European Society of Cardiology
a comprehensive educational and training offering for European Cardiology

a collaborative approach

Celine Carrera
• I am not Professor Lino Goncalves

• I am an employee of the European Society of Cardiology

• I am an MBA student at Open University
The European Society of Cardiology (ESC)

- Created in 1950
- Membership structure – ESC constituent bodies
  - 55 national cardiac societies
  - 34 affiliated cardiac societies
  - 6 Associations (areas of cardiology)
  - 18 Working Groups (areas of cardiology)
  - 5 Councils (professions)
  - ESC Fellows

➤ Circa 70’000 individuals
The mission and education

• To reduce the burden of cardiovascular disease in Europe

• Education is an important mean to achieve its mission

• At ESC, education is seen as the transfer of knowledge together with assessment to ascertain the breadth of knowledge and skills has been retained.
Historically focused on delivering congresses

2002 – Core Syllabus general cardiology defining the specialty.

2004 – Core Curriculum for the general cardiologist defining how to train in the specialty.

Since 2006 – reflection on how to deliver the core curriculum, to harmonise training and provide lifelong learning to cardiologists in Europe
Core curriculum – first collaborative initiative

• Written collaboratively by ESC Constituent Bodies
  • ESC Associations
  • ESC Working Groups
  • ESC Councils
  • National Cardiac Societies

• Endorsed by ESC National Cardiac Societies

• Implemented partly or full (became « law » in several European countries i.e. Belgium, Portugal, to name a few)

• Regular revision process with ESC Constituent Bodies to ensure feedback and identified gaps are addressed.
Educational activities and curricula

• In general cardiology and sub-specialties, all educational activities are mapped out on curricula.

• Increasingly, educational activities are organised into «educational tracks» leading to certification and recertification programmes (in sub-specialties of cardiology currently).

• Ultimately, the aim is to cater for ESC members’ lifelong learning.
Quality Assurance & Accreditation

• Close cooperation with the **EBAC** (European Board for Accreditation in Cardiology) for didactic CME activities

• **All** ESC educational **programmes are submitted to the EBAC** for accreditation

• Dialogue for development of future educational programmes
ESC Current educational offering

• **In person events:**
  • Educational sessions at congresses
  • Educational courses
  • Emphasis on guidelines, interactivity with delegates (self-assessment, voting, post event surveys)

• **Distance learning activities:**
  • Webinars
  • Clinical cases online
  • Textbooks & journal articles, including guidelines
  • eLearning platform

• **Assessment / certification programmes**
  • Knowledge based assessment (exams)
  • Skills assessment (logbooks)
Latest collaborative initiative
Collaborative tool

- A comprehensive collaborative tool bringing together:
  - European Society of Cardiology (ESC)
  - Sub-specialties of cardiology
  - Trainees and trainers ... about 70’000 of them ...
  - National Cardiac Society and Affiliated Cardiac Societies
  - Teaching hospitals / Medical institutions
Collaborative tool

European Auditor
- PT (Portugal)
- ES
- UK

Logbook/procedures

ESCeL Back office

National Scientific Society/Association/WG

Training Director

Trainee

Local Trainer

Hospital ...

Trainee

Local Trainer

Hospital 1

Trainee

Local Trainer

Trainee

Local Trainer

Europe

Portugal
What is it?

• A wealth of educational content carefully selected by KOLs
  • Courses, webcasts, guidelines, recorded webinars
• Self-assessment
  • MCQ tests, progress testing, self-assessment, summative exams
• Skills tracking
  • Case and procedures logbooks, DOPs, patient safety checklists
• Professional development
  • Personalised CV, appraisal, teaching & research

→ Tracking of professional development and education in 6 sub-specialties of cardiology
1. History taking and clinical examination

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Knowledge</th>
<th>Skills</th>
<th>Behaviours and Attitudes</th>
</tr>
</thead>
<tbody>
<tr>
<td>To obtain a history from the patient relevant to cardiovascular disorders:</td>
<td>To be able to describe the range of and the meaning of words used by patients</td>
<td>To analyse and integrate the information obtained by taking a history</td>
<td>To establish a relationship with the patient based on empathy and trust</td>
</tr>
</tbody>
</table>

Knowledge     | Skills          | Professional Development

[www.escardio.org](http://www.escardio.org)
A walk around
European Association of Percutaneous Cardiovascular Interventions (EAPCI)

Learning Programme Available

EAPCI Certification 2012

ESC eLearning Platform launched at ESC Congress 2012 in Munich

Meet us at one of the 6 "ESC eL information points" close to Delegates Lounges to learn more about ESC eL.

