

ESMO-ASCO Global Core Curriculum for Training in Medical Oncology Log Book

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ESMO/ASCO Task Force on Global Core Curriculum

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1. Introduction

The number of patients with malignancies in the world continues to increase. It is estimated that 10 million new cases are diagnosed every year and that 2 million people are either receiving treatment or are living with their disease. The last decades have seen a rapid growth in medical technology and in the advances of fundamental knowledge of cancer cell biology with impact on genetics, screening, early diagnosis, staging, and overall treatment of cancer.

These developments have also led to a more coordinated, multidisciplinary approach to the management of the individual malignancy and the need to establish formal training based on a set of guidelines or a curriculum in the various major specialities such as surgery, radiotherapy, and medical oncology.

The foundation for the establishment of medical oncology as a speciality was created in 1965 when the American Society of Clinical Oncology (ASCO) was founded. A uniform system of training in medical oncology in the United States was formulated by the American Board of Internal Medicine in 1973. In 1997, ASCO published a training resource document for the development of a curriculum in medical oncology.

The European Society for Medical Oncology (ESMO) instituted an examination in medical oncology in 1989 for physicians actively working in the field. To guarantee maintenance and update of the knowledge, skills, and attitudes of these physicians, which is essential to the provision of excellent care, the program of continued education of medical oncology, the ESMO-Medical Oncologist's Recertification Approval program, was introduced in 1994.

The main objective of these certification systems is to improve the quality of patient treatment and care, to set standards of clinical competence for the practice of medical oncology, and to encourage a continued scholarship for professional excellence over a lifetime of practice.

In 1998, a standard program of certification and training for medical oncology was published in accordance with the requirements set by the Union Européenne des Médecins Spécialistes for the recognition of medical oncology as an independent discipline. At present, medical oncology is a recognized specialty in 25 European countries.

In other areas of the world, teaching and training programs in medical oncology have also been developed.

With the increasing internationalization of health care, exchange of specialists, and rapid flow of information across borders, it has been important to develop a set of common guidelines with a global perspective for the clinical training required for physicians to qualify as medical oncologists. Thus, a joint ESMO/ASCO Task Force

created the first Global Core Curriculum in Medical Oncology in 2003 which was simultaneously published in the Journal of Clinical Oncology and Annals of Oncology (November 2004) after being approved by the Boards of ASCO and ESMO. Since then, the Curriculum has been mailed to universities and medical oncology societies and translated into 10 different languages.

The curriculum will be reviewed regularly by the ASCO/ESMO Task Force for the Global Core Curriculum in Medical Oncology. The next review will start in the first part of 2009, and an updated version will be issued by the end of 2009.

The interest in using the global core curriculum has increased considerably since its inception, as evidenced by the translation into 10 different languages, and it is also used as a model for the development of the speciality of medical oncology in several countries around the world, e.g. Australia, Ireland, Latvia, Japan, India and Panama.

The text of the Curriculum can be found on the Web sites of ESMO, www.esmo.org, and ASCO, www.asco.org, respectively, and the present log book should be considered as a supplement to the curriculum, serving as a learning portfolio with a record of the various parts of the training program.

The competency comprising curriculum consists of three sections:

- 4.1 Basic Scientific Principles
- 4.2 Basic Principles in the Management and Treatment of Malignant Diseases
- 4.3 Management and Treatment of Individual Cancers

In addition there are chapters focusing on:

- Psychosocial Aspects of Cancer
- 6. Patient Education
- 7. Bioethics, Legal, and Economic Issues
- 8 Skills

There are three main skills, which are expected to provide the necessary knowledge for the physician to care for patients with malignancies often in cooperation with specialists from a variety of disciplines, to deliver a multidisciplinary approach providing cancer patients with the best comprehensive care.

In the log book the following definitions are applied:

A, awareness = basic notions

K, knowledge = updated concepts of patho-physiology,

emidemiology, diagnosis, prognosis, and different

therapeutic approaches

C, competence = adequate understanding and practical

integration of knowledge and skills for optimum

diagnosis and treatment of the patient at

any phase of their disease.

Curriculum = education program for trainees

Trainee = junior specialist in medical oncology, after or

in parallel with internal medicine training. A trainee $\,$

could have several mentors during their education.

Mentor = confirmed medical oncologist who personally

educates, supervises, and guides a trainee

Head of = person who is responsible for medical oncology

department in the institution and guarantees the mentor's competence and the accuracy of the contents of the log book document.

Each item is divided into three tick boxes, Awareness, Knowledge, and Competence.

The log book recommendation is in grey. At the end of the training period, the mentor should fill in the box corresponding to the trainee's current assessment. A working version could be used during training. The first signature page should contain signatures by the mentor(s), and the person in charge of the training center (e.g. head of department, or equivalent) with full address and contact information as well as the signature of the trainee. The mentor specifies the section and subsections s/he supervised.

A pdf version of the log book can be downloaded from the ASCO or ESMO Web site or a printed version can be obtained by contacting either the ASCO or ESMO Head Office.

2. Standard Requirements for Training in Medical Oncology

The standard requirements are a total training period of 6 years, beginning with training in internal medicine for at least 2 years, followed by a training program in medical oncology for 3 to 4 years.

The 3- to 4-year training program in medical oncology must include a minimum of 2 years full-time clinical training in the diagnosis and management of a broad spectrum of neoplastic diseases.

Full-time clinical training means that at least 80% of the trainee's professional time and effort during a standard working week is dedicated to clinical activities (patient care or education). This may include the primary care of cancer patients, supervision of cancer patients on the general medical service or in designated medical oncology in-patient units, oncologic consultations and consultation rounds, oncology ambulatory care, scheduled clinical conferences, performance of procedures on patients, review of imaging, pathology, and other diagnostic materials, other direct patient care, attending national and international scientific meetings, and reading relevant literature.

Clinical activities may also include research involving patient contact, care, and treatment. Research experience for 1 or more years, including international training, is strongly recommended, especially for those oncologists seeking an academic career.

3. Special Requirements

Program Leader

The medical oncology program leader must be qualified to supervise and educate medical oncology trainees. Therefore, the leader must either be certified in medical oncology or possess equivalent qualifications. The leader will have a major commitment to the training program and related activities, and must be based at the primary training site of the medical oncology program.

The trainee will maintain a record of training. The program leader will countersign it, as appropriate, to confirm the satisfactory fulfilment of the required training experience and the acquisition of the competencies that are cumulated in the speciality curriculum. It will remain the property of the trainee and must be signed at the annual assessments. The assessment of the trainee will be based on the standard format of annual reviews.

Faculty

Faculty members

The medical oncology program faculty must include a minimum of three full-time qualified teaching faculty members, including the program leader.

All the faculty members must be certified in medical oncology or possess equivalent qualifications, and each of them must devote substantial time (at least 10 hours per week) to teaching, research, administration, and/or the critical evaluation of the performance, progress, and competence of the trainees.

Faculty standards

The teaching staff must demonstrate an interest in teaching, and set an example for trainees by documented engagement in the following pursuits: actively sharing medical oncology clinical practice; continuing his/her own medical education; active membership in regional, national and international scientific societies; active participation in research; and presentation and publication of scientific studies.

Educational Program

The medical oncology educational program must be organized to provide training and experience at a high enough level for the trainee to acquire the competency of a specialist in the field. The program must emphasize scholarship, self-instruction, development of critical analysis of clinical problems, and the ability to make appropriate decisions. Appropriate supervision of the trainees must be provided for the duration of their educational experience. The following principles require special emphasis:

Educational environment

Medical oncology training programs must provide an intellectual environment for the acquisition of knowledge, skills, clinical judgement, and attitudes essential to the practice of medical oncology. This objective can only be achieved when appropriate resources and facilities are available. Service commitments must not compromise the achievement of educational goals and objectives.

Professionalism—Fthics

Professionalism must be fostered during medical oncology training. In addition to mastering the comprehensive clinical and technical skills of the consultant medical oncologist, trainees are expected to maintain the values of professionalism. These values include placing the needs of one's patient ahead of one's self-interest, being responsive to the needs of society, and maintaining a commitment to scholarship and high standards of related research. Trainees, therefore, should be encouraged to join professional organizations, and participate in community programs, and institutional committees.

Responsibility

Lines of responsibility must be clearly delineated for the medical oncology trainees.

Institutional requirements

Clinical setting

The clinical setting must include opportunities to observe and manage patients with a wide variety of neoplastic diseases on both an in-patient and out-patient basis. The trainee must be given the opportunity to assume the continuing responsibility for both acute and chronically ill patients in order to learn the natural history of cancer, the extent of the effectiveness of the various therapeutic programs, and how to impart information to the patient, including bad news.

Hospital facilities

Modern in-patient, ambulatory care, and laboratory facilities necessary for the overall educational program must be available and functioning. Specifically, at the primary site, there must be adequate pathology services, modern diagnostic radiology services, resources for nuclear medicine imaging, blood banking and blood therapy facilities, and facilities for clinical pharmacology and tumor immunology. A general surgical service and support must be available, in addition to access to radiation therapy. The program must also include attendance at a multidisciplinary tumor conference, and clinical cancer protocol studies applied according to the guidelines of good clinical practice.

