- Cases in the abnormal paediatric ECG
    - Video (04.51 min)
- Video 'WCT and Blocks' (01.56 min) Dr Adam Michael
- Video: 'ALCAPA' (02.01 min) Dr Adam Michael

9.2 Paediatric Heart Conditions You Must Know (60 minutes to complete)

Multiple case studies looking at congenital heart conditions:

- Tetralogy of Fallot
- VSD
- Myocarditis

We also look at cardiac presentations in infancy.
Video:

- 'Shock' (04.55 min) Dr Claire Wilkins
- 'Cyanosis' (04.14 min) Dr Claire Wilkins
- 'Congestive Cardiac Failure' (04.05 min) Dr Claire Wilkins

10.MEDICATIONS *(20 minutes to complete)*

10.1 ECGs When Giving the Wrong Drug Can Kill (20 minutes to complete)

Cases where the wrong medication will kill

- Hyperkalaemia
- AF with WPW

Video 'Medications that may kill your patient' (04.35 min) A/Prof Peter Kas

11.THE ECG *(120 minutes to complete)*

11.1 ECG in 20 Seconds Method (60 minutes to complete)

A full interpretation of the ECG in 20 seconds approach detailing the method of reading ECGs quickly for maximum yield.

Video: 'The ECG in 20 Seconds Method' (08.11 min) A/Prof Peter Kas

11.2 Basic ECG (60 minutes to complete)

- Performing an ECG
- Lead Placement
- The ECG Axis (12.22 minutes Video)
- Bundle Branch Blocks
- Hemiblocks
- Ventricular Hypertrophy
- Rate Calculation