Subspecialty Certification at-a-Glance

Knowledge
- Access online courses & study materials
- Complete exams towards certification

Skills
- Log your case and procedures using the online logbook
- Review your DOPS (Directly Observed Practical Skills)

Professional Development
- Log your publications, relevant meeting attendance, and research
- Initiate 360° peer appraisals
### Knowledge Progress

**Mandatory Points**

- Progress: 0% (0 pts)

**Optional Points**

- Earned: 0
- Available: 0

Completion Requirements: A total of 47 mandatory points are needed for completion.

<table>
<thead>
<tr>
<th>Topics</th>
<th>Complete</th>
<th>In progress</th>
<th>Not started</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Basic Science</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2. Pharmacology</td>
<td></td>
<td></td>
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<tr>
<td>3. Imaging</td>
<td></td>
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<tr>
<td>4. Procedural Techniques</td>
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<tr>
<td>5. Indications for treatment and patient selection</td>
<td></td>
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<td></td>
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<tr>
<td>6. Management of percutaneous intervention complications</td>
<td></td>
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<tr>
<td>7. Miscellaneous</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. Imaging

3.1. Radiation physics, radiation risks and injury, and radiation safety
- 1 Mandatory points
  - Gregory Ducrocq

3.2. Invasive Imaging
- 1 Mandatory points
  - Javier Escaned
  - Intravascular ultrasound and Optical coherence tomography
  - MANDATORY Course: 1 points

3.3. Non-invasive Imaging
- 1 Mandatory points
  - Javier Escaned
Intravascular ultrasound and Optical coherence tomography

MANDATORY Course: 1 points
Authors(s): Hector M. GARCÍA-GARCÍA, Fernando ALFONSO Evelyn REGAR, Francesco FRATTI
Last Updated: 17/03/2012

At the conclusion of this program participants should be able to:

1. To learn the principles underlying the different modalities of intracoronary imaging, as well as the advantages and limitations derived from them.
2. To highlight the limitations of coronary angiography and how intracoronary imaging can be used to overcome them.
3. To review current uses of intracoronary imaging as diagnostic tools with regard to plaque size estimation, plaque component characterization, functional impact of coronary stenoses, long-term assessment of coronary interventions and research purposes.
4. To discuss the role of intracoronary imaging as a guidance tool during PCI to optimize its results or to identify periprocedural problems.
Intravascular ultrasound and Optical coherence tomography

3. IMAGING (3.2. Invasive Imaging)
Hector M. GARCÍA-GARCÍA, Fernando ALFONSO Evelyn REGAR, Francesco FRATI

Learning objectives

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4. To discuss the role of intracoronary imaging as a guidance tool during PCI to optimise its results or to identify periprocedural problems.
A variety of content, media ...

Intravascular ultrasound and Optical coherence tomography

3. IMAGING (3.2. Invasive Imaging)
Hector M. GARCIA-GARCIA, Fernando ALFONSO Evelyn REGAR, Francesco PRATI

EAPCI textbook 2.12 - Optical coherence tomography

penetration depth into the coronary artery wall of approximately 1.0-1.5 mm due to the attenuation of light in the tissue (Table 1).
As the speed of light is much faster than that of sound, an interferometer is required to measure the backscattered light. The interferometer splits the light source into two “arms” - a reference arm and a sample arm, which is directed into the tissue. The light from both arms is recombined at a detector, which registers the so-called interferogram, the sum of reference and sample arm fields. The echo time delay of the emitted light is used to generate spatial image information, the intensity of the received (reflected or scattered) light is translated into a grey scale or colour coded image table enabling the creation of the image

catheter during image acquisition. This modified technique avoided the occlusion, but, still, prolonged contrast injections were needed in order to image a long coronary segment [11]. The second generation, FD-OCT systems, already available for clinical use (LightLab CT-XT, LightLab Imaging Inc., Westford, MA, USA) can perform high-speed pullbacks (up to 20 mm/s) offering the possibility of scanning a long segment in a few seconds while the blood is removed by a short flush (typically X-ray contrast) injection through the guiding catheter.
3. General Hospital Care: Mid-Staffordshire NHS Foundation Trust Public Enquiry

In 2009 a highly critical report was published following an investigation by the Healthcare Commission into concerns raised about mortality and the standard of care provided at the Mid Staffordshire NHS Foundation Trust.

The investigations gave rise to widespread public concern and a loss of confidence in the Trust’s services and management.

The Report identified widespread failings within the hospital practice, including:

- Staff attitudes
- Target drive priorities
- A culture of bullying
- Disengagement from management
- Low staff morale
- Lack of openness
- Acceptance of poor standards of conduct
- Reliance on external assessments
Self-assessment

Intravascular ultrasound and Optical coherence tomography

3. IMAGING (3.2. Invasive imaging)
Hector M. GARCÍA-GARCÍA, Fernando ALFONSO Evelyn REGAR, Francesco PRATI

Test your knowledge

Question 3 of 4

In sient restenosis (64% diameter stenosis and 0.90 mm minimal luminal diameter by QCA) is documented patient with prior everolimus-eluting stent implantation in the LAD artery, in the context of chest pain triggered by exertion one year after stent implantation and anterior myocardial ischaemia documented in a perfusion scan. There are no other evident stenosis in the arterial tree.

3. Which of the following statements is TRUE:

- No further tests or imaging techniques are needed to take decisions in this patient
- Fractional flow reserve is recommended before treatment despite the existence of a radionuclide study
- Intracoronary imaging with IVUS or CCT is recommended to detect and correct any potential factor that has contributed to sient failure (for example, under-expansion of the stent) and to optimise the result of the repeat intervention
- FFR should be used to assess the final result of the procedure using a cut-off of 0.90 as an index of an optimal result

Submit Answer
### Skills tracking

#### EAPCI Case Logbook

**Status:** Out for Grading  
**Due:** 22/08/2014  
**Entries Required:** 4

<table>
<thead>
<tr>
<th>Entry</th>
<th>Date</th>
<th>Status</th>
<th>Theoretical Knowledge</th>
<th>Practical Skills</th>
<th>Advanced Technique</th>
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<td>80</td>
<td>70</td>
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<td>patient with family</td>
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<tr>
<td>history of CAD w/</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ongoing chest</td>
<td></td>
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<tr>
<td>pain</td>
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<td>Joe’s Notification</td>
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<tr>
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<tr>
<td>complication</td>
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<td>Transcathrical</td>
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<tr>
<td>Cardiac Cath and PCI</td>
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</tr>
</tbody>
</table>

#### Instructions

Add and manage case entries. Once the required number of cases have been added, submit your logbook for grading.
Procedures logbook & trainer validation
## Patient safety tracking

### EAPCI Certification 2012

Use this form to record the number of procedures completed during each month of training. Your local trainer will review and verify your monthly totals.

Add procedures using the procedures button below. Click Edit to change the number in a month. When you have completed a month of training, click Submit Month to submit your local trainer for verification.

**Notes from your Trainer(s)**

Aug 2012: Not adequate.

### Table

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Cardiac death</td>
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<td></td>
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<tr>
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<td>6</td>
<td>3</td>
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<tr>
<td>Non-cardiac death</td>
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<tr>
<td>Myocardial infarction</td>
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<tr>
<td>Heart Failure ( Kill 3 or 4)</td>
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<tr>
<td>Ventilation</td>
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<td>Sedation</td>
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<td>0</td>
<td></td>
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<tr>
<td>Completed: 0</td>
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<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
</tbody>
</table>
Professional development

Professional Profile

The Professional Profile component contains five categories for the user to self-report information about activities which they are involved in related to their professional career and training.

As part of the professional development tracking of the EAPCI certification process, trainees are required to record the following:

1. Publications
2. Teaching
3. Professional Experience
4. Research Meetings
5. Additional Information

It is recommended to record your activity at regular intervals in the platform.

Instructions

- Share
- Export PDF
- Export TXT
- Export HTML

Add Publication

- Ardan M. Sagunor and First Duru
  Implantable cardioverter defibrillator avoids shock during electrocursion
Challenges & Lessons learned

• Content collection versus selection
• Populating the platform with relevant material
• Steep learning curve
Next steps & future developments

ESC’s aim – to reinforce needs assessment & outcome measurement

Consolidation
Collaboration

ESC Practice Guidelines

Reflection, outcome measurement

Educational activities *(journals, congress sessions, courses, ..)*

Registries & surveys

www.escardio.org
ESCeLearning Platform for general cardiology

• Version 2 of the platform
  • Lifelong learning & training in general cardiology
  • Localisation and closer cooperation with national cardiac societies
  • Peer to peer forum & discussion w/ KOLs
Conclusion

• Report on ES CeLearning platform and further CME initiatives at ESC Congress 2013 & European CME Forum 2013
Thank you!