

**In the Name of God**

**Islamic Republic of Iran**  
**Ministry of Health and Medical Education**  
**Deputy for Education**

**Radiotherapy**  
**Degree: Specialty**

**Introduction:**

Now a days because of multiple factors, Number of Patients affected by Cancer are increasing. Based on international statistics, after cardiovascular diseases, it is the second cause of mortality and morbidity worldwide and in our country almost 100000 bodies are affected annually and after Cardiovascular diseases and accidents ,it is the third most prevalent cause of mortality and morbidity.

Based on WHO estimates with a 100% increase , Cancer Affected people from 10 million bodies in 2000 ,will be increased to 20 million bodies in 2020.

Most of the increase will be in developing countries with 180% increase, As a developing country, Islamic Republic of Iran also will have to face a 2-3 times increase in cancer incidence rate & almost 90 % of them will be solid tumors.

The most important risk factors of this increase in IRI are: age, changes in life styles and environmental factors. Meanwhile cancer itself has multiple social, economic, familial and individual effects and care of affected patients will demand extra financial and manpower resources .

With scientific development in recent years , patients' survival rate have been increased ,in a manner that more than 50 % of patients will be cured completely, and the most important cause of this increasing Cure rate is non- surgical management.

This training Program as the earliest Oncology Specialty ,in recent 50 years has been the most active group in nonsurgical cancers management and has played a key role in Cancer training in IRI.

**Definition and duration of the Training Program:**

It is a clinical independent specialty, in which the graduates with acquiring adequate knowledge about Oncology Basics ,Diagnostic modalities and cancerous patients' Staging ,will proceed to standard Treatment of cancers specially the solid ones.

The specialists of this field usually have multidisciplinary therapeutic approach.

Duration of Training program is 4 years.

**Aims:**

1-In next 10 years, considering Educational,Research and service provision, we will be one of the top countries in Radiotherapy Field in the region .

2- High quality service provision and Policy making , research and education in field of cancer.

**General Competencies\***

**Procedural Skills+:**

❖ Radiotherapy	Prescription & Injection of Radio pharmaceutical
❖ Working with Radiotherapy equipment	❖ Use of Infusion Pumps

❖ Modified Standard Cancer treatment approaches (Hyperthermia...)	❖ Thoraco-centesis & Pleuro-desis
❖ Aspiration(Diagnostic, Palliative, Therapeutic)	❖ Aspiration and drainage of superficial abscess
❖ Prescription & Injection of Chemotherapy pharmaceutical (systemic, local )	Different Simulation for Radiotherapy

**+ -Except Hematologic and Lymphatic system Cancers.**

**Educational Strategies, Methods and Techniques\***

**Ethical Considerations\***

**\*Note: The related document(s) can be found at <http://hcmep.behdasht.gov.ir/>.**

**Student Assessment :**

<b>Methods :</b>	
<ul style="list-style-type: none"> <li>- Mini-Clinical Evaluation Exercise (mini-CEX)</li> <li>- Direct Observation of Radiotherapy Planning Skills (DORPST)</li> <li>- Direct Observation of Systemic Therapy (DOST)</li> <li>- Multi Source Feedback (MSF)</li> <li>- Case Based Discussion (CbD)</li> <li>- Patient Survey (PS)</li> <li>- Audit Assessment Tools (AA)</li> <li>- Teaching Observation (TO)</li> <li>- Logbook</li> <li>- DOPS</li> <li>- MCQ</li> <li>- OSCE</li> </ul>	<p><b>Continuous</b></p> <p><b>During and End of each Ward</b></p> <p><b>Annual</b></p> <p><b>End of 4year training Program (Pre – Board,Board)</b></p>

**Overall Training Program Structure :**

Level of Residency(Year )	Training Field	Contents	Duration
1st	Classroom	Radiobiology & Cancer Biology	8 months
	Classroom and Physics Ward	Physics & Introduction to treatment soft wares	
	Classroom	Clinical Pharmacology	
	Classroom	Medical Statistics and Research Method	

	Oncology & Radiotherapy Wards	Basis of approach to Malignancies ,Radiotherapy ,Chemotherapy ,Palliative and Maintenance Therapy	
	General Internal Medicine Ward	Internal Medicine rules with special attention to Oncology	4 months
2 <sup>nd</sup> year	Oncology & Radiotherapy Wards	Approach to Malignancy (Diagnosis, Staging, management )	8 months
	Oncology Ward	General Internal Medicine Ward	2 months
	Oncology & Radiotherapy Wards	Diagnostic Approaches to Gastrointestinal Tumors and Management of chemotherapy induced GI complication	2 months
3 <sup>rd</sup> year	( Oncology & Radiotherapy Wards	Approach to Malignancy (Diagnosis, Staging, management )	8 months
	Nephrology Ward	Diagnosis and Management of Renal Complication during Chemotherapy	2 months
	Hematology Ward	Introduction of Hematologic Diseases and Malignancies	2 months
4 <sup>th</sup> year	Oncology & Radiotherapy Wards	Approach to Malignancy (Diagnosis, Staging, management )	11 months
	Optional Ward	Advanced Cancer Imaging, Cancer Nuclear Cancer Histology, Cancer Surgery	1 month

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