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Status of Hybrid Imaging in the EU

The European Association of nuclear Medicine (EANM) performs a biennial survey using data from its national member societies to review current nuclear medicine procedures and technology installations in Europe.

2007 Survey Results

The previous survey in 2007 used data from 34 national societies, and showed that over 500 PET systems were installed, of which two-thirds were combined PET/CT devices (n = 339). By comparison, more than 5,000 gamma cameras were installed. Interestingly, there was almost one cyclotron per four PET or PET/CT devices. This relatively large number of cyclotrons, especially when compared with the U.S, reflects the fact that European nuclear medicine departments tend to be rather ambitious in making use of a variety of radiotracers, rather than restricting themselves to the use of FDG.

The number of PET procedures in 2007 totalled about 350,000; again two-thirds were PET/CT procedures (n = 226,000). This number accounts for about three percent of nuclear medicine procedures in vivo (excluding laboratory procedures). PET or PET/CT was completely reimbursed in 15 of the 27 countries that responded. In six countries, PET/CT was partially reimbursed.

Joint EANM/ESR Survey

A follow up survey was jointly initiated and undertaken by the EANM and the European Society of Radiology (ESR), as a first step towards improving training for multimodality imaging and facilitating the performance and interpretation of combined cross-sectional imaging.

Specifically, the intention of this survey was to provide a database that would serve the aim of the EANM and the ESR to work together on an equal and constructive basis for the future benefit of both specialties. Both societies set out their positions and aspirations in a document published in 2007 ("White Paper of the European Association of Nuclear Medicine and European Society of Radiology on Multimodality Imaging").

To obtain the database, a questionnaire was sent to all individual members of the EANM and ESR. Up to 1,500 respondents from the ESR and 350 from the EANM represented 38 countries and drew the following conclusions:

- In two-thirds of departments the CT component is currently only used for anatomical landmarking and attenuation correction (low-dose CT);
- In only 20 percent of departments are most CT scans conducted as full diagnostic CT with or without contrast enhancement;
- Members of both societies expect that the proportion of diagnostic CT will increase in future (>50 percent of individual members);
- Members of the EANM reported use of a significantly higher variety of radiotracers, and
- A majority (>75 percent) of respondents from both societies declared themselves in favour of joint development of a training programme for hybrid imaging on a European level by the EANM and ESR and the respective UEMS sections.

The answers to the question on preferred training options (adjusted period of interdisciplinary training or integrated interdisciplinary training programme) were indeterminate, with a moderate preference of radiologists for integrated training. It is questionable whether the two options were sufficiently well defined to rely on the responses given.

Conclusions

Expectations that an increasing proportion of procedures will involve combination of PET and full diagnostic CT is driving the need for a qualification that will allow the performance and interpretation of both procedural components by a single specialist. It is in the interests of both nuclear medicine and radiology communities, to create a training programme that delivers the necessary skills in the respective complementary field. Thus, both societies have set up working groups composed of representatives of the societies and the respective UEMS sections to develop a curriculum that will serve both radiologists and nuclear medicine physicians who want to perform and interpret multimodality imaging.

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