



### **Kelita Erika Jara Matienzo**

Medical Physicist Radiation Therapy Service Edgardo Rebagliati Martins National Hospital Lima - Peru

#### Tell me a little about yourself.

I am the daughter of Ancashino parents, born in Lima, the oldest of 04 siblings. My mother taught me to read and write before entering primary school and I really enjoyed doing Palmer calligraphy. Since I was a child, I liked sports and practiced basketball, volleyball, karate for several years, 100m sprints, and I like climbing, especially in the snow.

In August 2001, I migrated to the United States to pursue postgraduate studies there, unfortunately, the September 11 attack affected many students.

#### How did you become interested in Medical Physics?

From a very young age, I was inclined toward science and mathematics. During school time, I was very sure that I liked research, I read books about discoveries in the world, and also took courses in electricity, among others.

My dad's younger brother was an Electronics student at the National University of Engineering and brought magazines from European universities. At that time, I thought of studying astrophysics and read about the various applications of physics.

Finally, I entered the Federico Villarreal National University, School of Physical Sciences, I did my pre-professional internships at the National Institute of Neoplastic Diseases, which led me to follow the path of Medical Physics.

### Tell me about the role of a Medical Physicist in radiation therapy.

In radiation therapy, a multidisciplinary team of professionals is required to administer treatment to cancer patients.

The role of a Medical Physicist in radiation therapy is of great responsibility, basically establishing and developing the procedures that guarantee the quality and effectiveness of the treatment, including quality control of equipment (Linear Accelerators and HDR), treatment planning, and radiation safety in the Service.

# In your own experience, what technical aspects would you consider to be evolving in radiation therapy?

The advancement of radiation therapy has mainly been in treatment equipment, with guided image systems for real-time analysis and correction. This state-of-the-art equipment allows us to develop treatment techniques for each patient based on the type and location of the tumor and increase the treatment dose to destroy tumor cells and safely avoid irradiating surrounding organs at risk.

# How would you summarize the precautions to be taken for patient protection in the Radiation Therapy Service?

Comply with the quality assurance program developed in the Service, which means periodically and continuously executing all safety protocols and procedures, which include clinical prescription and dose administration, to ensure that the dose was delivered to the patient with precision and accuracy.

### What can you tell us about the importance of quality control of radiation therapy equipment?

Quality control of radiation therapy equipment is part of the quality assurance program. These controls must be periodically executed and corrected if necessary to avoid errors in the prescribed dose calculation. This would imply underdosing or overdosing the patient. As long as these quality controls are met, we can maintain and/or improve the quality of treatments.

# Similarly, what can you tell us about the need to implement quality assurance programs in radiation therapy services?

Definitely, every radiation therapy service must implement a quality assurance program according to its clinical environment and comply with at least the minimum requirements to achieve an acceptable level of quality.

In each Radiation Therapy Center, not only should the appropriate documentation be available, but it should also be executed responsibly and techniques of feedback should be developed to correct or improve the different aspects of the process contained in a quality assurance program. Many times only incidents occur, and if we downplay them, the result will be a radiological accident.

#### What challenges are you setting for the future?

In 2010, I participated in one of the technological changes at the Rebagliati Hospital, the arrival of Linear Accelerators and the process of changing from conventional 2D radiotherapy to 3CRT and IMRT radiotherapy.

I hope to contribute and be part of another new technological change so that the hospital's Radiation Therapy Service can become a specialized cancer center with state-of-the-art technology. As we all know, the ultimate goal is for the patient to receive quality treatment.