

Strengthening clinical practice in nuclear medicine in Europe

The challenge...

Chronic diseases like cardiovascular disease and cancer account for more than 40% of causes of death worldwide, particularly in Europe. Although X ray computed tomography (CT), magnetic resonance imaging (MRI) and ultrasound remain the first line modalities for diagnostic imaging, new imaging techniques such as single photon emission computed tomography–computed tomography (SPECT-CT) and positron emission tomography–computed tomography (PET-CT) are increasingly complementing other imaging modalities, coupling the metabolic information provided by SPECT and PET with the anatomical resolution of X ray CT.

Both SPECT-CT and PET-CT can be used for oncologic imaging and in cardiac disease management. The procedures were introduced into clinical practice around 10 years ago and their use is increasing steadily, achieving more accuracy of primary staging and the detection of recurrent disease. SPECT-CT and PET-CT have the potential to improve patient management in up to 40% of cases.

*Participants at the regional
training course on Nuclear
Cardiology: From Theory to
Practice, October 2011.*



The project...

An IAEA technical cooperation (TC) project is helping to reinforce the central role of nuclear technologies, either as first line modalities or as complements to other diagnostic tests and therapeutic procedures.

Earlier regional projects (RER/6/014 and RER/6/017), in collaboration with the European Association of Nuclear Medicine (EANM), contributed to improving health services for patients undergoing nuclear medicine techniques for diagnosis and treatment. Building on the outcomes achieved so far, the current project (RER/6/026) aims to improve appropriate use of SPECT/CT and PET/CT imaging in managing chronic diseases. The European Association of Nuclear Medicine (EANM) is an important project partner, offering training courses that provide opportunities for continuous professional development to nuclear medicine practitioners.

The impact...

Since 2009, more than 350 medical practitioners have been trained through 11 regional training events and 23 IAEA/EANM training courses under regional TC projects on nuclear medicine. The participants have increased their knowledge and strengthened their skills in the application of enhanced nuclear medicine technologies. These improved capacities are contributing significantly to improving the quality of patient management in chronic diseases such as cardiovascular disease and cancer.

Technical cooperation project RER/6/014, RER/6/017: Improving Clinical Practice in Nuclear Medicine, and RER/6/026: Strengthening SPECT/CT and PET/CT Hybrid Imaging Applications for Chronic Disease Diagnosis