

# **ESTABLISHING THE CYCLOTRON AND THE PET/CT UNIT IN THE REPUBLIC OF MACEDONIA-our experience**

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In 2015 y officially was marked the beginning of the new era for medical world in the Republic of Macedonia. The cyclotron unit became operational and enabled the installation and operation of the first public PET/CT scanner. It was the biggest advanced technology investment that has ever happened in the field of medical imaging, installation of the cyclotron unit and diagnostic unit with hybrid imaging system PET/CT. The investment was done by the government of the Republic of Macedonia and the project was realized with the tremendous support of experts from the International Atomic Energy Agency (IAEA). By installing the first cyclotron in the region the production of short lived radioisotopes become reality. The new developed institution is recognized as Public health institution, University institution and fully covers the own needs, also have a capacity to cover two private PET/CT units in the Republic of Macedonia and wider Balkan area. Establishing a PET/CT and a cyclotron unit together in one building is a very complicated project. It takes a lot of time and needs enormous effort dedication, excellent planning with expert advice from highly qualified personnel. Nowadays the results of this hard work are visible and available to the citizens of the Republic of Macedonia as well as neighboring countries. In the paper will be present the results of daily routine quality control of the cyclotron and installed sophisticated equipment in radio pharmacy laboratory. Also, diagnostic part is equipped with hybrid system such as PET/CT Siemens mCT which combine the powerful PET technology with the highly precise X-ray imaging. We are proud that this “state of art” technology we made closer to our citizens and we really hope that they will feel the benefit of this new technology in early diagnosing but also to avoid unnecessary and costly therapies. Also, a positive impact on the overall healthcare budget is also expected.

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