

Cancer control in Bangladesh gets major boost

By Laura Gil

Over 500 more patients a year will now be getting vital medical examinations thanks to a new nuclear imaging machine now up and running in Bangladesh through IAEA support. The machine is an essential tool for advanced nuclear medical diagnosis of health conditions, such as cancer.

“Waiting in line for three months, which is what some patients who cannot afford private healthcare have to do, can in some cases make the difference between life and death,” said Kamal Uddin, a radiation oncologist and counterpart of various IAEA technical cooperation projects in Bangladesh.

The new positron emission tomography–computed tomography (PET–CT) machine will help expand patient care in the country. PET–CT scans enable doctors to take images of what’s happening inside the body in order to diagnose diseases such as cancer and monitor patients’ progress during treatment.

Making a difference, saving lives

For little Mahbub Murad, a PET-CT scan changed his life. He was three years old when doctors at the National Institute of Nuclear Medicine and Allied Sciences, or NINMAS, in Bangladesh spotted a cancer lymphoma on Mahbub’s PET–CT scan in 2015. Alarmed by the advanced stage of the disease, they began treating Mahbub with chemotherapy. After

two sessions, they used PET–CT again to check his response.

Fortunately, says Shamim Momtaz Ferdousi Begum, Head of PET–CT at NINMAS, Mahbub recovered so quickly that the oncologists stopped the chemotherapy. “Instead of the six chemotherapy sessions we would’ve put him through, he only received four,” she said. “And he is cured now and under follow-up.”

“We were very anxious because we knew we just couldn’t afford the treatment,” said Mahbub’s father, Mohammad Murad. “Now we come and do all his checkups at NINMAS without having to wait so long, and free of cost. We cannot believe it.”

PET–CT scans are just one type of nuclear medicine procedure. These procedures require the use of medical drugs called radiopharmaceuticals that contain medical radioisotopes (see page 4). Many radioisotopes are produced by cyclotrons, which are a type of particle accelerator.

Currently, Bangladesh operates one cyclotron, twice a week, in a private hospital. It is the country’s only source of radiopharmaceuticals for public and private centres that provide PET–CT scans. A new cyclotron facility, expected to be operational at NINMAS by late 2019, will produce radiopharmaceuticals four to five days a week.

“The new cyclotron will not only allow the existing PET–CT machines to improve their productivity but will also enable other PET–CT facilities to open and contribute to national cancer management,” said Enrique Estrada Lobato, nuclear medicine physician at the IAEA.

Upgrading radiation oncology services

Alongside enhancements in nuclear medicine, Bangladesh is going through a major upgrade in radiation oncology thanks to a fleet of staff who have been quietly training for years. Through 20 national training programmes supported by the IAEA technical cooperation