Update of skills and knowledge

Having obtained certification in medical oncology, the specialist is expected to update the acquired skills and knowledge by participating in Continuing Medical Education programs such as courses, symposia, or self-learning processes on a regular basis.

Perception of other specialities

It is also essential to have the support of oncology nursing, pharmacy, rehabilitation medicine, palliative care medicine, and dietetic and psychosocial services so that the trainee can perceive the role of other specialities involved in cancer patient care.

Facilities

It is the responsibility of the teaching institute to oversee that these facilities are available before a graduate medical education program is initiated.

The following curriculum should be considered as the educational framework for medical oncology training.

4. Competency Comprising Curriculum

4.1. Basic Scientific Principles

ancer biology		Awareness		Kno	Knowledge		Competence	
		yes	no	yes	no	yes	no	
Biology of normal cells								
Basic processes of carcinogene	sis							
Gene structure								
Gene expression								
Gene regulation								
Cell cycle								
Cell cycle interaction with thera	ру							
Tumor cell kinetics								
Tumor cell proliferation								
Programmed cell death								
Balance between cell death and								
cell proliferation								
Molecular techniques								
Polymerase chain reaction								
Chromosomal analyses								
Other techniques of molecular a	nd							
tumor cell biology								
Mentor:	Trainee:			Depart	ment / Instit	ute:		

Tumor immunology		Awa ves	reness no	Know ves	wledge no	Com ves	petence no
Cellular and humoral componen	ts	,		,		,	
of the immune system							
Regulatory action of cytokines							
on the immune system							
Inter-relationship between tumo	r						
and host immune systems							
Inter-relationship between tumor							
Immune-mediated antitumor cyt	totoxicity						
Direct effect of cytokines on tun	nors						
Mentor:	Trainee:			Departi	ment / Institu	ıte:	
	Etiology, epidemiology, screening and prevention Aware						
Etiology, epidemiology, screen	ning and preven	Awa	reness		wledge		petence
<i>G37</i> 1 <i>G37</i>			reness no	Kno v	wledge no	Com yes	petence no
Etiology of genetic and environm		Awa yes	no	yes	no	yes	no
Etiology of genetic and environm factors in oncogenesis	nental	Awa			_		-
Etiology of genetic and environm factors in oncogenesis Epidemiologic factors and descr	nental	Awa yes	no	yes	no □	yes	no
Etiology of genetic and environm factors in oncogenesis Epidemiologic factors and descr of disease	nental	Awa yes	no	yes	no	yes	no
Etiology of genetic and environm factors in oncogenesis Epidemiologic factors and descr	nental	Awa yes	no	yes	no □	yes	no
Etiology of genetic and environm factors in oncogenesis Epidemiologic factors and descr of disease Basic principles of screening an	nental iptors d risk	Awa yes	no	yes	no	yes	no
Etiology of genetic and environment factors in oncogenesis Epidemiologic factors and description of disease Basic principles of screening an assessment	nental iptors d risk	Awa yes	no	yes	no .	yes	no
Etiology of genetic and environm factors in oncogenesis Epidemiologic factors and descr of disease Basic principles of screening an assessment Sensitivity and specificity of the	nental iptors d risk test	Awa yes	no	yes	no	yes	no
Etiology of genetic and environm factors in oncogenesis Epidemiologic factors and descr of disease Basic principles of screening an assessment Sensitivity and specificity of the Cost-benefit ratio	nental iptors d risk test	Awa yes	no	yes	no	yes	no
Etiology of genetic and environme factors in oncogenesis Epidemiologic factors and description of disease Basic principles of screening an assessment Sensitivity and specificity of the Cost-benefit ratio Principles and indications for ge	nental iptors d risk test	Awayes	no	yes	no	yes	no
Etiology of genetic and environme factors in oncogenesis Epidemiologic factors and description of disease Basic principles of screening an assessment Sensitivity and specificity of the Cost-benefit ratio Principles and indications for gescreening and counseling	nental iptors d risk test netic preventive	Awayes	no	yes	no	yes	no

Clinical research including sta	atistics	Awa	reness	Knowledge Compe		petence	
		yes	no	yes	no	yes	no
Clinical trial design							
Phase I trials							
Phase II trials							
Phase III trials							
Ethical issues involved in study of	design						
Regulatory issues involved in stu	ıdy design						
Legal issues involved in study de	esign						
Criteria for defining response to	therapy						
Tools used to assess quality of li	fe						
Basics of statistics (including sta	atistical methods,						
requirements for patient number	s in designing						
studies, and proper interpretatio	n of data)						
Toxicity assessment and grading]						
Role and functioning of the instit	tutional						
review board and ethical commi	ttees						
Informed consent from patients							
Government regulatory mechani	sms						
of surveillance							
Instruction in grant writing							
Information about mechanisms	of support						
for clinical research							
Cost of therapy and cost-effective	veness						
Instruction in preparing abstract	S						
Instruction in preparing oral and	visual						
presentations							
Instruction in writing articles							
Critical evaluation of the scientif	ic value of						
published articles and influence	on daily						
clinical practice							
Exposure to the development an	d conduct						
of trials through international co	operative						
groups							
Exposure to the development an	d conduct						
of in-house protocols							
Mentor:	Trainee:			Departi	ment / Institi	ute:	

4.2. Basic Principles in the Management and Treatment of Malignant Diseases

The management of malignant diseases requires the expertise of many different medical subspecialities. The majority of patients with malignant diseases are best managed by a multidisciplinary approach integrating the various subspecialities due to the increasing complexity of modern treatment. The trainee should recognize the contributions of each of these subspecialities in the diagnosis and disease assessment stage, and treating the underlying disease and its complications. The trainees should interact with each of these disciplines in order to gain an appreciation of the benefits and limitations of each modality.

Participation of the trainees in interdisciplinary meetings is encouraged. The trainees should be capable of assessing the patient's comorbid medical conditions, that may affect the toxicity and efficacy of treatment, in order to formulate a treatment plan and be aware of the special conditions that influence the treatment of the growing population of elderly patients with malignant disorders.

Awareness

Knowledge

Competence

Pathology/laboratory medicine/molecular biology

		yes	no	yes	no	yes	no
Review of biopsy material and s	urgical						
specimens with a pathologist							
New pathologic techniques							
Laboratory testing							
Serum tumor markers							
Cell membrane markers							
DNA markers							
Mentor:	Trainee:			Donarti	ment / Instit	uto	
Wentor.	namee.			Бераги	nent/mont	ute.	
Staging procedures		Λινο	ronoco	Vno	ulodao	Com	notonoo
Staging procedures			reness		wledge		petence
	, quatam	yes	no	yes	no	yes	no
Tumor-node-metastasis staging		yes	no	yes	no 🗆	yes	no
Tumor-node-metastasis staging Indications for clinical procedure	es	yes	no	yes	no	yes	no
Tumor-node-metastasis staging Indications for clinical procedure Indications for radiographic productions	es cedures	yes	no	yes	no 🗆	yes	no
Tumor-node-metastasis staging Indications for clinical procedure Indications for radiographic prod Indications for nuclear medicine	es cedures	yes	no	yes	no	yes	no
Tumor-node-metastasis staging Indications for clinical procedure Indications for radiographic procedures	es cedures imaging	yes	no	yes	no	yes	no
Tumor-node-metastasis staging Indications for clinical procedure Indications for radiographic prod Indications for nuclear medicine	es cedures imaging	yes	no	yes	no	yes	no
Tumor-node-metastasis staging Indications for clinical procedure Indications for radiographic procedures	es cedures imaging	yes	no	yes	no	yes	no
Tumor-node-metastasis staging Indications for clinical procedure Indications for radiographic procedures Response assessment to treatment of the Indications for nuclear medicine procedures	es cedures i imaging	yes	no	yes	no	yes	no
Tumor-node-metastasis staging Indications for clinical procedure Indications for radiographic procedures Response assessment to treatment of the Indications for nuclear medicine procedures	es cedures i imaging	yes	no	yes	no	yes	no

