Radiation therapy is now able to hit selectively malignant tissue, using "Smart Rays" that allow:

- identifying with precision the target tumor
- saving the surrounding healthy tissues
- preserving the organs and their functions
- significantly reducing the duration of treatments.

In this way, maximum results may be obtained, with minimal side effects for the patient.

No anaesthesia, no incisions, no pain, no rehabilitation.

Short treatment cycles





To make an appointment

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Radiotherapy Division

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Advanced Radiotherapy Center

IEO advanced radiotherapy centre, among the top 10 in the world for treatment, research and technology.

Latest-generation radiotherapy for tumour treatment, respecting quality of life.







ARC is equipped with the new generation radiotherapy machines able to perform high precision treatment employing intensity modulation, image guidance, stereotactic approach, intraoperative irradiation and brachytherapy.



This is a miniature linac dedicated to robot-assisted radiosurgery i.e. delivery of a single high dose of radiation, stereotactically directed to the target. Robotic arm enables the system to deliver radiation from many different directions, verifying instantaneously the target position. This non-invasive, frameless, high precision (submillimetric accuracy) approach allows delivery of the ablative dose to any part of the human body. In IEO, CyberKnife is employed for radiosurgery of primary and metastatic cranial and spine tumors, selected tumors of lung, pancreas, liver and other abdomino-pelvic malignancies.

Vero System

This is the world's first real-time dynamic tracking irradiation system that is capable of accurately tracking the position of tumors that move inside patient's body due to respiration, for example, and thereby enables highly precise, uninterrupted X-ray irradiation to the targeted tumor. In a short time irradiation can be precisely delivered to several moving targets.

In IEO, Vero is employed in the management of prostate cancer, and small thoracic or abdomino-pelvic primary or metastatic tumors.

Arc Advanced Radiotherapy Center

TomoTherapy

This is a novel system that combines CT imaging with a radiation treatment delivery system that administers the dose slice-by-slice. With this unique design, the intensity of the radiation beam delivered conforms to the patient's tumor and helps avoid critical structures as the machine rotates 360 degrees around the patient. Large and irregularly shaped areas may be adequately treated.

In IEO, TomoTherapy is employed for the postoperative breast radiotherapy as a single treatment or combined with introperative radiation boost (given during breast surgery).

Trilogy[™] System

This advanced radiotherapy versatile technology enables several irradiation modalities, including RapidArc approach (Volumetric Modulated Arc Therapy). By using real-time diagnostic data, the sculpted radiation beam pinpoints the tumor and protects the surrounding healthy tissue, while minimizing the patient's time on the treatment table. High precision radiation is delivered two to eight times faster than any other system making the experience more comfortable for the patient.

In IEO, Trilogy is employed for the head and neck cancer tumors (enabling parotid sparing approach) and for large pelvic volumes (gynecological, urological or intestinal malignancies when pelvic lymph nodes irradiation is necessary).