

North Macedonia

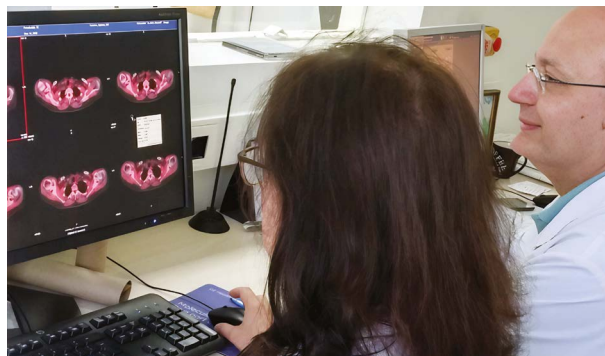
IAEA Member State since February 1994

Selected achievements

2018: The country's first SPECT-CT hybrid imaging system is inaugurated at the Institute of Pathophysiology and Nuclear Medicine of the Mother Theresa University Clinical Centre. Since then, over 11 000 patients have already received diagnostic scans and waiting times are reduced by 20 per cent.

2017: North Macedonia's University Institute for Positron Emission Tomography (PET) hosts 10 IAEA fellows from Africa for comprehensive training in radiopharmacy.

2017: The first public PET centre is opened at the University Institute for Positron Emission Tomography in Skopje to help detect the early onset of diseases.



Doctors at the Institute of Pathophysiology and Nuclear Medicine of the Mother Theresa University Clinical Centre analyse SPECT-CT images. (Photo: V. Majstorov/Ss. Cyril and Methodius University in Skopje)

Additionally, an online system was implemented at the Institute of Physics, enabling remote monitoring of patient doses and quality control of 16 State mammography units and 19 computed tomography scanners.

These initiatives have contributed to the establishment of national diagnostic reference levels — preventing the unintended exposure of patients and staff and fostering an improvement of clinical practice and radiation safety culture in medical settings.

Food safety

North Macedonia has strengthened its radiation processing capabilities through an IAEA-supported peer review initiative centred on detecting irradiated food originating from other countries. This has helped to reduce the number of insect pests and extend shelf life.

Following a review, IAEA recommendations enabled the Laboratory at the University Ss. Cyril and Methodius in Skopje to be upgraded and accredited. They also served to boost national capacities and contributed to the establishment of a monitoring programme for detecting irradiated food — ensuring long term compliance with safety regulations.

Environmental radioactivity monitoring

With IAEA assistance, North Macedonia has strengthened its capacity for environmental and emergency radioactivity monitoring at the Institute of Public Health.

National priorities

- Food productivity
- Human health and nutrition
- Management of groundwater resources
- Energy development planning
- Environment

Main areas of IAEA support

- Human health
- Environmental radioactivity monitoring
- Environmental protection

Project successes

Nuclear medicine and diagnostic imaging

With IAEA support, North Macedonia has enhanced the quality of positron emission tomography (PET) diagnostics for both oncological and non-oncological cases. This entailed the introduction of new PET radiopharmaceuticals, establishing a national centre for monitoring patient doses and ensuring quality assurance at the Institute of Physics of the Faculty of Natural Sciences and Mathematics in Skopje.

This involved expert missions, a fellowship on radon measurement and the provision of additional equipment for monitoring water, soil, and sediment radioactivity. The institute also improved its ability to measure public exposure to ionizing radiation by establishing a network to monitor nuclear medicine departments and industries.

Additionally, the IAEA supported long term measurement campaigns for detecting air pollutants in collaboration with the Ministry of Environment. This helped identify the main sources of particle pollution in the biggest urban cities in the country.

Participation in the major initiatives

- ZODIAC

Date of imPACT Review(s)

2018



The country’s first SPECT-CT hybrid imaging system is inaugurated at the Institute of Pathophysiology and Nuclear Medicine of the Mother Theresa University Clinical Centre in 2018. (Photo: Ministry of Education and Science, North Macedonia)

IAEA support received in the 21st century



Contributions to South-South and triangular cooperation