Therapy

Surgery		Awa	reness	Knowledge Compe		petence	
		yes	no	yes	no	yes	no
Indications and contraindications	s of surgery						
Role of surgery in the staging, co	ure, and						
palliation							
Indications for organ preservation surgery							
Indications for sequencing of sur	gery with						
other treatment modalities							
Risks and benefits of surgery as	a definitive						
treatment and as an adjunct to r	adiotherapy						
and/or anticancer agents							
Postoperative complications							
Mentor:	Trainee:			Departi	ment / Institu	ıte:	
		_					
Radiation oncology			reness		wledge		petence
		yes	no	yes	no	yes	no
Principles of radiation biology					-		•
Principles of radiation biology Indications for radiation therapy	as a	yes	no	yes	no	yes	no
Principles of radiation biology Indications for radiation therapy curative modality		yes	no	yes	no	yes	no
Principles of radiation biology Indications for radiation therapy curative modality Indications for radiation therapy		yes	no	yes	no	yes	no 🗆
Principles of radiation biology Indications for radiation therapy curative modality Indications for radiation therapy palliative modality	as a	yes	no	yes	no	yes	no
Principles of radiation biology Indications for radiation therapy curative modality Indications for radiation therapy palliative modality Principles of treatment planning	as a	yes	no	yes	no	yes	no 🗆
Principles of radiation biology Indications for radiation therapy curative modality Indications for radiation therapy palliative modality Principles of treatment planning dosimetry	as a and	yes	no	yes	no	yes	no 🗆
Principles of radiation biology Indications for radiation therapy curative modality Indications for radiation therapy palliative modality Principles of treatment planning dosimetry Indications for sequencing of rad	as a and liation	yes	no	yes	no .	yes	no
Principles of radiation biology Indications for radiation therapy curative modality Indications for radiation therapy palliative modality Principles of treatment planning dosimetry Indications for sequencing of rad therapy with surgery and/or anti	as a and liation cancer agents	yes	no	yes	no .	yes	no
Principles of radiation biology Indications for radiation therapy curative modality Indications for radiation therapy palliative modality Principles of treatment planning dosimetry Indications for sequencing of rad	as a and liation cancer agents	yes	no	yes	no .	yes	no .

Anticancer agents			reness		vledge		petence
Indications and goals in primary		yes	no	yes	no	yes	no
Indications and goals in primary							
malignant disorders							
Indications and goals in recurren	ıτ						
malignant disorders	.11:						
Usefulness in the neoadjuvant se							
Usefulness in the concomitant setting							
Usefulness in the adjuvant settin	•						
Indications as a radiation sensiti							
Importance of dosing and treatm							
Assessment of patient's comorb	id						
medical conditions							
Pharmacokinetics							
Pharmacogenomics							
Pharmacology of the various age							
Toxicity profile of each anticance	er agent,						
including long-term hazards							
Dose and treatment schedule ad	aptation						
in case of organ dysfunction							
Mentor:	Trainee:			Departr	nent / Institu	te:	
Biologic therapy		Awa ı ves	reness	Knov ves	vledge no	Com	petence
Indications for biologic therapy (including	,		,		,	
cytokines and hematopoietic gro	-						
Specific side effects and their m	,						
Combinations with chemotherap	-						
Monoclonal antibodies	,					П	
Tumor vaccines							
				_	_		
Tumor vaccines Cellular therapy Gene-directed therapy		_	_			_	

Supportive and palliative mea	surements	Awareness Knowledge C		Com	Competence		
		yes	no	yes	no	yes	no
Indications of supportive treatme	ents						
Limitations of supportive treatm	ents						
Side-effects of supportive treatr	nents						
Indications for palliative therapy							
End-of-life care							
How to use in clinical practice							
Mentor:	Trainee:			Departi	ment / Institu	ıte:	
	,						
Supportive measures							
Nausea and vomiting		Awa	reness		wledge	Com	petence
		yes	no	yes	no	yes	no
Etiologies of nausea and vomiting	•						
Mechanism of action and pharm	acology of						
anti-emetic agents							
How to use anti-emetic agents i	n daily						
clinical practice							
Mentor:	Trainee:			Departs	nent / Institu	ıto:	
Worton.	Trainee.			Doparti	nont / mout	110.	
Infactions and noutrononic		Λ	******	Vno	ulodao	Com	notonoo
Infections and neutropenia		Awa	reness	KIIU	wledge	COIII	petence
Dringinlag of diagnosis and man	agamont	yes	no	yes	no	yes	no
Principles of diagnosis and man	-	,		,		,	
of infections and neutropenic fer	ver						
of infections and neutropenic fer Treatment and prevention of infe	ver ections						
of infections and neutropenic fer	ver ections						
of infections and neutropenic fer Treatment and prevention of infe	ver ections						

Anemia		Awa	reness	Kno	Knowledge Compe		
		yes	no	yes	no	yes	no
Indications and complications of	red						
blood cell transfusions							
Preparation and administration of	of red						
blood cell transfusions							
Indications for erythropoietin							
Mentor:	Trainee:			Depart	ment / Insti	tute:	
Thrombocytopenia		Awa	reness	Kno	wledge	Com	petence
		yes	no	yes	no	yes	no
Indications for platelet transfusion							
Complications of platelet transfu							
Preparation and administration of	of platelet						
transfusions							
Mentor:	Trainee:			Depart	ment / Insti	tute:	
Marrow and peripheral-blood	progenitor cells				wledge		petence
		Awa yes	reness no	Kno vyes	wledge no	Com yes	petence no
Marrow and peripheral-blood Methods for marrow and periphe progenitor cells procurement and	ral-blood	yes			-		•
Methods for marrow and periphe	ral-blood	yes	no	yes	no	yes	no
Methods for marrow and periphe progenitor cells procurement and Mentor:	ral-blood cryopreservation	yes	no	yes Depart	no ment / Instit	yes	no
Methods for marrow and periphe progenitor cells procurement and	ral-blood cryopreservation	yes	no	yes Depart	no ment / Instit	yes tute:	no
Methods for marrow and periphe progenitor cells procurement and Mentor: Organ protection	ral-blood cryopreservation	yes	no	yes Depart	no ment / Instit	yes	no
Methods for marrow and periphe progenitor cells procurement and Mentor: Organ protection Organ-protective measures	ral-blood cryopreservation	yes Awa yes	no	yes Depart	no ment / Instit wledge no	yes tute: Com yes	no petence no
Methods for marrow and periphe progenitor cells procurement and Mentor: Organ protection Organ-protective measures and treatments	ral-blood cryopreservation Trainee:	yes	no	yes Depart	no ment / Instit	yes tute:	no
Methods for marrow and periphe progenitor cells procurement and Mentor: Organ protection Organ-protective measures and treatments Indications and side-effects of decisions.	ral-blood cryopreservation Trainee:	yes Awa yes	reness no	yes Departe Knowyes	no ment / Instit wledge no	yes tute: Com yes	no petence no
Methods for marrow and periphe progenitor cells procurement and Mentor: Organ protection Organ-protective measures and treatments Indications and side-effects of dorgan-protective agents	ral-blood cryopreservation Trainee:	Awayes	reness no	yes Departs Knoo yes	no ment / Instit wledge no	yes tute: Com yes	no petence no
Methods for marrow and periphe progenitor cells procurement and Mentor: Organ protection Organ-protective measures and treatments Indications and side-effects of decisions.	ral-blood cryopreservation Trainee:	yes Awa yes	reness no	yes Departe Knowyes	no ment / Instit wledge no	yes tute: Com yes	no petence no
Methods for marrow and periphe progenitor cells procurement and Mentor: Organ protection Organ-protective measures and treatments Indications and side-effects of dorgan-protective agents	ral-blood cryopreservation Trainee:	Awayes	reness no	yes Depart	no ment / Instit wledge no	yes tute: Com yes	no petence no

Mucositis		Awa yes	reness no	Kno yes	wledge no	Com yes	no no
Differences between infectious in that caused by anticancer agent.					П	_	
Pain medication and topical anes							
Tail modication and topical and	501000						
Mentor:	Trainee:			Depart	ment / Instit	ute:	
Malignant effusions		yes	reness no	yes	wledge no	yes	petence no
Signs, symptoms, and treatments of ascites							
Signs, symptoms, and treatments of pleural							
effusions							
Signs, symptoms, and treatment	IS Of	_			_	_	_
pericardial effusions	hooio						
Effusions treatment by paracent	ilesis	Ш	Ш	Ш	Ш	Ш	Ш
Mentor:	Trainee:			Depart	ment / Instit	ute:	
Extravasation							
Extravasation Prevention of extravasation		Awa yes	reness no	Knowyes	wledge no	Com yes	no
		yes	no	yes	no	yes	no
Prevention of extravasation		yes	no	yes	no	yes	no
Prevention of extravasation Diagnosis of extravasation	Trainee:	yes	no	yes	no	yes	no
Prevention of extravasation Diagnosis of extravasation Treatment of extravasation	Trainee:	yes Awa	no	yes Depart	no	yes ute:	no
Prevention of extravasation Diagnosis of extravasation Treatment of extravasation Mentor: Oncologic emergencies		yes	no	yes Depart	no □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	yes	no
Prevention of extravasation Diagnosis of extravasation Treatment of extravasation Mentor: Oncologic emergencies Recognition of clinical presentat	ions that require	yes Awa	no	yes Depart	no	yes ute:	no
Prevention of extravasation Diagnosis of extravasation Treatment of extravasation Mentor: Oncologic emergencies Recognition of clinical presentat immediate intervention (eg, spin	ions that require al cord	yes Awa	no	yes Depart	no	yes ute:	no
Prevention of extravasation Diagnosis of extravasation Treatment of extravasation Mentor: Oncologic emergencies Recognition of clinical presentat immediate intervention (eg, spin compression, pericardial tampor For patients in whom a diagnosis	ions that require al cord nade)	yes Awa yes	no	yes Depart	no ment / Instit wledge no	yes ute:	no
Prevention of extravasation Diagnosis of extravasation Treatment of extravasation Mentor: Oncologic emergencies Recognition of clinical presentatimmediate intervention (eg, spin compression, pericardial tampor	ions that require al cord nade)	yes Awa yes	no	yes Depart	no ment / Instit wledge no	yes ute:	no
Prevention of extravasation Diagnosis of extravasation Treatment of extravasation Mentor: Oncologic emergencies Recognition of clinical presentat immediate intervention (eg, spin compression, pericardial tampor For patients in whom a diagnosis suspected, proper approach	ions that require al cord nade) s of cancer is	yes Awa yes	reness	yes Depart Kno yes	ment / Instit	yes ute:	no
Prevention of extravasation Diagnosis of extravasation Treatment of extravasation Mentor: Oncologic emergencies Recognition of clinical presentat immediate intervention (eg, spin compression, pericardial tampor For patients in whom a diagnosis suspected, proper approach for obtaining a tissue diagnosis	ions that require al cord nade) s of cancer is	yes Awa yes	reness no	yes Depart Knoryes	ment / Instit	yes ute:	no

