UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Radiotherapy Tecnhniques

2627-3-I0303D015-I0303D068M

Aims

The student will be able to: describe the different phases of the radiotherapy process from the prescription visit to post-therapeutic monitoring; define and describe in detail the technical phases of setting up and carrying out the radiation treatment; define the methods of correct multidisciplinary integration between the different professional figures operating in the Radiotherapy department, refine the methods of approaching the cancer patient.

Contents

The teaching aims: to provide the student with knowledge of the different irradiation techniques both in the field of external beam radiotherapy and in that of brachytherapy; to provide the student with knowledge on the methods of calculating the dose distribution and on the principles of dose optimization; to provide the student with knowledge relating to the patient's path in Radiotherapy; to provide the student with knowledge on irradiation methods according to the main tumor diseases

Detailed program

The various phases of the radiotherapy procedure: prescription, setting, centering, simulation, acquisition of anatomical data, development of the treatment plan, evaluation of the plan, execution, verification, monitoring during treatment, monitoring over time.
The choice of beams: photons, electrons. The choice of energy. Performance in depth. The beam modifiers. The conformation. Intensity modulation. The irradiation geometry.
Dose fractionation methods. The volumes of interest. ICRU reports.
Patient set-up: positioning and immobilization methods.
Imaging in Radiotherapy.

Quality controls.
Recording of processing data.
Brachytherapy: indications; devices for endocavitary treatments and interstitial treatments; the different radioisotopes; loading modes: pre-loading, after-loading, -remote-loading.

Prerequisites

Health Care and Disease Prevention

Teaching form

6 frontal lessons of 2 hours carried out in attendance

Textbook and teaching resource

Teachers will provide educational materials

Semester

First semester

Assessment method

Monza
Oral interview
Bergamo
Multiple-choice questions and oral interview

Office hours

By appointment required by mail

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION