

## **Volume 10 - Issue 3, 2010 - Cover Story**

### **Current and Desired Qualifications in Hybrid Imaging**

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The great majority of professionals in nuclear medicine and radiology expect that the number of diagnostic CT scans in hybrid imaging will increase. Then, CT expertise will be a necessary part of hybrid imaging in general. Joint interpretation of images by fully trained experts in nuclear medicine and radiology and consultation between the two specialists to combine the data into a final diagnosis has the advantage of providing a high-quality result. At a practical level, it would be desirable to have qualified experts in hybrid imaging who can cover both modalities, PET and CT. However, comprehensive training in both clinical radiology and nuclear medicine would extend the training programme to eight - ten years.

#### **Integrated Training**

The solution is to integrate one part of the complementary qualification (nuclear medicine for radiologists and diagnostic radiology for nuclear physicians) into the core specialisation, and to add adjusted complementary training in the other specialty. In total, two years of training in the complementary specialty obtained in a fully accredited department, should provide a broad foundation of knowledge in the second specialty, provided it is not confined to a single technique such as CT or PET or to a single clinical application.

It should be recommended that training in the second specialty includes about 18 months of cross-sectional imaging (CT and MRI for nuclear physicians, and PET and SPECT for radiologists); the remaining six months of training might then be dedicated to a variety of other diagnostic procedures. Clinical training should be paralleled by education in the physical principles of CT and MRI for nuclear physicians, and by education in radiopharmacy, radiotracer biokinetics and physical principles of SPECT and PET for radiologists. Training need not include therapeutic interventional radiology or radionuclide therapy.

#### **Exceptions to Complementary Training**

There is general consensus that a basic requirement for qualification in hybrid imaging is full specialisation in either nuclear medicine or radiology. Through the additional qualification in the second specialty as outlined above, the great majority of multimodal imaging procedures will be accessible, independent of the primary (core) specialisation. Some exceptions have to be considered, such as hybrid imaging in neurology, cardiology and thyroidology, and pre-therapeutic dosimetry in radionuclide therapy. Procedures in neurology and cardiology will require special training programmes.

The exact duration of training for multimodality imaging is necessarily subject to national regulations or even to local circumstances. The general time scale as outlined here is compatible with a model requiring a total of six years leading to a special competency certification for multimodality imaging. At the time of writing (January 2010), detailed specifications of the training syllabus are still under discussion between the European Association of Nuclear Medicine and the European Society of Radiology and their UEMS delegates.

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