

## ***Establishing a radiotherapy and nuclear medicine centre in Mauritania***

### ***The challenge...***

Cancer is increasingly recognized as a major public health problem across Africa. The burden of the disease is worsening as rising living standards lead to lifestyle and environmental changes, such as unhealthy diets, physical inactivity and pollution, that increase the incidence of cancer.

For many years, Mauritania, one of Africa's 34 least developed countries, has struggled to address the human and financial costs of cancer. Haematological malignancies and solid tumours, for example, require specialized treatments that were not available at Mauritanian hospitals, which meant that patients had to seek treatment abroad. Cancers of the cervix, breast, prostate, liver and ovary are among the most common cancers in the country.

### ***The project...***

After establishing a National Oncology Centre (CNO) in Nouakchott in 2010, the Government of Mauritania sought IAEA support to build capacities in the delivery of radiotherapy, nuclear medicine, and cancer care, generally.

The specialized medical staff—radiation oncologists, medical physicists, radiation therapy technologists—trained abroad by the IAEA, are now fully in-charge of the facility.

A follow-up TC project focused on establishing a nuclear medicine unit. Fourteen specialized staff, including nuclear medicine specialists, medical physicists, and radiation pharmacists, were trained to ensure the availability of local expertise for the operation of a new nuclear medicine centre, the first in the country.

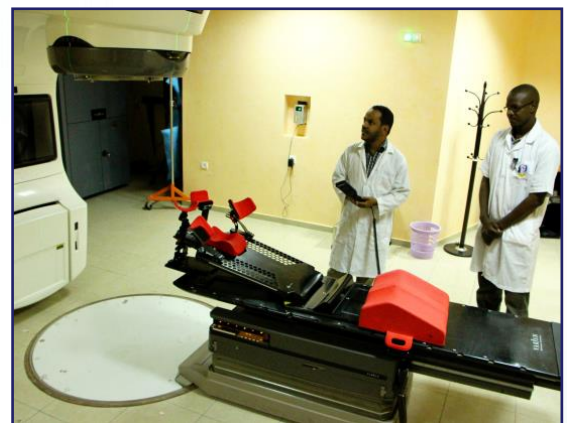
Moreover, more than 20 expert missions were fielded both before and after the construction of the nuclear medicine centre, ensuring that technical and safety requirements were met prior to the first patient's arrival. Brachytherapy services were also recently launched in order to address cervix cancer.

On November 28, 2014, the completed nuclear medicine facility was inaugurated. Like the radiotherapy centre, it is located within the National Oncology Centre in Nouakchott.

### ***The impact...***

Today, Mauritians have access to radiotherapy and nuclear medicine, provided locally, by qualified Mauritians, and cost-free for the poorest. Roughly US \$2 million were additionally saved by the Government since November 2014, due to the development and utilization of local rather than foreign expertise. The CNO offers comprehensive services in diagnosing, treating and managing cancer and other diseases in Mauritania, and offers training regionally.

Today, the CNO – equipped with a gamma camera, a linear particle accelerator, and a high-dose brachytherapy machine—can provide a full suite of oncological services. Its medical staff successfully treated 315 new patients in 2014, and already in 2015, have treated 238 new patients with external beam radiation and 12 patients with brachytherapy.



*Technicians calibrate and test scanning equipment at the National Oncology Centre.*

**Technical cooperation projects MAU/6/002: Planning the Establishment of a Radiotherapy and Nuclear Medicine Centre; and MAU/6/003: Establishing a Nuclear Medicine and Radiotherapy Centre Within the Framework of a National Cancer Programme (Phase 2)**