

## 26723 - Physical diagnostic and therapeutic procedures II

### Información del Plan Docente

<b>Academic Year</b>	2016/17
<b>Academic center</b>	104 - Facultad de Medicina
<b>Degree</b>	304 - Degree in Medicine
<b>ECTS</b>	6.0
<b>Course</b>	4
<b>Period</b>	Second semester
<b>Subject Type</b>	Compulsory
<b>Module</b>	---

### **1.Basic info**

#### **1.1.Recommendations to take this course**

#### **1.2.Activities and key dates for the course**

### **2.Initiation**

#### **2.1.Learning outcomes that define the subject**

#### **2.2.Introduction**

### **3.Context and competences**

#### **3.1.Goals**

#### **3.2.Context and meaning of the subject in the degree**

#### **3.3.Competences**

#### **3.4.Importance of learning outcomes**

### **4.Evaluation**

### **5.Activities and resources**

#### **5.1.General methodological presentation**

The learning process that is designed for this subject is based on the following:

Matter is it structured in 32 sessions of teaching large groups of 1 hour and 10 teaching sessions to small groups of 4 hour (for student)

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The content of theoretical teaching sessions will be supported by the literature previously recommended.

### 5.2.Learning activities

Theoretical activities and planned to acquire the specific skills of the subject and the general and transverse graduation practices

"We must remind all students that if activities exercises include data related to the medical history or personal data of the patient strict confidentiality is required"

### 5.3.Program

The program that the student is offered to help him/her to achieve the expected results includes the following activities :

#### Topics in Radiology block:

- 1.-Traumatic injuries of the head, face and neck. Radiological semiology. Clinical guidelines for diagnostic use.
- 2.- Space-occupying lesions of the central nervous system. Brain tumors. Clinical guidelines for diagnostic use.
- 3.- Cerebral vascular pathology. Stroke and brain hemorrhage. Clinical guidelines for diagnostic use. Image Guided Minimally Invasive Techniques.
- 4.-Thorax Pathology. Parenchymal disease. Differential diagnosis between alveolar and interstitial diseases. Diagnostic Clinical guidelines
- 5.-Tumors, nodules and pulmonary cysts. Differential diagnosis. Staging of lung cancer. Diagnostic Clinical guidelines
- 6.- Pleura and mediastinum diseases. Opaque thorax, pneumothorax. Mediastinal tumors. Diagnostic Clinical guidelines

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- 7.- Emergency management in Pneumology. Hemoptysis and pulmonary embolism. CT value
- 8.- Radiology in space occupying lesions of the abdomen (LOES). Diagnostic Clinical guidelines. (Esta vez está bien)
- 9.- Radiology of acute abdomen. Viscera perforation. Intestinal Occlusion. Acute peritonitis.
- 10- Radiology of liver and pancreatic diseases. Image diagnostic of Jaundice. Pancreatitis. Portal hypertension.
- 11.-Radiology of abdominal vascular diseases. Gastrointestinal bleeding. Diagnostic Clinical guidelines.
- 12.-Radiology of the urinary tract: pyelonephritis, obstructive uropathy, bladder, prostate and male gonads diseases, renal tumors. Diagnostic. Clinical guidelines
- 13.- Radiology of the vascular system. Diagnostic clinical guidelines.
- 14.-Radiology of the female genital tract. Breast cancer. Diagnostic Clinical Guide
- 15.- Radiology of the bone diseases . Changes in bone density. Bone fractures. Arthrosis and arthritis. Bone tumors. Diagnostic Clinical Guidelines.

### **Seminars :**

- 1.--Reading and interpretation of chest radiographs in different projections. Indications and limitations**

Objective: The student must be able to identify RX normal

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**2.--Reading and interpretation of CT brain. " 5 slices of the brain CT ". Patterns of normality and more frequent diseases . Indications and limitations.**

Objective: The student must know how to look a CT brain at key anatomical points and recognize normal patterns

**3.--Breast. Identifying normal patterns and description of the main pathological changes. Screening program.**

Objective. The student must know the significance of the discovery of mammographic abnormality diagnosis and the main clinical diagnostic guidelines.

**4.-Osteoarticular pathology. Reading an X-ray bone and osteoarticular area.**

Objective: The student must be able to recognize major traumatic and non-traumatic bone injuries

### **Topics block . Nuclear Medicine**

1.-Skeletal scintigraphy in malignant bone diseases

2.-Skeletal scintigraphy in non neoplastic osseous disorders

3.-Clinical applications of urinary nuclear medicine

4.-Clinical applications of endocrine nuclear medicine. Metabolic therapy

5.-Lymphoscintigraphy in Oncology . Radioguided surgery

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6.-The role of PET-CT

7.-PET-CT. Applications in oncology

### **Seminars:**

4 Nuclear medicine seminars in which the following issues will be analyzed: present clinical cases that may be related to the topic block or other current applications of nuclear medicine in pathologies that are already known

1. Pulmonary embolism. Role of V / P in diagnosis

2. Studies of myocardial perfusion. When we use?

3. Patient with thyroid disease . Role of Nuclear Medicine

4. Patient with breast tumor . Role of Nuclear Medicina

The seminars will be held with the active participation of students through different systems of simulation. They will begin in the OSCE (objective structured clinical evaluation) by simulating these clinical cases. It will be provided with specific material and information for the active participation in these seminars.

