



IOC  
COURSE ON CARDIOVASCULAR  
EVALUATION OF OLYMPIC ATHLETES



**26 - 27 OCTOBER 2018**  
**OLYMPIC CENTER GIULIO ONESTI**  
**ROME, ITALY**



# IOC COURSE ON CARDIOVASCULAR EVALUATION OF OLYMPIC ATHLETES FROM BASIC TO ADVANCED

**OCTOBER 26-27, 2018**  
**ROME, ITALY**

## Rationale

The sudden and unexpected cardiac death is a rare, but tragic and emotional event, which assumes high visibility when occurs in an elite/professional athlete. Unavoidably, this event raises several medical and legal questions, including the most appropriate strategy to prevent these catastrophes.

The IOC approached this issue in a previous document (see: Ljungqvist A, et al. The International Olympic Committee (IOC) Consensus Statement on periodic health evaluation of elite athletes March 2009. Br J Sports Med. 2009 Sep;43(9):631-43), where the rationale and methods for cardiovascular (CV) evaluation of the athletes were extensively described.

The CV evaluation including the 12-lead electrocardiogram, as suggested by the IOC statement, has the power to identify (or raise suspicion for) most of the cardiac disease at risk. The ECG, however, may also show certain abnormalities in athletes, which mimic those of patients with cardiac diseases, generating concern regarding the appropriate management of the athlete. In these cases, the abnormal ECG conveys the indication for additional testing, such as echocardiography and/or cardiac magnetic resonance, to confirm or exclude the presence of a disease.

Therefore, the IOC Medical and Scientific Commission has planned the present Course of Cardiovascular evaluation of the athletes with the aim to provide team physicians and consultant cardiologists with the most updated scientific and practical information relative to the appropriate methods for evaluating athletes. Particular attention will be spent on the appropriate interpretation of the ECG observable in athletes, as well as the correct indication for additional diagnostic testing, when needed.

The 2018 program is intended to teach team physicians and consultant cardiologists with a short, comprehensive scientific update relative to the most challenging cardiac diagnoses and reserve a large part to practical sessions, where the experts will help delegates to interpret the results of the common diagnostic testing, including the 12-lead ECG, the exercise ECG testing, the echocardiography and eventually, cardiac magnetic resonance.

Antonio Pelliccia  
Course Director



### Thursday October 25<sup>th</sup>, 2018

Arrival Day and Faculty Dinner

### Friday October 26<sup>th</sup>, 2018: Day 1

08.00-08.30 Registration

08.30-08.45 Welcome, introduction and course outline (Antonio Pelliccia)

08.45-09.00 Welcome from IOC Head of Scientific activities (Lars Engebretsen)

#### SESSION 1: The basic of cardiovascular evaluation of athletes: the 12-lead ECG

09.00-09.30 The basic of ECG the athlete – How to recognize the normal patterns (with special regard to LV hypertrophy, incomplete RBBB, early repolarization) (**Michael Papadakis**)

09.30-09.45 *Questions and Answers*

09.45-10.15 The abnormal ECG patterns in athletes (with special regard to negative T-wave, axis deviation, atrial enlargement, Q waves) (**Michael Papadakis**)

10.15-10.30 *Questions and Answers*

10.30-10.45 **Coffee break**

#### SESSION 2: The imaging and exercise testing in the cardiovascular evaluation of athletes

10.45-11.15 How to recognize cardiac disease in athletes by imaging testing (with special reference to hypertrophic cardiomyopathy and arrhythmogenic cardiomyopathy) (**Stefano Caselli**)

11.15-11.30 *Questions and Answers*

11.30-12.00 How to recognize ischemic heart disease in athletes (atherosclerotic coronary artery disease, congenital coronary anomalies, myocardial bridge) (**Mats Börjesson**)

12.00-12.15 *Questions and Answers*

12.15-12.45 How to manage ventricular arrhythmias in athletes (**Antonio Pelliccia**)

12.45-13.00 *Questions and Answers*

13.00-14.30 **Lunch break**

## Programme

### Practical sessions: Day 1

#### SESSION 3: Reading the ECG in athletes

14.30-15.30 Interactive reading and interpretation of the ECG in athletes

Tutors: **Michael Papadakis** and **Mats Börjesson**

15.30-15.45 *Questions and Answers*

15.45-16.00 **Coffee break**

#### SESSION 4: What to look for in the echocardiography of athletes

16.00-17.00 Interactive illustration and interpretation of the echocardiographic studies in athletes

Tutors: **Stefano Caselli** and **Flavio D'Ascenzi**

17.00-17.15 *Questions and Answers*

17.15-17.30 Learning Assessment. End of the Day 1

**Dinner for participants & Faculty**

### Saturday October 27<sup>th</sup>, 2018: Day 2

### Practical sessions: Day 2

#### SESSION 5: The exercise testing in athletes: modalities and results

09.00-10.00 Interactive reading and interpretation of the exercise ECG testing in athletes

Tutors: **Mats Börjesson** and **Michael Papadakis**

10.00-10.30 *Questions and Answers*

10.30-10.45 **Coffee break**

#### SESSION 6: The cardiac magnetic resonance (CMR) in athletes: the essentials to be known

10.45-11.45 Interactive reading and interpretation of the CMR images in athletes

Tutors: **James Moon** and **Antonio Pelliccia**

11.45-12.00 *Questions and Answers*

12.30-12.15 Learning assessment of day 2

**Closure of the course**

## Target of the Course

Team physicians, sport medicine specialists and consultant cardiologists interested in the cardiovascular evaluation of the professional/elite athletes.

### Main objectives for the Course

Teach the physicians of the basic knowledge of CV evaluation, according to the protocol suggested by the IOC.

- 1 Explain the criteria to identify and interpret the ECG in athletes, and distinguish the normal ECG changes consistent with the athlete's heart from the abnormalities requiring additional diagnostic testing and cardiology consultation.
- 2 Discuss the indication for the imaging testing (when indicated, echocardiography, cardiac magnetic resonance, exercise ECG testing), and be able to interpret the results, by distinguishing normal (consequence of athletic conditioning) from abnormal (suggestive for cardiac disease).

### Faculty

**Antonio Pelliccia** (*Course director*), *Rome*

**Lars Engebretsen**, *Lausanne/Oslo*

**Michael Papadakis**, *London*

**Mats Börjesson**, *Gothenburg*

**Stefano Caselli**, *Zurich*

**Flavio D'Ascenzi**, *Siena*

**James Moon**, *London*

### Delegates

Sport physicians and cardiologists delegated by the National Olympic Committees, International Federations, Intl. Sport Bodies, Academic Institutions (*presentation required*).

The registration to the Course is free of charge. Places are limited.

Individual applications accepted selectively, please contact the **Organising Secretariat**.

The Course will be held in **English** (no simultaneous translation).

For further information, visit the website:

<http://ioc-cardiologycourse.org/rome2018>

## Venue

### Olympic Center Giulio Onesti

Aula Magna SdS, Largo Giulio Onesti 1 - Rome, Italy



**For information and application:**

**International Olympic Committee:**

Mrs. Cherine Touvet- Fahmy

IOC Medical & Scientific Department

[cherine.touvet@olympic.org](mailto:cherine.touvet@olympic.org)

**Organising Secretariat :**



Publi Créations

74, Bd. d'Italie - MC - 98000 Monaco

Tel.: +377 97 97 35 55 - Fax: +377 97 97 35 50

[www.publiccreations.com](http://www.publiccreations.com) - [info@ioc-cardiologycourse.org](mailto:info@ioc-cardiologycourse.org)

