

Access to Affordable Radi

The number of cancer cases is growing globally. Developing countries are worst hit by the cancer crisis, since the resources needed to prevent, diagnose and treat cancer are limited or nonexistent.

Radiotherapy is one of the essential components of treatment for many forms of cancer. In the developed world access to radiotherapy is readily available, but in the developing world access is scarce (see map on pages 8-9).

The problem is at its worst in sub-Saharan Africa where 80% of the continent's one billion inhabitants have no access to basic radiotherapy.

For over forty years, the IAEA has been assisting developing countries in the field of cancer diagnosis and treatment.

Now, the IAEA's Programme of Action for Cancer Therapy (PACT) — with technical support from the IAEA's Division of Human Health and Radiation Safety and Monitoring Section — has launched a new initiative that calls on manufacturers of diagnostic and radiotherapy technologies to provide affordable radiotherapy systems for the developing world.

According to PACT's Director, Massoud Samiei, there is a shortage of around 7000 radiotherapy treatment units, based upon the current number of cancer cases in developing countries. As the number of cancer cases increases, this situation is expected to get worse.

In the developing world, access to radiotherapy is scarce. The problem is at its worst in sub-Saharan Africa, where 80% of the continent's one billion inhabitants have no access to basic radiotherapy.

(Photos: P.Pavlicek/IAEA)

"Most low and middle income countries simply cannot afford the complex radiotherapy units currently on the market that cost over four million dollars each."

"Our initiative encourages manufacturers to simplify their designs while maintaining the same high level of safety and quality. We're asking them to deliver a one million dollar solution that contains all the essential equipment and includes a maintenance and training package," said Samiei.

The initiative is facilitated by an "Advisory Group on increasing access to Radiation Therapy" (AGaRT), which brings together radiotherapy users — doctors, physicists and medical staff from low and middle-income countries — radiotherapy suppliers and international organisations, including the World Health Organization (WHO), the International Electrotechnical Commission (IEC) and related professional societies.

Over the next few years, this consortium will be developing solutions to increase access to radiotherapy in developing countries that are safe, affordable and effective in low-resource settings.

In June 2010, the AGaRT members met for the first time at the IAEA's headquarters in Vienna and shared information with some 20 industry representatives on the requirements of cancer radiotherapy centres in developing countries.

Professor Paulo Eduardo Novaes, a senior radiation oncologist from São Paulo, Brazil said: "This meeting provided a unique opportunity to come face to face with manufacturers. Frequently the needs of



ation Therapy Saves Lives

by Louise Potterton

the manufacturers and the users are not the same. The products need to reflect the needs of the users — the patients and the doctors.”

Vietnamese oncologist, Dr Dang Huy Quoc Thinh, stressed that there is a shortage of radiotherapy units in Vietnam where there are around 25 machines for a population of 87 million.

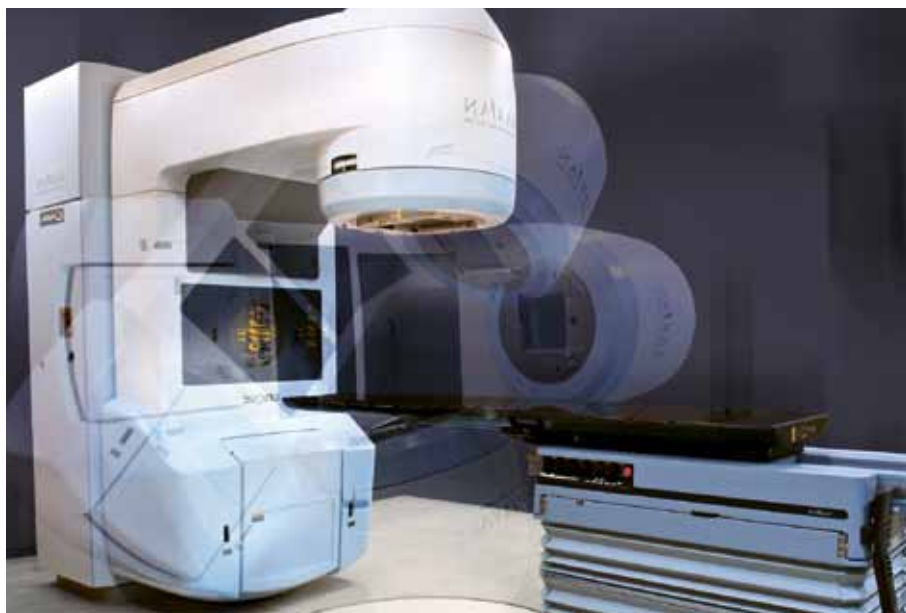
“Cancer is a big problem in Vietnam. We have about 150,000 new cases a year, and the waiting list for radiotherapy is very long. People die because we can’t provide the treatment in time,” he added.

Although this initiative to increase access to radiotherapy is in its infancy, the response from the industry has been positive. Some companies are already responding to the challenge.

Varian Medical Systems, for instance, has developed a system known as “UNIQUE™” that, according to the company, is affordable and suitable for low-resource settings.

Rolf Staehelin, Varian’s Director of International Marketing, said: “As a market leader in this field, we want to make cancer care available to many people around the world and not just a few. With UNIQUE™ we have the solution readily available to achieve this challenging goal.”

“When we talk about cancer treatment we don’t just mean equipment; we need to offer a complete solution. This should include extended services, to ensure long-term maintenance, education and training services. Today, UNIQUE™ is already in clinical operation and we’re delivering the first systems to radiotherapy centres in India.”



The sad reality, notes the IAEA’s Samiei, is that the “future customers” of radiotherapy equipment are in developing countries where the majority of cancer cases occur. According to global estimates from the World Health Organization, by 2020 there will be around 20 million cancer cases a year — with around 70% of these cases occurring in the less developed parts of the world.

More affordable cancer radiotherapy technology is more urgently needed with each passing year, as the cancer epidemic spreads.

Louise Potterton is in the IAEA Division of Public Information. E-mail: lj.potterton@iaea.org

Varian Medical Systems developed “UNIQUE™”, a cost-effective radiation oncology solution that is affordable for low-resource settings.

(Photo: Varian)

In June 2010, the AGaRT members met at the IAEA’s headquarters in Vienna to share information with industry representatives on the requirements of radiotherapy centres in developing countries.

(Photo: D.Calma/IAEA)