Paraneoplastic syndromes	raneoplastic syndromes		Awareness		wledge	Competence	
		yes	no	yes	no	yes	no
"Remote effects" of malignancy							
Malignancies most commonly as	ssociated						
with the individual syndromes							
Management of each syndrome							
Mentor:	Trainee:			Depart	ment / Instit	ute:	
Nutritional support			reness		wledge		petence
Indications for enteral support		yes □	no	yes	no	yes	no
Indications for parenteral suppo	rt						
Complications of enteral suppor							
Complications of parenteral support							
Mentor:	Trainee:			Depart	ment / Instit	ute:	
Palliative care and en			reness				netence
		Awa	reness	Kno	wledge	Com	petence
Palliative care and en	d-of-life car		reness no				petence no
Palliative care and en Pain Assessment of location and seven	d-of-life car erity of pain	Awa yes	no	Kno yes	wledge no	Com yes	no
Palliative care and en	d-of-life car erity of pain ladder	Awa yes	no	Knowyes	wledge no	Comyes	no
Palliative care and en Pain Assessment of location and sew World Health Organization pain	d-of-life car erity of pain ladder	Awa yes	no	Knowyes	wledge no	Comyes	no
Palliative care and en Pain Assessment of location and sew World Health Organization pain Pharmacology and toxicity of the	d-of-life car erity of pain ladder	Awa yes	no	Knov yes	wledge no	Com yes	no
Palliative care and en Pain Assessment of location and sew World Health Organization pain Pharmacology and toxicity of the narcotics and other analgesics	d-of-life car erity of pain ladder e opiate	Awa yes	no	Knovyes	wledge no	Com yes	no
Palliative care and en Pain Assessment of location and sevent of location and sevent of location and sevent of location and sevent of the location pain of location pain of location pain of location pain of location and location pain of location and location of location and sevent location of location	d-of-life car erity of pain ladder e opiate	Awa yes	no	Knovyes	wledge no	Com yes	no

Other symptoms		Awa	reness	Knov	Knowledge Competer		
		yes	no	yes	no	yes	no
Palliation of symptoms of respira	itory tract						
Palliation of symptoms of gastroi	intestinal tract						
Palliation of neurologic symptom	S						
Cutaneous and mucosal symptoms							
Anorexia and cachexia							
Dehydration							
How to handle end-of-life symptom	oms						
Mentor:	Trainee:			Departi	ment / Institi	ute:	
Communication		Awa	reness	Knov	wledge	Com	petence
		yes	no	yes	no	yes	no
Communication with the patient	and family						
Break bad news							
Act in difficult situations							
Communication and work with o	ther health care						
professionals (eg, nurses, social	workers,						
psychologists)							
Mentor:	Trainee:			Donarte	ment / Institu	ıto.	
Mentor.	namee.			Бераги	nent/msuu	ute.	
Rehabilitation		Awa	reness	Knov	wledge	Com	petence
		yes	no	yes	no	yes	no
Role of physical therapy, particul	larly						
in the postoperative setting							
Role of occupational therapy							
Role of speech therapy							
Role of swallowing therapy							
Mentor:	Trainee:			Donort	mont / Inctit	ıto.	
Michilot.	namee.			рерап	nent / Institi	ute.	

Management and Treatment of Individual Cancers

For each specific disease, the trainee should know the epidemiology, pathophysiology, genetics, signs and symptoms, diagnostic work-up, treatment, and follow-up. The trainee should be able to communicate and discuss these topics with the patients.

Head and neck cance	rs						
		Awa	reness	Kno	wledge	Com	petence
		yes	no	yes	no	yes	no
Head and neck examination							
Risk factors for head and neck of							
Natural histories of the individua	l primary						
tumor sites							
Staging of head and neck cance	rs						
Panendoscopy							
Surgery and/or radiation therapy	as as						
definitive treatment							
Role of chemotherapy							
Role of palliation in advanced dis	sease						
Organ preservation							
Long-term management of patie	nts						
Risks of second malignancies							
Mentor:	Trainee:			Departi	ment / Institu	ıte:	
Lung cancer and mes		yes	reness no	yes	wledge no	yes	petence no
Risk factors for developing lung	cancer	yes	no	yes	no	yes	no
	cancer	yes	no	yes	no	yes	no
Risk factors for developing lung	cancer	yes	no	yes	no	yes	no
Risk factors for developing lung Risk factors for developing meso	cancer othelioma	yes Awa	no	yes Departi	no ment / Institu	yes ute:	no
Risk factors for developing lung Risk factors for developing meso Mentor: Small-cell lung cancer	cancer othelioma Trainee:	yes Awa yes	no	yes Departs Know yes	no	yes ute:	no petence no
Risk factors for developing lung Risk factors for developing meso Mentor: Small-cell lung cancer Multimodality approach to limite	cancer othelioma Trainee: d-stage	yes Awa	no	yes Departi	no ment / Institu	yes ute:	no
Risk factors for developing lung Risk factors for developing meso Mentor: Small-cell lung cancer Multimodality approach to limite Role of chemotherapy in patients	cancer othelioma Trainee: d-stage	yes Awa yes	no	yes Departe Know yes	no	yes ute: Com yes	no
Risk factors for developing lung Risk factors for developing meso Mentor: Small-cell lung cancer Multimodality approach to limite Role of chemotherapy in patients advanced disease	cancer othelioma Trainee: d-stage s with	yes Awa yes	reness no	yes Departr Know yes	no ment / Institu wledge no	yes ute: Com yes	no Defence no Defence
Risk factors for developing lung Risk factors for developing meso Mentor: Small-cell lung cancer Multimodality approach to limite Role of chemotherapy in patients	cancer othelioma Trainee: d-stage s with	yes Awa yes	no	yes Departe Know yes	no	yes ute: Com yes	no

Non-small-cell lung cancer		Awa yes	reness no	Knov yes	wledge no	Com yes	petence no
Criteria of inoperability							
Surgical and nonsurgical staging	g of patients						
with localized disease							
Value of surgery in localized dise	ease						
Value of chemotherapy in localiz	ed disease						
Value of radiation therapy in loca							
disease							
Combined modality treatment in	localized						
disease							
Role of chemotherapy in the pall	liation						
of advanced disease							
Role of radiation therapy in the p	alliation						
of advanced disease							
Mentor:	Trainee:			Donartr	nent / Institu	ıto:	
Wentor.	Hamee.			Departi	Henr / Insult	ile.	
Mesothelioma		Δwa	reness	Knov	wledge	Com	petence
oootiioiiiu		ves	no	ves	no	ves	no
Risk factors for mesothelioma		,		,		,	
Risk factors for mesothelioma Criteria for operability							_
Criteria for operability		,		,		,	
Criteria for operability Value of chemotherapy							
Criteria for operability	Trainee:						
Criteria for operability Value of chemotherapy	Trainee:						
Criteria for operability Value of chemotherapy	Trainee:						
Criteria for operability Value of chemotherapy Mentor:	, manus						
Criteria for operability Value of chemotherapy	, manus						
Criteria for operability Value of chemotherapy Mentor: Gastrointestinal canc	, manus			□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □	nent / Institu	ute:	
Criteria for operability Value of chemotherapy Mentor:	, manus	Awa	reness	Departr	ment / Institu	tte:	petence
Criteria for operability Value of chemotherapy Mentor: Gastrointestinal cance Esophageal cancer	ers	Awa	reness	Departr Know yes	ment / Institu	com yes	petence
Criteria for operability Value of chemotherapy Mentor: Gastrointestinal cance Esophageal cancer Risk factors for esophageal cancer	ers	Awa	reness	Departr Know yes	ment / Institu	com yes	petence no
Criteria for operability Value of chemotherapy Mentor: Gastrointestinal cance Esophageal cancer Risk factors for esophageal cancellidications for endoscopy in diagrams.	cer gnosis	Awa	reness	Departr Know yes	ment / Institu	Com yes	petence no
Criteria for operability Value of chemotherapy Mentor: Gastrointestinal cance Esophageal cancer Risk factors for esophageal cancel Indications for endoscopy in diagonal Indications for endoscopy in statements.	cer gnosis ging	Awayes	reness	Departr Know yes	ment / Institu	Com yes	petence
Criteria for operability Value of chemotherapy Mentor: Gastrointestinal cance Esophageal cancer Risk factors for esophageal cance Indications for endoscopy in dial Indications for nutritional support	cer gnosis ging	Awa	reness	Departr Knowyes	ment / Institu	Com yes	petence
Criteria for operability Value of chemotherapy Mentor: Gastrointestinal cance Esophageal cancer Risk factors for esophageal cance Indications for endoscopy in dial Indications for endoscopy in state Indications for nutritional support Combined modality therapy	cer gnosis ging	Awayes	reness	Departr Know yes	ment / Institu	Com yes	petence
Criteria for operability Value of chemotherapy Mentor: Gastrointestinal cance Esophageal cancer Risk factors for esophageal cance Indications for endoscopy in state Indications for nutritional support Combined modality therapy Role of palliative chemotherapy	cer gnosis ging	Awayes	reness	Departr Knov yes	ment / Institu	Com yes	petence
Criteria for operability Value of chemotherapy Mentor: Gastrointestinal cance Esophageal cancer Risk factors for esophageal cance Indications for endoscopy in dial Indications for endoscopy in state Indications for nutritional support Combined modality therapy	cer gnosis ging	Awayes	reness	Departr Know yes	ment / Institu	Com yes	petence

