

Behind the scenes of the European Examination in General Cardiology

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The European Examination in General Cardiology (EEGC) is a joint venture between the European Union of Medical Specialists, the European Society of Cardiology (ESC) and the participating National Cardiac Societies, including the British Cardiovascular Society (BCS). It provides a high-quality test of knowledge for cardiology trainees from 14 countries where it is used to support training. In the UK, the EEGC is taken in specialty training (ST)5, and can be retaken in ST6 and ST7 if necessary, and is approved by the GMC as a requirement for CCT.

Development of the exam (figure 1) starts at the ESC Congress in August with a question writing meeting (a). Each question has a clinical scenario, a single question and five possible answers shown in alphabetical order. The questions are written and edited by groups of cardiologists from a range of countries and subspecialties. The knowledge tested is mapped to the curriculum in line with current guidelines and published clinical studies. Countries register in September (b) and confirm the cities where the exam will be sat in October (c). UK candidates contact the BCS education team (Education@bcs.com) from November of their ST5 year to arrange registration (d). The EEGC Board meets in January, prior to the second question writing meeting of the year (e). In February, five cardiologists select 24 questions from each of the sections: general cardiology, valvular or myocardial disease, ischaemic heart disease, arrhythmias, adult congenital heart disease or non-invasive cardiology. Seventy per cent are text only, 20% contain still images and 10% include

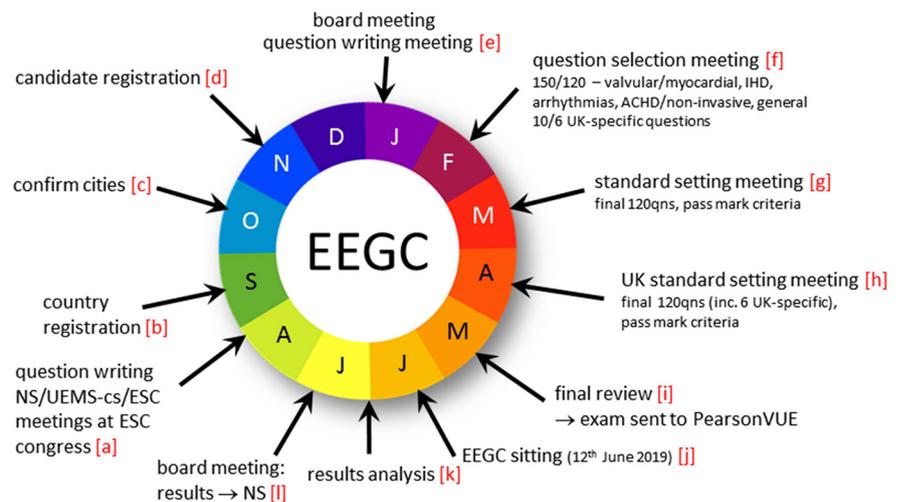


Figure 1 Development of the EEGC. ACHD, Adult Congenital Heart Disease; EEGC, European Examination in General Cardiology; ESC, European Society of Cardiology; IHD, Ischaemic Heart Disease; NS, National Cardiac Societies; qns, questions; UEMS-cs, Union of European Medical Specialists Cardiology Section.

video clips (f). The standard setting group review each question using a modified Angoff method to estimate its difficulty, and their collated scores inform the final pass mark (g). This process is repeated in the UK because of the UK-specific questions (h). In May, the final exam of 120 questions is reviewed by the EEGC Board chair and chair of the standard setting group (i) to ensure that there are no errors before the exam is sat on computers at local test centres over 3 hours in June (j). Six of the 120 questions that UK candidates

sit are clearly identified as specific to UK guidance or laws.

The performance of each question in the exam is reviewed, and any questions where <30% or >90% of candidates answered correctly, as well as questions where there was a negative correlation with candidates' performance in the overall exam, are reviewed by representatives of participating national societies to ensure that the answer key was correct, that the question was not misleading and that it tested an important point of

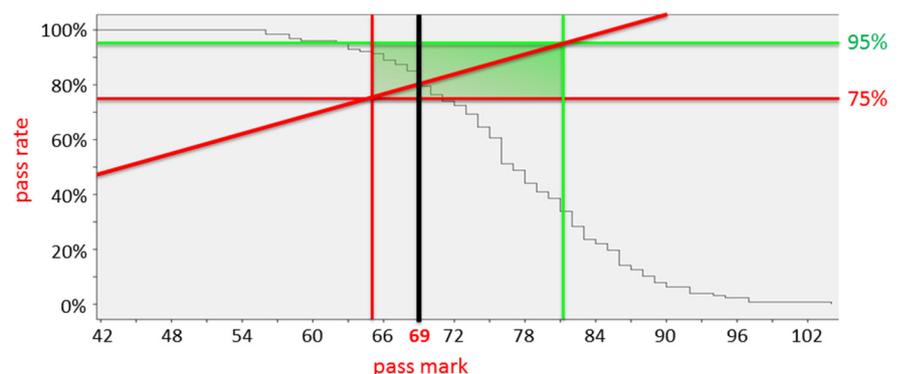


Figure 2 Hofstee method for the calculation of the UK pass mark 2018.

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knowledge (k). Any question where there is concern is excluded from the exam. The marks are then passed to the EEGC Board and independent psychometricians at the University of Cologne to determine the pass mark. This is done using the Hofstee method (figure 2), which allows for adjustment of the pass mark according to the difficulty of the examination. The exam board has decided that between 75% and 95% of candidates are expected to pass the EEGC. A rectangle (shaded green) is then formed by 2 SD limits around the mean of the expected pass mark determined by the standard setting group. The final pass mark is at the intersection between the diagonal across this rectangle and the plot of the candidates' performance.

Four hundred and eighty-three trainees sat the EEGC in 2018, 128 from the UK. Overall, approximately 85% of UK candidates passed with a score of at least 69 out of 120 possible marks (57.5%).

More information is available from the BCS website, where there are some example questions. There are presentations and further examples on the ESC website (<http://esc365.escardio.org>) <https://esc365.escardio.org/Congress/ESC-CONGRESS-2017/Test-your-clinical-knowledge-with-the-European-Exam-in-General-Cardiology/21300-test-your-clinical-knowledge-with-the-european-exam-in-general-cardiology> <https://esc365.escardio.org/Congress/ESC-Congress-2018/Take-the-Challenge-The-European-Exam-on-General-Cardiology-EEGC/24165-take-the-challenge-the-european-exam-on-general-cardiology-eeec> [the-exam-how-it-works-what-impact-it-has.](https://esc365.escardio.org/Congress/ESC-Congress-2018/The-changing-environment-of-Cardiology-Education-and-Training-ESC-and-UEMS/180159-put-it-all-together-from-the-esc-core-curriculum-to-the-european-exam-general-cardiology-and-beyond-what-is-</p>
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