

Upgrading the nuclear medicine diagnostic imaging facilities at the University of Peradeniya, Sri Lanka

The challenge...

Sri Lanka has a population of approximately 20 million, and the number of cancer cases has been steadily rising with around 25 000 cases diagnosed in 2013 compared to around 10 000 in 2001. Cancer is the second-highest cause of death nationally. The size of Sri Lanka's cancer burden is largely due to delayed detection and lack of access to effective treatment facilities.

The domestic demand for cancer diagnosis and treatment services exceeds the available capacities of the Sri Lankan government. Although the country has several nuclear medicine facilities which are used extensively for early detection of cancers, the existing infrastructure is nearly 40 years old, and due to a lack of spare parts it must be replaced, not upgraded. Faced with a growing number of patients requiring better treatment options, the government of Sri Lanka sought IAEA assistance to improve and upgrade diagnostic imaging capacities at the Faculty of Medicine's Nuclear Medicine Unit at the University of Peradeniya, which is the first established nuclear medicine facility in the country.

The project...

Nuclear imaging is effective and useful, and is universally-recognized for its early detection of malignancies, renal disorders and cardiac ailments—nuclear medicine studies shows tissue and organ function in a manner that other imaging modalities cannot. In line with Sri Lanka's national Country Programme Framework, which describes the need to upgrade existing nuclear imaging facilities, the IAEA was asked to support capacity-building efforts at the University of Peradeniya, and to support the procurement of a new dual head SPECT gamma camera for the nuclear medicine unit. To ensure the appropriate use of this device, two expert missions—in nuclear cardiology and imaging—were launched, in addition to four IAEA fellowships.



The University of Peradeniya's Nuclear Medicine Unit receives its first patient following the upgrade of its equipment.

The impact...

The newly-upgraded nuclear medicine unit at the University of Peradeniya is already benefiting the thousands of patients previously on the waiting list. Travel is no longer always necessary, waiting times have been reduced, and the overall efficacy and safety of the facility has been strengthened.

The facilities will be also used to improve undergraduate and postgraduate education in nuclear medicine by exposing trainees and students to clinical environments and real patients.

Moreover, the installation and implementation of new, advanced technology has allowed Sri Lankan health authorities to conduct multidisciplinary research activities within the faculty of medicine, and with other faculties in the fields of medical physics, biomedical sciences and software engineering for image analysis.