Gastric cancer		Awa	reness		wledge		petence
		yes	no	yes	no	yes	no
Risk factors for gastric cancer							
Role of surgery							
Role of combined modality thera	ру						
Role of palliative chemotherapy							
Supportive measures							
Mentor:	Trainee:			Departi	ment / Institu	ite:	
Colon cancer		Awa ves	reness no	Knov ves	wledge no	Com ves	petence no
Surgical staging							
Indications for adjuvant therapie	s in colon		_	_	_		_
cancer							
Indications for adjuvant therapie	s in rectal						
cancers							
Role of chemotherapy in advanc	ed						
metastatic disease							
Heritable types of colon cancer a	nd the differences						
in their patterns of spread and m	nanagement						
Risk factors							
Screening for colorectal cancer							
Chemoprevention							
Genetic testing							
Mentor:	Trainee:			Departr	ment / Institu	ite:	
Anal cancer			reness		wledge		petence
		yes	no	yes	no	yes	no
Association with human papillon							
Role of combined modality thera	py in						
organ preservation							
Mentor:	Trainee:			Departi	ment / Institu	ite:	

Epidemiology							
Risk factors for hepatobiliary car	ncers						
Alpha-fetoprotein in diagnosis,							
response assessment, and scree	•						
indications of surgery in localize							
Role of systemic and intra-arteri	al						
chemotherapy							
Mentor:	Trainee:			Depart	ment / Instit	tute:	
Pancreatic cancer			reness		wledge		petence
Risk factors		yes	no	yes	no	yes	no
Genetic aspects							
Roles of endoscopy							
Role of molecular diagnosis							
Curative and palliative role of su	rgery						
Palliative role of chemotherapy in	n						
advanced disease							
				,		tuto	
Mentor:	Trainee:			Depart	ment / Instit	iule.	
Mentor: Genitourinary cancer				Depart	ment / Instit	lute.	
		Awa	reness	<u> </u>	ment / Instit		petence
Genitourinary cancer Renal cell cancer		Awa yes	reness no	<u> </u>			petence no
Genitourinary cancer Renal cell cancer Diagnostic aspects				Kno	wledge	Com	-
Genitourinary cancer Renal cell cancer Diagnostic aspects Paraneoplastic aspects	s	yes	no	Kno yes	wledge no	Com yes	no
Genitourinary cancer Renal cell cancer Diagnostic aspects Paraneoplastic aspects Curative role of surgery in localiz	s zed disease	yes	no	Kno yes	wledge no □	Comyes	no
Genitourinary cancer Renal cell cancer Diagnostic aspects Paraneoplastic aspects	s zed disease	yes	no	Kno yes	wledge no	Comyes	no
Genitourinary cancer Renal cell cancer Diagnostic aspects Paraneoplastic aspects Curative role of surgery in localiz	s zed disease	yes	no	Kno yes	wledge no	Com yes	no

Knowledge

yes no

Awareness yes no Competence

yes no

Hepatobiliary cancers

Urothelial cancers		Awa yes	reness no	Kno v	wledge no	Com yes	petence no
Risk factors							
Differences between localized a	nd						
invasive disease							
Propensity for transitional-cell carecurrence	arcinoma						
Role of urine cytology in staging							
and follow-up							
Role of cystoscopy in staging and follow-up							
Role of intravesical therapy in the management of superficial blade							
Role of surgery in early-stage in cancers	vasive						
Combined modality therapy							
Management of metastatic trans carcinoma	sitional-cell						
Mentor:	Trainee:			Departi	ment / Instit	ute:	
							_
Penile cancer			reness		wledge		petence
Role of human papilloma virus in	the	yes	no	yes	no	yes	no
etiology of penile cancers	i tiit	П	П		П	П	П
Role of combined modality treati	ment					П	
							_
Mentor:	Trainee:			Departi	ment / Instit	ute:	

Prostate cancer		Awa	reness	Knov	wledge	Com	petence
		yes	no	yes	no	yes	no
Epidemiology							
Screening of prostate cancer							
Indications for prostate-specific	antigen						
in screening and follow-up							
Importance of histologic grading							
Role of observation in the mana	gement of						
early stage disease							
Role of surgery in the managem	ent of						
early stage disease							
Role of radiation therapy in the i	management						
of early stage disease							
Application of hormone therapy	in						
advanced disease							
Application of chemotherapy in	advanced						
disease							
Mentor:	Trainee:			Departi	nent / Institu	rte:	
Mentor:	Trainee:			Departi	nent / Institu	rte:	
Mentor:	Trainee:			Departi	ment / Institu	rte:	
Mentor:	Trainee:			Departi	ment / Institu	te:	
Mentor: Germ cell tumors	Trainee:	Awa	reness	· 	nent / Institu		petence
Germ cell tumors		Awa yes	reness no	· 			petence no
Germ cell tumors International Germ Cell Collabor				Know	wledge	Com	•
Germ cell tumors International Germ Cell Collabor Group Classification				Know	wledge	Com	•
Germ cell tumors International Germ Cell Collabor Group Classification Utility of tumor markers in	ative	yes	no	Kno vyes	vledge no	Com yes	no
Germ cell tumors International Germ Cell Collabor Group Classification Utility of tumor markers in diagnosis, prognosis, and follow	ative	yes	no	Kno vyes	vledge no	Com yes	no
Germ cell tumors International Germ Cell Collabor Group Classification Utility of tumor markers in diagnosis, prognosis, and follow Role of surgery	ative	yes	no	Know yes	wledge no	Com yes	no
Germ cell tumors International Germ Cell Collabor Group Classification Utility of tumor markers in diagnosis, prognosis, and follow Role of surgery Role of radiotherapy	ative	yes	no	Knov yes	wledge no	Com yes	no
Germ cell tumors International Germ Cell Collabor Group Classification Utility of tumor markers in diagnosis, prognosis, and follow Role of surgery Role of radiotherapy Role of chemotherapy	ative r-up	yes	no	Know yes	wledge no	Com yes	no
Germ cell tumors International Germ Cell Collabor Group Classification Utility of tumor markers in diagnosis, prognosis, and follow Role of surgery Role of radiotherapy	ative r-up	yes	no	Know yes	wledge no	Com yes	no
Germ cell tumors International Germ Cell Collabor Group Classification Utility of tumor markers in diagnosis, prognosis, and follow Role of surgery Role of radiotherapy Role of chemotherapy Combination chemotherapy in a	ative r-up dvanced disease	yes	no	Knov	wledge no	Comyes	no
Germ cell tumors International Germ Cell Collabor Group Classification Utility of tumor markers in diagnosis, prognosis, and follow Role of surgery Role of radiotherapy Role of chemotherapy	ative r-up	yes	no	Knov	wledge no	Comyes	no