### **Topics block : Radiotherapy**

1. Gynecologic tumors (uterus and cervix). Indications of radiotherapy. Integration with other cancer therapies.

2. Tumors Otorrinolaringologic sphere. Indications of radiotherapy. Integration with other cancer therapies.

3. Lung Tumors. Indications of radiotherapy. Integration with other cancer therapies.

4. Rectum and gastrointestinal tumors. Indications of radiotherapy. Integration with other cancer therapies.

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### **Seminars:**

2 Radiation Oncology seminars in which will be analyzed and will present clinical cases will arise.

The seminar topics are:

1.- Prostate tumors. Clinical Practice Guidelines

2. Breast tumors. Clinical Practice Guidelines.

### **Topics block of Physical Medicine and Rehabilitation:**

1. Rehabilitation in musculoskeletal disorders: orthopedic, inflammatory, traumatic pathologies, mechanical alterations and degenerative processes

2. Rehabilitation in neurological diseases: peripheral nerve disease, demyelinating disorders, acquired brain injury and spinal cord injury

3. Rehabilitation in cardiovascular diseases: coronary disease

4. Pulmonary Rehabilitation of obstructive and restrictive pulmonary disease

5. Geriatric and sociosanitary Rehabilitation

### **Seminars**

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4 Rehabilitation seminars in which clinical cases related to the Topics block of Physical Medicine and Rehabilitation will be analyzed and presented

1- Musculoskeletal disorders : Back pain and lumbar sciatic pain, hip fracture, painful shoulder

2- Pathologies of the nervous system. vascular stroke, spinal cord injury

3- Cardiovascular and respiratory diseases. Ischemic heart diseases, chronic obstructive pulmonary disease.

### 5.4.Planning and scheduling

Scheduled sessions and presentation of works

They appear in the Guide as the organization of 8 th semester is planned

### 5.5.Bibliography and recommended resources

Zaragoza:

- |           |  |
|-----------|--|
| <b>BB</b> | Anatomía radiológica para estudiantes / Miguel Ángel de Gregorio [dir.] ; [autores, Eduardo Ramón Alfonso... et al.] . - [1ª ed.] Zaragoza : Watson : Aqua, D. L. 2013<br>Gregorio Ariza, Miguel Ángel de. |
| <b>BB</b> | Radiología para estudiantes / M. A. de Gregorio Ariza, H D'Agostino, E. R. Alfonso Aguirán . - 2ª ed. Zaragoza : Aqua, 2004  |
| <b>BB</b> | Manual SERMEF de rehabilitación y medicina física / I. Sánchez Blanco ... [et al.] . - 1ª ed., 1ª reimp. Buenos Aires ; Madrid [etc.] : Editorial Médica Panamericana, 2008                                |
| <b>BB</b> | Medicina Nuclear en la práctica clínica / editores, A. Soriano Castrejón, J. Martín-Comín, A. Mª. García Vicente . - 2ª ed. Madrid : Aula Médica, D.L. 2012  |
| <b>BB</b> | Oncología radioterápica : principios, métodos, gestión y práctica clínica / editor coordinador, Felipe A. Calvo ; coeditores,  |

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- Albert Biete... [et al.] Madrid : Arán, D.L. 2010
- BB** PET/TC : imagen oncológica con PET/TC diagnóstica / Todd M. Blodgett... [et al.] [Madrid] : Marbán, cop. 2012
- BB** Ziessman, Harvey A.. Medicina nuclear : los requisitos en radiología / Harvey A. Ziessman, Janis P. O'Malley, Jamens H. Thrall ; [revisión, Isabel Lara Aguilera] . - [3ª ed.] Amsterdam ; Barcelona; Madrid [etc.] : Elsevier, D.L. 2007
- BC** Frontera, Walter R.. Essentials of physical medicine and rehabilitation. Musculoskeletal Disorders, Pain and Rehabilitation. 2nd ed.
- BC** Heyward, Vivian H.. Evaluación de la aptitud física y prescripción del ejercicio / Vivian H. Heyward. . [3ª ed. en español, traducción de la] 5ª ed. [en inglés] Buenos Aires ; Madrid [etc.] : Editorial Médica Panamericana, D.L. 2008.
- BC** Manual ACSM para la valoración y prescripción del ejercicio / [director principal, W. Larry Kenney] . - 2ª ed., 1ª reimp. Barcelona : Paidotribo, cop. 2007
- BC** Rehabilitación / Sociedad Española de Rehabilitación y Medicina Física Madrid : Garsi, 1967- [Publicación periódica]

### LISTADO DE URLs:

American College of Sports Medicine -  
[<http://www.acsm.org/access-public-information/position-stands>]

Biblioteca de Guías de Práctica Clínica del Sistema Nacional de Salud -  
[<http://Guiassalud>]

European Association of Nuclear Medicine  
-  
[<http://www.eanm.org/publications/guidelines/index.php?navId=37>]

Guia de prescripció d'exercici físic per a la salut -  
[<http://www20.gencat.cat/docs/canalsalut/Home%20Canal%20Salut/Professionals>]

MIR Mallinckrodt Institute of Radiology -  
[<https://www.mir.wustl.edu/>]

SERAM: Sociedad española de radiología médica -  
[<http://seram.es/modules.php?name=webstructure&lang=ES&idwebstructure=100>]

Sociedad Española de Medicina Nuclear e Imagen Molecular -  
[<http://www.semnim.es/>]