

## White paper of the European Association of Nuclear Medicine (EANM) and the European Society of Radiology (ESR) on multimodality imaging. The opinion of the Department of Nuclear Medicine, University Hospital of Heraklion, Crete, Greece

**To the Editor:** Multimodality imaging (SPECT/CT, PET/CT, PET/MRI) is an area of very rapid growth with important clinical benefits. As we all know, in 2005 the leadership of the European Association of Nuclear Medicine (EANM) and the European Society of Radiology (ESR) started discussing areas concerning ways of potential cooperation between these two separate medical specialties, nuclear medicine and radiology. In 2007 results of this discussion were presented by both societies as a document entitled “White paper of the European Association of Nuclear Medicine (EANM) and the European Society of Radiology (ESR) on multimodality imaging” [1].

Briefly, this paper sets out the positions of the two societies working together. Diagnostic SPET/CT, PET/CT and PET/MRI offer more detailed information on anatomy, pathology, biology and pathophysiology. The first part of this document refers to the most important indications for multimodality imaging and the second part shows the necessity of a high level training in both nuclear medicine and radiology. If we analyze the discussion included in this paper, we can see that the reason is to make the specialty of Nuclear Medicine from being an independent specialty to be incorporated in Radiology. We have the feeling that this relationship is not fair for Nuclear Medicine.

As it is written in this white paper: “Nuclear Medicine and Radiology are recognized by the European Union as separate entities”. There is no doubt that Nuclear Medicine and Radiology, as specialties, besides their differences have also similarities. There is no doubt that the clinical value of the combined techniques is extremely important. This can be done either by combining electronically the results from both tests or by visually estimating their diagnostic value.

The philosophy of PET/CT is based on biology and pathophysiology i.e. on the PET part, which is nowadays very important for the knowledge of biological characteristics of tumors. CT scanners are linked to PET and to SPET scanners and not the opposite i.e. PET and SPET scanners are not linked to CT scanners. CT is an additional and occasionally helpful tool for more detailed anatomical information, and for

rapid and optimal attenuation correction of the PET or the SPET images, but is not the primary diagnostic tool. We agree that training of nuclear medicine physicians should be properly structured, and that an adjusted period of training is necessary to include the physical principles and practical skills of CT and MRI. Perhaps one more year of training should be added for a more complete education in nuclear medicine. We disagree with the white paper statement that: “the working pattern would involve the Nuclear Medicine specialist managing and reporting the nuclear medicine component of the examination and the radiologist managing and reporting the anatomical and pathological component, with consultation between the two specialists to combine the data into a final diagnosis”. In our opinion, Nuclear Medicine physicians, with some additional training, will be able without any further help to give accurate anatomical consultation and reporting. We do not understand the meaning of “the pathological component... of the examination ...” (besides the anatomical). Of course radiologists may be asked as advisors in case nuclear medicine physicians consider their consultation helpful for the final diagnostic reporting. The white paper must not be considered as a guideline to be followed, but as a document arising many questions, many doubts as to its practicability.

### Bibliography

1. Bischof Delaloye A, Carrió I, Cuocolo A et al. White paper of the European Association of Nuclear Medicine (EANM) and the European Society of Radiology (ESR) on multimodality imaging. *Eur J Nucl Med Mol Imaging* 2007; 34: 1147-1151.

**Nikolaos Karkavitsas, Sophia Koukouraki, Maria Stathaki**

Department of Nuclear Medicine, University Hospital Heraklion, Crete, Greece

**Prof. Nikolaos Karkavitsas**

Department of Nuclear Medicine, University Hospital Heraklion, Crete, Greece

E-mail: karkavit@med.uoc.gr