Gynecologic Malignancies

Ovarian cancer		Awa yes	reness no	Knov yes	vledge no	Com yes	petence no
Heritable predisposition of ovaria	an cancer						
Role of surgical procedures in							
initial staging							
Role of surgical procedures in							
initial treatment							
Role of surgical procedures in							
subsequent systemic treatment							
Indications for chemotherapy in							
localized disease							
Indications for chemotherapy in		_	_	_	_	_	_
advanced disease							
Mentor:	Trainee:			Departr	nent / Institu	te:	
Uterine cancer		Awa yes	reness no	Knov yes	wledge no	Com yes	petence no
Uterine cancer Role of hormones and hormonal	therapies				-		-
					-		-
Role of hormones and hormonal	ncers	yes	no	yes	no	yes	no
Role of hormones and hormonal in the etiology of endometrial ca	ncers	yes	no	yes	no	yes	no
Role of hormones and hormonal in the etiology of endometrial ca Curative role of surgery in early- disease Radiation therapy in the multidis	ncers stage	yes	no	yes	no 🗆	yes	no 🗆
Role of hormones and hormonal in the etiology of endometrial ca Curative role of surgery in early- disease Radiation therapy in the multidis approach of advanced disease	ncers stage ciplinary	yes	no	yes	no 🗆	yes	no 🗆
Role of hormones and hormonal in the etiology of endometrial ca Curative role of surgery in early- disease Radiation therapy in the multidis approach of advanced disease Role of chemotherapy in the mai	ncers stage ciplinary	yes	no	yes	no .	yes	no
Role of hormones and hormonal in the etiology of endometrial ca Curative role of surgery in early- disease Radiation therapy in the multidis approach of advanced disease Role of chemotherapy in the man of local disease	ncers stage ciplinary nagement	yes	no	yes	no .	yes	no
Role of hormones and hormonal in the etiology of endometrial ca Curative role of surgery in early-disease Radiation therapy in the multidis approach of advanced disease Role of chemotherapy in the mai of local disease Role of chemotherapy in the mai	ncers stage ciplinary nagement	yes	no	yes	no	yes	no
Role of hormones and hormonal in the etiology of endometrial ca Curative role of surgery in early-disease Radiation therapy in the multidis approach of advanced disease Role of chemotherapy in the mai of local disease Role of chemotherapy in the mai of metastatic disease	ncers stage ciplinary nagement	yes	no	yes	no	yes	no
Role of hormones and hormonal in the etiology of endometrial ca Curative role of surgery in early-disease Radiation therapy in the multidis approach of advanced disease Role of chemotherapy in the mai of local disease Role of chemotherapy in the mai of metastatic disease Role of hormone therapy in the r	ncers stage ciplinary nagement	yes	no	yes	no	yes	no
Role of hormones and hormonal in the etiology of endometrial ca Curative role of surgery in early-disease Radiation therapy in the multidis approach of advanced disease Role of chemotherapy in the mai of local disease Role of chemotherapy in the mai of metastatic disease Role of hormone therapy in the rof local disease	ncers stage ciplinary nagement nagement management	yes	no	yes	no	yes	no
Role of hormones and hormonal in the etiology of endometrial ca Curative role of surgery in early-disease Radiation therapy in the multidis approach of advanced disease Role of chemotherapy in the man of local disease Role of chemotherapy in the man of metastatic disease Role of hormone therapy in the role local disease Role of hormone therapy in the role local disease	ncers stage ciplinary nagement nagement management	yes	no	yes	no	yes	no
Role of hormones and hormonal in the etiology of endometrial ca Curative role of surgery in early-disease Radiation therapy in the multidis approach of advanced disease Role of chemotherapy in the mai of local disease Role of chemotherapy in the mai of metastatic disease Role of hormone therapy in the rof local disease	ncers stage ciplinary nagement nagement management	yes	no	yes	no	yes	no

Cervical cancer		Awa yes	reness no	Knov yes	wledge no	Com yes	petence no
Risk factors for cervical cancer							
Staging as the basis for selecting	g surgery						
Staging as the basis for radiation							
Role of chemotherapy in the mai							
of local disease combined with r	•						
Role of chemotherapy in the trea							
advanced disease							
	I						
Mentor:	Trainee:			Departr	nent / Institu	te:	
Vulvar and vaginal cancers		Awa	reness	Knov	wledge	Com	petence
		yes	no	yes	no	yes	no
	-						
	су						
Surveillance							
Management							
Mentor: Trainee: Vulvar and vaginal cancers Induction of clear-cell carcinoma of the vaginal women whose mothers received diethylstilbestrol during pregnancy Surveillance Management Curative role of surgery in early-stage disease Combination therapy in advanced disease Mentor: Trainee:	stage disease						
Combination therapy in advance	d disease						
Mentor:	Trainee:			Denartr	nent / Institu	te·	
Wichton.	manicc.			Doparti	mont / montu	ιο.	
Breast cancer							
Breast cancer		Awa	reness	Knov	wledge	Com	petence
Breast cancer		Awa yes	reness no	Knov yes	wledge no	Com yes	petence no
Breast cancer Interpretation of a mammogram					_		•
	ne breast	yes	no	yes	no	yes	no
Interpretation of a mammogram		yes	no	yes	no	yes	no
Interpretation of a mammogram Interpretation of ultrasound of th		yes	no	yes	no	yes	no
Interpretation of a mammogram Interpretation of ultrasound of th Interpretation of magnetic reson	ance	yes	no	yes	no	yes	no
Interpretation of a mammogram Interpretation of ultrasound of th Interpretation of magnetic reson imaging scan of the breast	ance	yes	no 	yes □ □	no	yes	no
Interpretation of a mammogram Interpretation of ultrasound of th Interpretation of magnetic reson imaging scan of the breast Pathologic and prognostic featur Issues that affect the choice of pr	ance res rimary treatments,	yes	no 	yes □ □	no	yes	no
Interpretation of a mammogram Interpretation of ultrasound of th Interpretation of magnetic reson imaging scan of the breast Pathologic and prognostic featur	ance res rimary treatments, tion of receptors	yes	no	yes	no	yes	no
Interpretation of a mammogram Interpretation of ultrasound of th Interpretation of magnetic reson imaging scan of the breast Pathologic and prognostic featur Issues that affect the choice of princluding the value of determina	ance res rimary treatments, tion of receptors sease	yes	no	yes	no	yes	no
Interpretation of a mammogram Interpretation of ultrasound of th Interpretation of magnetic reson imaging scan of the breast Pathologic and prognostic featur Issues that affect the choice of pr including the value of determinar Hormone therapy in advanced di	ance res rimary treatments, tion of receptors sease	yes	no	yes	no	yes	no
Interpretation of a mammogram Interpretation of ultrasound of th Interpretation of magnetic reson imaging scan of the breast Pathologic and prognostic featur Issues that affect the choice of pr including the value of determina: Hormone therapy in advanced disc	ance res rimary treatments, tion of receptors isease ase	yes	no	yes	no	yes	no
Interpretation of a mammogram Interpretation of ultrasound of th Interpretation of magnetic reson imaging scan of the breast Pathologic and prognostic featur Issues that affect the choice of princluding the value of determination of the prognostic feature including the value of determination of the prognostic feature including the value of determination of the prognostic feature including the value of determination of the prognostic feature including the value of determination of the prognostic feature including the progno	ance res rimary treatments, tion of receptors isease ase	yes		yes		yes	
Interpretation of a mammogram Interpretation of ultrasound of th Interpretation of magnetic reson imaging scan of the breast Pathologic and prognostic featur Issues that affect the choice of pr including the value of determinat Hormone therapy in advanced disc. Indications for adjuvant therapy	ance res rimary treatments, tion of receptors sease ase egimens I the role	yes		yes		yes	

Sarcomas

Bone sarcomas		Awa	reness	Kno	wledge	Com	petence
		yes	no	yes	no	yes	no
Predisposing situation and cond	ition in the						
development of primary bone sa	ircomas						
Pathologic spectrum							
Indications for limb preservation	and						
adjuvant chemotherapy							
Role of combined modality there	ару						
Mentor:	Trainee:			Departi	ment / Institu	ıte:	
Soft tissue sarcomas		Awa	reness	Kno	wledge	Com	petence
Soft tissue sarcomas		Awa yes	reness no	Kno v	wledge no	Com yes	petence no
Soft tissue sarcomas Surgery for initial diagnosis					•		•
		yes	no	yes	no	yes	no
Surgery for initial diagnosis		yes	no	yes	no 🗆	yes	no
Surgery for initial diagnosis Indications for limb preservation		yes	no	yes	no	yes	no
Surgery for initial diagnosis Indications for limb preservation Role of chemotherapy		yes	no	yes	no .	yes	no
Surgery for initial diagnosis Indications for limb preservation Role of chemotherapy Role of surgery		yes	no	yes	no	yes	no
Surgery for initial diagnosis Indications for limb preservation Role of chemotherapy Role of surgery Role of radiation therapy		yes	no	yes	no	yes	no
Surgery for initial diagnosis Indications for limb preservation Role of chemotherapy Role of surgery Role of radiation therapy Specific medical treatment for	Trainee:	yes	no	yes	no	yes	no