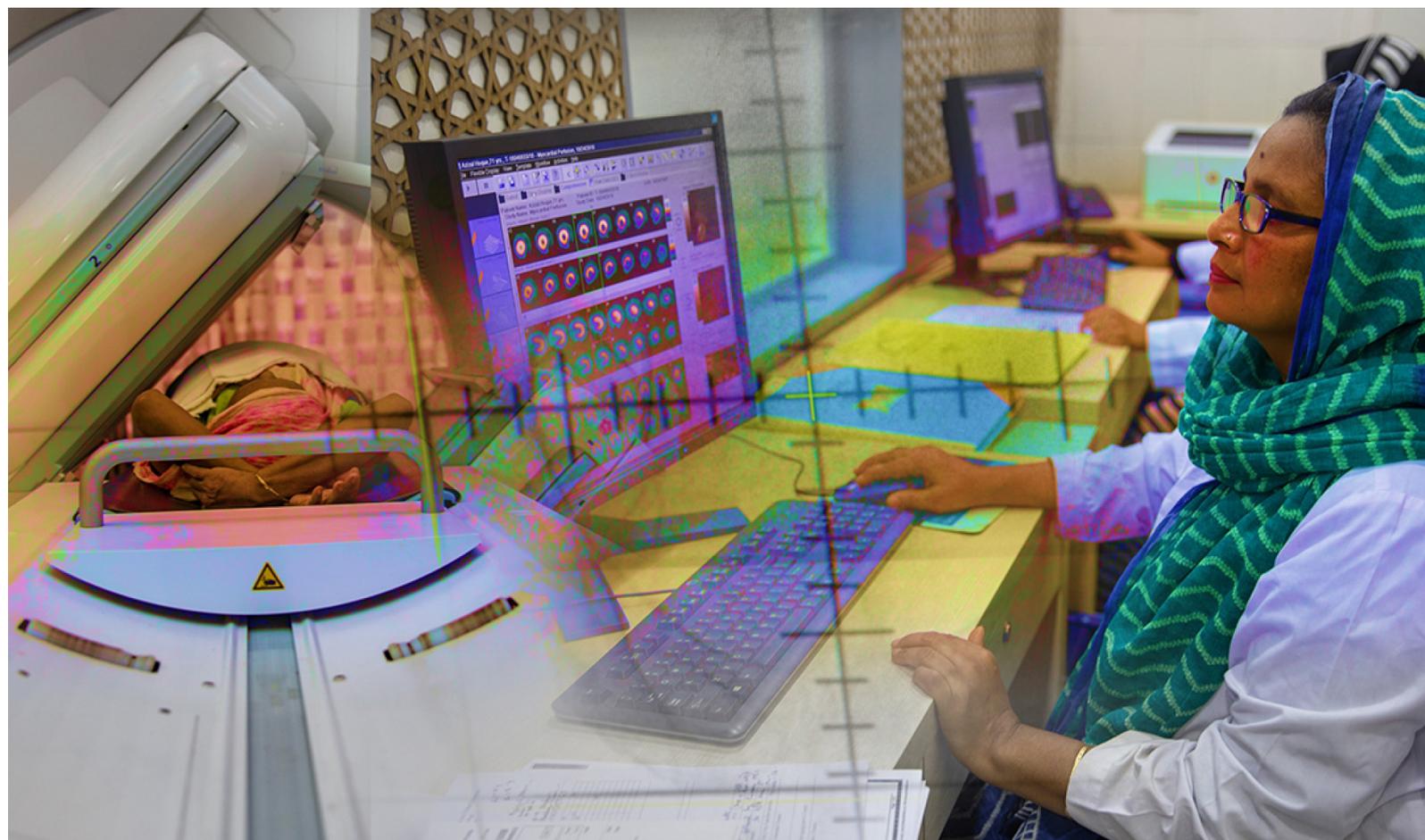
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—*Mohammad Murad, father of young cancer patient under follow-up at NINMAS, Bangladesh*

Mahbub Murad and his father, Mohammad, during a follow-up visit for his now-cured lymphoma.

(Photo: L. Gil/IAEA)





(Image: L. Gil and F. Nessim/IAEA)

programme, several radiation oncologists, medical physicists and radiation technologists from the public and private sectors have attended advanced training courses since 2012.

“It helps to know that we’re doing things right,” said Nazmun Naher Shanta, radiation oncology registrar at the National Institute of Cancer Research and Hospital (NICRH). “Having senior experts from the region verify that what we’re doing is right gives us confidence in our methods and increases the quality of the treatment we provide.”

The IAEA has been helping Bangladesh in strengthening cancer control for more than 20 years. This support, in addition to the training of specialists, includes guidance on radiation protection and regulations, as well as the provision of facilities and equipment.

A hard reality

The challenge professionals in the field are facing is twofold. On the one hand, there is a scarcity of trained staff. On the other, the population is growing. While international standards recommend operating 1 radiotherapy machine per 1 million

inhabitants, Bangladesh still has only 24 machines for its population of 166 million.

In addition, the majority of patients reach hospitals and healthcare centres at such an advanced stage of disease that often the only available treatment is palliative care to alleviate pain. This is not only because of a lack of facilities but also due to a lack of awareness: patients usually do not approach a healthcare centre even if they have symptoms.

“If we address these problems, that is, through accessibility, awareness and more well-trained medical staff, in ten years things will have changed dramatically,” Uddin said. He, like many others in the field, is confident that the development of centres beyond the capital is the way to go.

“Bangladesh has motivated, dedicated professionals and is getting more equipment,” said Syahril Syahril, project manager at the IAEA responsible for technical cooperation with the country. “Although there are challenges ahead, we are working to ensure that the country will continue to receive the necessary assistance through IAEA technical cooperation.”