Medical Physics is a branch of applied physics that uses the concepts and methods of physics for the diagnosis and treatment of diseases. A Medical physicist (MP) contribute to improve effectiveness of radiological and nuclear imaging procedures. They also work on the development of new radiotherapy techniques. MP are concerned with clinical activity as well as with research and teaching. The primary responsibility of the MP working in clinical practice of a radiotherapy department is to assure the safe and effective delivery of ionizing radiation to achieve a therapeutic result. During this activity, a MP performs or supervises all the technical aspects of the necessary procedures. A MP establishes adequate protocols to ensure accurate patient dosimetry, measurement and characterization of radiation, and determination of delivered dose. A MP works collaborating with radiation oncologists to design treatment plans, monitor equipment and procedures to ensure that cancer patients receive the prescribed dose of radiation to the correct location. MPs are also responsible for the radiological protection of the department, including performing the calculation of the thickness of the treatment room barriers in such a way as to comply with the Brazilian legislation. Today, with the rapid development in the area of images and of computer sciences, new techniques are becoming available. In this way, the treatments with radiation are more complex and require greater accuracy, which make the presence of physicists to be mandatory in a radiotherapy department. These new technologies have opened up a job opportunity for the physicist at equipment manufacturers, where a MP can work in the areas of development, marketing and training.