



Experiential Learning in CT Radiography and PET Molecular Imaging

I am a radiologist from Tbilisi, Georgia. I work at Research Institute of Clinical Medicine - Academician Fridon Todua center, one of the leading medical institutions of the country, which has recently received the European Quality Award by Europe Business Assembly. Our institution is launching PET/CT department in the near future. PET/CT has an established role in oncological imaging and finds its major applications in the diagnosis, staging and restaging of several types of cancers, monitoring the response to therapy, and in contributing useful information for the planning of radiotherapy treatment. By establishing a modern PET/CT center, our institution will be offering our patients a complete diagnostic workup.

Human resource issues are among the financial, structural, and organizational constraints that may be encountered during the establishment of a PET project. Planning a PET/CT centre requires advanced training of key professionals at an early stage, preferably at well-established international facilities. This IAEA fellowship was an excellent opportunity for me as a future interpreter of PET/CT hybrid images to undergo training in nuclear medicine and understand basic physical principles of radioactive decay, data acquisition, and image reconstruction as well as basic principles of FDG radiochemistry, biology and the role of FDG metabolism in the interpretation of PET and PET/CT studies.

This training was planned at UT Southwestern Medical Center, Dallas, Texas, at the department of Radiology, Division of Nuclear Medicine, under the supervision of Dr. Rathan Subramaniam, MD, PhD. The host institute was suitable, due to communication in English, as well as being one of the leaders of the field.

This three-month training was particularly valuable for me as I had not had any clinical experience in General Nuclear Medicine or PET/CT before. After the training I am aware of oncological applications of PET/CT for the full range of scenarios encountered in a professional setting and fully understand its role in the management of specific diseases. I have become familiar with the basic indications of a PET/



CT examination, normal distribution of FDG radiotracer throughout the body and common physiologic and benign findings. I understand the value of PET/CT for various clinical scenarios and different oncologic nosologies.

Within the ranges of this project I attended the annual SNMMI meeting at Denver, Colorado, which was of special importance to me. I attended a review course which gave me a good overview of the role of nuclear medicine in clinical practice, recent advances and future prospects. I attended informative sessions about best clinical practice of PET/CT in head and neck, chest and abdominal malignancies and regarding its role in diagnosing and treating neuroendocrine tumors. Sessions about PET/CT instrumentation and new technologies in this field were especially interesting for me.

Overall, the experience gained in this training program will help me if I am further involved in training of residents, technologists and young specialists in this field. In my opinion, the training will have a big impact on my future professional carrier, as well as on the development of nuclear medicine and particularly PET/CT in my home country of Georgia. The IAEA provides good opportunities for young specialists to broaden their knowledge and experience, and I am looking forward to participating in other IAEA activities in the future.

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