

# Nuclear Cardiology Core Syllabus of the European Association of Cardiovascular Imaging (EACVI)

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The European Association of Cardiovascular Imaging (EACVI) Core Syllabus for Nuclear Cardiology is now available online. The syllabus lists key elements of knowledge in nuclear cardiology. It represents a framework for the development of training curricula and provides expected knowledge-based learning outcomes to the nuclear cardiology trainees.

## Keywords

Nuclear cardiology • Syllabus • Education • Training • Teaching

## Introduction

Nuclear cardiology techniques are well established and widely used in the assessment of heart diseases. A great wealth of data exists on the use of myocardial perfusion imaging in diagnosis, prognosis, risk stratification and establishing treatment strategies in patients with ischaemic heart disease. Other techniques include hybrid myocardial perfusion imaging with cardiac computed tomography angiography, equilibrium, and first pass radionuclide angiography and innervation imaging, metabolic imaging, as well as the emerging combined positron emission tomography with computed tomography (CT), and cardiac magnetic resonance imaging (CMR).

A comprehensive nuclear cardiology examination requires knowledge of physics, cameras, anatomy, physiology, image interpretation, appropriate patient selection, and radiation safety procedures. Therefore, the Nuclear Cardiology Syllabus includes knowledge of physics and instrumentation associated with nuclear imaging, integrates radiation safety standards into professional practice, and also includes appropriate use criteria and clinical practice guidelines. The Nuclear Cardiology Core Syllabus describes the fundamental knowledge base required for accurate and comprehensive practice of Nuclear Cardiology and provides a framework for nuclear cardiology education and training. Nuclear Cardiology Core Syllabus of the European Association of Cardiovascular Imaging (EACVI) is now available online.<sup>1</sup>

The Nuclear Cardiology Core Syllabus has been developed by representatives of the EACVI Section on Nuclear Cardiology and Cardiac Computed Tomography and has been structured in line

and scope with the EACVI Echocardiography and Cardiac Magnetic Resonance Imaging Core Syllabi.<sup>2,3</sup>

## Scope of the Nuclear Cardiology Core Syllabus

The purpose of Nuclear Cardiology Core Syllabus in conjunction with the others provided by EACVI is to encourage homogeneous cardiovascular imaging education and a subsequent structured certification in Europe.

It provides a core knowledge summary for cardiology trainees, cardiologists, and professionals with an interest in nuclear cardiology.

The syllabus can serve as a guide for developing educational material and educational course content. Trainees may use the nuclear cardiology syllabus to guide their preparation for knowledge-based assessments.

Harmonized imaging education and assessment facilitate the delivery of standardized high-quality cardiac imaging, which in turn leads to improved diagnosis and management of cardiovascular disease across Europe.

## Use of the Core Syllabus within the EACVI activities

The role of the EACVI is to provide guidance, to set the premises for cardiac imaging practice standards unification in Europe, to define knowledge requirements, and to promote education. The EACVI is a

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world leader in education, providing high-quality educational opportunities through congresses, teaching courses, journals, website, books, recommendations and position papers, slide-sets, and other tangible educational materials. The EACVI Nuclear Cardiology Core Syllabus will be used to standardize the content of these educational opportunities and of the educational activities organized by the EACVI in collaboration with National Societies and National Working Groups in Nuclear Cardiology. The EACVI values the contribution of National Societies and Working Groups in educational activities. The new EACVI Nuclear Cardiology Core Syllabus will be used to update the ESC Core Syllabus and Core Curriculum in clinical cardiology. Furthermore, the document will represent the foundation of collaboration between the EACVI Education Committee, the EACVI Board, and the European Society of Cardiology (ESC) Education Committee in awarding adequate Continuous Medical Education (CME) credits to educational activities run throughout Europe.

## Perspectives

The Core Syllabus is the first step in the development of the EACVI Core Curriculum. The Core Curriculum will be an expansion of the Core Syllabus based on educational objectives. It will specify teaching,

training, and assessment methods. Moreover, it will become the reference outline for all teaching materials and courses in Nuclear Cardiology throughout Europe. It will represent the foundation of the new European electronic education platform (ESCel). The EACVI will aim in continuous update of the syllabus, ensuring advances in the field of Nuclear Cardiology are incorporated. The Nuclear Cardiology Core Syllabus is aligned with the Echocardiography and CMR Core Syllabi of the EACVI.<sup>2,3</sup> The Nuclear Cardiology Core Syllabus may form the basis for a European Nuclear Cardiology Certification Examination. The aim is to create a complete cardiovascular Imaging Core Syllabus.

## References

1. <http://www.escardio.org/communities/EACVI/education/Pages/core-syllabus-nuclear-cardiac-ct.aspx>.
2. Cosyns B, Garbi M, Separovic J, Pasquet A, Lancellotti P. Education Committee of the European Association of Cardiovascular Imaging Association (EACVI). Update of the echocardiography core syllabus of the European Association of Cardiovascular Imaging (EACVI). *Eur Heart J Cardiovasc Imaging* 2013;**14**:837–9.
3. Petersen SE, Almeida AG, Alpendurada F, Boubertakh R, Bucciarelli-Ducci C, Cosyns B et al. Education Committee of European Association of Cardiovascular Imaging Association (EACVI). Update of the European Association of Cardiovascular Imaging (EACVI) Core Syllabus for the European Cardiovascular Magnetic Resonance Certification Exam. *Eur Heart J Cardiovasc Imaging* 2014; **15**:728–9.

