

FELLOW'S CORNER—ANNOUNCEMENT

Another Way to Increase Nuclear Cardiology Experience: Novel JSNC E-learning Course

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The Japanese Society of Nuclear Cardiology (JSNC) presents regional educational seminars in eight Japanese districts and about 1,000 individuals have participated annually since 2007. The participants include nuclear cardiology trainees, cardiologists who wish to update their knowledge and radiology or nuclear medicine technologists who aim to understand how doctors interpret nuclear images. A seminar textbook (126 pages) written by Japanese nuclear cardiology experts includes all aspects of nuclear cardiology from technology to myocardial perfusion and biochemical imaging, as well as guidelines and evidence recognized all over the world. A supplementary booklet provides examples of interpretations of images derived from 18 patients and the effective application of nuclear cardiology. This seminar has been presented for 10 years, and now JSNC plans to start an e-learning program.

Specialized knowledge is essential for medical education, and systematic learning using textbooks is an important first step. Fundamental specialized knowledge of medical imaging is critical, and the characteristic findings of some specific diseases are explained in such textbooks. Gamut-style textbooks have also been published. For example, under the heading, “Stress-induced perfusion defect”, specific findings of several diseases or conditions are listed, and readers can select appropriate items that best fit their patients to conclude a final diagnosis. Some technical issues such as the effects of motion may be included, which could be a cause of artifacts in single-photon emission computed tomography (SPECT) images.

While educating medical students at universities, we found that having knowledge and reading images involve different skills. Knowing ischemia does not automatically imply that myocardial ischemia is always correctly interpreted from myocardial perfusion images. That is, intensive training in reading images is required in addition to the acquisition of medical knowledge; for example, whether or not an imaging procedure should be repeated is clinically more important than simply noticing motion artifacts during SPECT data acquisition.

Interactive step-by-step training to learn how to read and interpret images using e-learning will help to enhance diagnostic skills. Not all trainees will be in an educational center specializing in nuclear cardiology and not all radiology specialists have nuclear cardiology expertise. In addition, cardiology specialists are not always familiar with nuclear cardiology. Nuclear medicine technologists who can read nuclear cardiology images could provide good quality images and reliable quantitative data. In addition to many nuclear images provided by the eScan Academy (<http://www.escan-academy.com>), in which all courses are accredited by the European Accreditation Council for Continuing Medical Education and the American Medical Association, JSNC plan to add content that is popular in Japan. These new learning approaches have just recently been started by JSNC, and we hope to collaborate with you and obtain your feedback to create more effective learning resources.

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Escan
Sample

eScan Academy COURSES TEACHING POINTS MY ARCHIVE Kenichi Nakajima

Patient information

Gender	Male
Age	71
Diagnosis	Known coronary artery disease
BMI	31
Previous infarction	No
Previous PCI or CABG	Yes
EF	70 %
EDV	130 ml
ESV	38 ml
TID	1.11
Smoker	No
Hypertension	Yes
Family history	Yes
Hyperlipidemia	Yes
Peripheral vascular disease	No
Chest pain-anamnestic	Typical
Type of stress	Adenosine

Ischemia?

☐ No evidence of coronary artery disease
☐ Ischemia
☐ Infarction
☐ Ischemia and infarction

Image Sets(3) SPECT Color Scale Electric 0 - 100

Fig. 1 Sample case presentation in e-learning system from eScan Academy. This is a 71-year old patient with known coronary artery disease. The patient's information and questions are shown on the left side. By looking at stress-rest myocardial perfusion images, polar maps, and gated wall motion images, one can select appropriate diagnosis (for example, normal, ischemia and/or infarction) and go to the next step.

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