Skin cancers

Melanoma Risk factors		Awa ves	reness no	Knov ves	wledge no	Com yes	petence no
Risk factors							
Clinical appearance of primary n	nelanomas and						
its precursor lesions, such as dy	splastic nevus						
Differentiation of skin lesions that	at are benign						
from those that are potentially m	-						
Value of tumor depth and other p	orognostic						
factors in assessing prognosis							
Surgical procedure in making the	e diagnosis						
and curative resection							
Indications for biologic therapies	in the						
adjuvant setting							
Risks and benefits of chemother	apy in						
advanced disease							
Primary prevention of melanoma							
Recognition and counselling of p		_		_		_	
at high risk for developing melan	ioma						
Mentor:	Trainee:			Departr	ment / Institu	ıte:	
Basal cell and squamous cell Clinical appearance of lesions	cancers	yes	reness no	yes	wledge no	yes	petence no
Clinical appearance of lesions Association with sun exposure		yes	no	yes	no	yes	no
Clinical appearance of lesions		yes	no	yes	no	yes	no
Clinical appearance of lesions Association with sun exposure		yes	no	yes	no	yes	no
Clinical appearance of lesions Association with sun exposure Long-term complication of cancer	er therapy	yes	no	yes □ □ □ □ Departr	no	yes	no
Clinical appearance of lesions Association with sun exposure Long-term complication of cance Mentor:	er therapy	yes	no	yes Departr	no no no no no no no no no no	yes under the company of the compan	no
Clinical appearance of lesions Association with sun exposure Long-term complication of cance Mentor: Endocrine cancers	er therapy	yes Awa yes	no	yes Departr Know yes	no	yes tte:	no petence no
Clinical appearance of lesions Association with sun exposure Long-term complication of cance Mentor: Endocrine cancers Diagnostic work-up	er therapy Trainee:	yes Awa yes	reness no	yes Departr	no	yes rte:	petence no
Clinical appearance of lesions Association with sun exposure Long-term complication of cance Mentor: Endocrine cancers Diagnostic work-up Treatment of endocrine cancers Endocrine cancer as a part of a complete syndrome due to specific genetic	er therapy Trainee:	yes Awa yes	reness no	yes Departr	no	yes rte:	petence no
Clinical appearance of lesions Association with sun exposure Long-term complication of cance Mentor: Endocrine cancers Diagnostic work-up Treatment of endocrine cancers Endocrine cancer as a part of a complex cancer as a complex cance	er therapy Trainee:	yes Awa yes	reness	yes Departr Know yes	no	yes cute:	petence no
Clinical appearance of lesions Association with sun exposure Long-term complication of cance Mentor: Endocrine cancers Diagnostic work-up Treatment of endocrine cancers Endocrine cancer as a part of a complete syndrome due to specific genetic	er therapy Trainee:	yes Awa yes	reness	yes Departr Know yes Compared to the compar	no nent / Institu wledge no	yes Com yes	petence no

Central nervous system malignancies

Role of surgery in primary disea	00	yes	110	yes	110	yes	110
Role of surgery in metastatic dis							
Role of radiation therapy in prim		_			_	_	
Role of radiation therapy in meta	•						
disease	istatic						
Role of chemotherapy in primary	, diagona						
Role of chemotherapy in metast							
note of chemotherapy in metast	alic uiscasc	Ш	Ш	Ш	Ш	Ш	Ш
Mentor:	Trainee:			Departi	nent / Institi	ute:	
Carcinoma of unknow	vn primary	site					
		Awa	reness	Knov	wledge	Com	petence
		yes	no	yes	no	yes	no
Importance of tumor histopathol							
Pathologic analysis in directing t							
Tumor markers in directing the v	•						
Recognition of settings in which	treatment						
may affect survival							
Palliative treatment							
Mentor:	Trainee:			Departr	nent / Institu	ute:	
Hematologic Maligna	ncies						
Leukemia		Awa yes	reness no	Knov yes	wledge no	Com yes	petence no
Pathologic techniques in diagnos	sis						
Molecular biologic techniques in	diagnosis:						
Cytogenetics							
Immuno-phenotyping							
Polymerase chain reaction							
Current treatment recommendat	tions and their						
applications in adult population	and the elderly						
Mentor:	Trainee:			Departr	nent / Institi	ute:	

Knowledge

Awareness

Competence

Acute leukemias and myelody	splasia	Awa	reness	Kno	wledge	Com	petence
		yes	no	yes	no	yes	no
Risk factors for developing leuke	emia						
French-American-British classif	ication						
Implications of classification for	treatment						
and prognosis							
Marrow transplantation							
Value of differentiation therapy							
Mentor:	Trainee:			Depart	ment / Instit	tute:	
Chronic leukemias		Awa	ireness	Kno	wledge	Com	petence
		yes	no	yes	no	yes	no
Peripheral-blood smear							
Current therapeutic approaches							
Indications for marrow transplar	itation						
Mentor:	Trainee:			Depart	ment / Instit	tute:	
Lymphomas Ann Arbor Staging classification		yes	no	yes	wledge no	yes	no
	ification	yes	no	yes	no	yes	no
Ann Arbor Staging classification	fication Trainee:	yes	no	yes	no	yes	no
Ann Arbor Staging classification World Health Organization classi Mentor:	Г	yes	no	yes □ □ Depart	no	yes	no
Ann Arbor Staging classification World Health Organization classi	Г	yes Awa	no	yes Depart	no ment / Instit	yes tute:	no
Ann Arbor Staging classification World Health Organization classi Mentor: Hodgkin's disease	Г	yes	no	yes Depart Kno yes	no	yes	no
Ann Arbor Staging classification World Health Organization classi Mentor: Hodgkin's disease Staging of Hodgkin's disease	Г	yes Awa yes	no	yes Depart	no ment / Instit wledge no	yes tute: Com yes	no
Ann Arbor Staging classification World Health Organization classi Mentor: Hodgkin's disease Staging of Hodgkin's disease Indications for surgical staging	Trainee:	yes Awa yes	no	yes Depart Kno yes	no ment / Instit wledge no	yes tute:	no petence no
Ann Arbor Staging classification World Health Organization classi Mentor: Hodgkin's disease Staging of Hodgkin's disease Indications for surgical staging Role of radiation therapy in early	Trainee:	yes Awa yes	no	yes Depart Kno yes	ment / Instit	yes tute:	no petence no
Ann Arbor Staging classification World Health Organization classi Mentor: Hodgkin's disease Staging of Hodgkin's disease Indications for surgical staging Role of radiation therapy in early Indications for chemotherapy	Trainee:	yes Awa yes	no	yes Depart Kno yes	ment / Instit	yes tute:	no petence no
Ann Arbor Staging classification World Health Organization classi Mentor: Hodgkin's disease Staging of Hodgkin's disease Indications for surgical staging Role of radiation therapy in early Indications for chemotherapy in stages II, III, and IV	Trainee:	yes Awa yes	no	yes Depart Kno yes Compared Comp	ment / Instit	yes cute:	no
Ann Arbor Staging classification World Health Organization classi Mentor: Hodgkin's disease Staging of Hodgkin's disease Indications for surgical staging Role of radiation therapy in early Indications for chemotherapy	Trainee:	yes Awa yes	no	yes Depart Kno yes	ment / Instit	yes cute: Com yes	no petence no
Ann Arbor Staging classification World Health Organization classi Mentor: Hodgkin's disease Staging of Hodgkin's disease Indications for surgical staging Role of radiation therapy in early Indications for chemotherapy in stages II, III, and IV Long-term complications of trea	r-stage disease	Awayes	no	yes Depart Kno yes	ment / Instit	yes cute: Com yes	no
Ann Arbor Staging classification World Health Organization classi Mentor: Hodgkin's disease Staging of Hodgkin's disease Indications for surgical staging Role of radiation therapy in early Indications for chemotherapy in stages II, III, and IV Long-term complications of trea Follow-up of patients	r-stage disease tment	Awayes	no	yes Depart Kno yes	ment / Instit	yes cute: Com yes	no

Non-Hodgkin's lymphoma		Awa ı yes	reness no	-		Competence yes no	
Association of lymphomas with I	HIV						
and immunosuppression							
Revised European-American Lyn	nphoma						
classification							
International Prognostic Factors							
Role of chemotherapy							
Value of marrow transplantation							
in relapsed or refractory disease	!						
Different types of low-grade lym	phomas						
(when treatment is indicated and	d when						
observation is appropriate)							
Role of radiation therapy							
Role of surgery							
Role of chemotherapy including	monoclonal						
antibodies in treatment							
Clinical properties of high-grade	lymphomas						
Role for intensive treatment of h							
lymphomas	3 3						
, p = 112	1						
Mentor:	Trainee:			Departr	nent / Institu	te:	
Cutaneous T-cell lymphoma		Awaı	reness	Knov	vledge	Com	petence
		Awa i	reness no	Knov yes	vledge no	Com	petence no
Clinical appearance at different	stages				-		•
	stages	yes	no	yes	no	yes	no
Clinical appearance at different value of immunophenotyping in diagnosis		yes	no	yes	no	yes	no
Clinical appearance at different Value of immunophenotyping		yes	no	yes	no	yes	no
Clinical appearance at different value of immunophenotyping in diagnosis		yes	no	yes	no	yes	no
Clinical appearance at different value of immunophenotyping in diagnosis Role of psoralen and ultraviolet A	A in	yes	no	yes	no	yes	no 🗆
Clinical appearance at different value of immunophenotyping in diagnosis Role of psoralen and ultraviolet initial management	A in	yes	no	yes	no	yes	no 🗆
Clinical appearance at different and Value of immunophenotyping in diagnosis Role of psoralen and ultraviolet initial management Role of radiation therapy in initial	A in	yes	no	yes	no	yes	no
Clinical appearance at different and Value of immunophenotyping in diagnosis Role of psoralen and ultraviolet initial management Role of radiation therapy in initial management	A in	yes	no	yes	no	yes	no
Clinical appearance at different a Value of immunophenotyping in diagnosis Role of psoralen and ultraviolet A initial management Role of radiation therapy in initial management Role of topical chemotherapy in	A in	yes	no	yes	no .	yes	no
Clinical appearance at different solution Value of immunophenotyping in diagnosis Role of psoralen and ultraviolet initial management Role of radiation therapy in initial management Role of topical chemotherapy in initial management	A in	yes	no	yes	no .	yes	no
Clinical appearance at different solution Value of immunophenotyping in diagnosis Role of psoralen and ultraviolet initial management Role of radiation therapy in initial management Role of topical chemotherapy in initial management Palliative role of chemotherapy in	A in I n advanced	yes	no	yes	no	yes	no
Clinical appearance at different solution Value of immunophenotyping in diagnosis Role of psoralen and ultraviolet dinitial management Role of radiation therapy in initial management Role of topical chemotherapy in initial management Palliative role of chemotherapy in or refractory disease	A in I n advanced	yes	no	yes	no	yes	no
Clinical appearance at different solution Value of immunophenotyping in diagnosis Role of psoralen and ultraviolet initial management Role of radiation therapy in initial management Role of topical chemotherapy in initial management Palliative role of chemotherapy in or refractory disease Palliative role of biologic agents	A in I I n advanced	yes		yes		yes	no
Clinical appearance at different and Value of immunophenotyping in diagnosis Role of psoralen and ultraviolet initial management Role of radiation therapy in initial management Role of topical chemotherapy in initial management Palliative role of chemotherapy in or refractory disease Palliative role of biologic agents advanced or refractory disease	A in I I n advanced	yes		yes		yes	no
Clinical appearance at different and Value of immunophenotyping in diagnosis Role of psoralen and ultraviolet initial management Role of radiation therapy in initial management Role of topical chemotherapy in initial management Palliative role of chemotherapy in initial management Palliative role of chemotherapy in or refractory disease Palliative role of biologic agents advanced or refractory disease Palliative role of radiation therap	A in I I n advanced	yes		yes		yes	no

,		Awaı yes	reness no	Knov yes	wledge no	Com yes	petence no
How to distinguish the plasma co	ell dyscrasias:						
Monoclonal gammopathy of unknown							
significance							
Waldenstrom's macroglobulinem	nia						
Plasmacytoma							
Multiple myeloma							
POEMS (polyneuropathy, organo	megaly,						
endocrinopathy, monoclonal prote	ein, skin changes)						
Plasma cell leukemia							
Indications for treatment in each	instance						
Mentor:	Trainee:			Departr	nent / Institu	te:	
AIDS-associated malignancies							
AIDS-associated malignancie	S		reness		wledge		petence
v		Awa ı yes	r eness no	Kno v	vledge no	Com yes	petence no
Association of central nervous s	ystem tumors				·		•
Association of central nervous s with immunosuppression and Al	ystem tumors	yes	no	yes	no 🗆		no
Association of central nervous s with immunosuppression and Al Indications for treatment	ystem tumors DS	yes	no	yes	no _		no
Association of central nervous s with immunosuppression and Al Indications for treatment Increased toxicities attributable	ystem tumors DS	yes	no	yes	no 🗆	yes	no
Association of central nervous s with immunosuppression and Al Indications for treatment Increased toxicities attributable medical problems	ystem tumors DS to concurrent	yes	no	yes	no 🗆	yes	no
Association of central nervous s with immunosuppression and Al Indications for treatment Increased toxicities attributable medical problems Prophylaxis and treatment for co	ystem tumors DS to concurrent	yes	no	yes	no o	yes	no
Association of central nervous s with immunosuppression and Al Indications for treatment Increased toxicities attributable medical problems	ystem tumors DS to concurrent	yes	no	yes	no o	yes	no

5. Psychosocial Aspects of Cancer

Psychosocial influence of cancer		Awareness		Kno	wledge	Competence	
		yes	no	yes	no	yes	no
Recognition when intervention is							
Cultural issues that impact on the	ie						
management of disease							
Spiritual conflicts associated with	th the						
diagnosis and treatment							
Adaptive and maladaptive behave	ior in						
coping with disease							
Coping mechanisms by patients	and families						
within the context of the cancer	diagnosis						
Issues involved in end-of-life car	re						
Sexual dysfunction as a result of	f the disease,						
treatment, or because of psycho	logical effects						
Indication and uses of psychotro	pic drugs						
Bereavement process							
Physicians' personal coping							
How to integrate family member	s, pastoral care,						
nursing support, hospice, and ca	ancer support						
groups							
Communication with patients an	d their family						
Break bad news							
Act adequately in difficult situati	ons						
Mentor:	Trainee:			Depart	ment / Instit	ute:	

6. Patient Education

Genetic Counselling		Awa yes	reness no	Kno yes	wledge no	Com yes	petence no
Assessment of the increased risk of cancer in		,		,		,	
the patient and the patient's family							
Principles for genetic screening and counselling							
Mentor:	lentor: Trainee:			Departi	ment / Instit	ute:	
Health Maintenance		Awa ves	reness	Kno v	wledge no	Com ves	petence
Counselling the patients and the known risk factors for subseque		yoo	110	you	110	yoo	110
Diet							
Smoking							
Alcohol							
Sun exposure							
Mentor:	Trainee:			Department / Institute:			
Long-Term Complications		Awa yes	reness no	Kno v	wledge no	Com yes	petence no
Recognition of long-term compli of each treatment modality	cations						
Risk of treatment-induced car		Awa yes	reness no	Kno v	wledge no	Com yes	petence no
Acute myeloid leukemia after ch	emotherapy						
Radiation induced sarcomas							
Endocrine dysfunctions Hypothyroidism after neck radiation		Awa yes	reness no	Know yes	wledge no	Com yes	petence no
Sterility with chemotherapy							
Chemoprevention measures							
Testing and intervals for follow-u	ıp						
Mentor: Trainee:							

7. Bioethics, Legal, and Economic Issues

			Awareness		wledge	Competence	
Requirements for obtaining		yes	no	yes	no	yes	no
informed consent							
Ethics			reness		wledge		petence
Ethics involved in the conduct of		yes	no	yes	no	yes	no
medical research							
Legal Issues		Awa ves	reness no	Know ves	wledge no	Com	petence no
Related to anticancer treatment		y03 □		y03 □			
Life support							
Withdrawal of life support syster	ns						
Cost Efficiency		Awareness		Knowledge		Competence	
		yes	no	yes	no	yes	no
Cost effectiveness of medical int	tervention						
in the management of cancer							
Conflict of Interest		Awa	reness	Kno	wledge	Com	petence
0		yes	no	yes	no	yes	no
Guidelines to define conflict of in professional activities	iterest within						
Professional Attitude		Awareness		Knowledge		Competence	
		yes	no	yes	no	yes	no
Professionalism and humanism i	n care of						
patients and their families							
Mentor:	Trainee:			Departi	ment / Instit	ute:	

8. Skills

Anticancer Agent Administration		Awareness		Knowledge		Competence	
		yes	no	yes	no	yes	no
Prescription of anticancer agent	S						
Administration of anticancer age	ents						
Care of and access to indwelling							
venous catheters							
Handling and disposal of chemo	therapeutic						
and biologic agents							
Mentor:	Trainee:			Departr	nent / Institu	ite:	
Bone Marrow Aspiration, Biopsy, and Interpretation		Awa i yes	reness no	Kno v yes	wledge no	Com yes	petence no
Performance of marrow aspiration and biopsy	OH						
Interpretation of marrow aspirat	ions		_				
and biopsies							
Mentor:	Trainee:			Departr	ment / Institu	ıte:	
Ommaya Reservoir and Lumba	or Bunoturo	Λινο	reness	Vno	wledge	Com	petence
Olilliaya neservoli aliu Lulliba	ai Fuilcluic	ves	no no	ves	no	ves	no no
Performance of lumbar puncture	and	yes	110	yes	110	yes	110
administration of chemotherapy							
Use of subcutaneous device to a	-		_				
medication							
Recognition and solving of comp	lications						
of administration devices							
Administration of chemotherapy	through						
an Ommaya reservoir							
Mentor:	Trainee:			Departr	ment / Institu	rte:	

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The authors indicated no potential conflicts of interest.

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