

Academic Year/course: 2021/22

## 26723 - Physical diagnostic and therapeutic procedures II

### Syllabus Information

**Academic Year:** 2021/22

**Subject:** 26723 - Physical diagnostic and therapeutic procedures II

**Faculty / School:** 104 - Facultad de Medicina

**Degree:** 304 - Degree in Medicine

**ECTS:** 6.0

**Year:** 4

**Semester:** Second semester

**Subject Type:** Compulsory

**Module:**

### 1. General information

### 2. Learning goals

### 3. Assessment (1st and 2nd call)

### 4. Methodology, learning tasks, syllabus and resources

#### 4.1. Methodological overview

The methodology followed in this course is oriented towards the achievement of the learning objectives. It favors the acquisition of knowledge related to diagnostic imaging, rehabilitation, and radiotherapy. A wide range of teaching and learning tasks are implemented, such as lectures, seminars, and autonomous work.

Students are expected to participate actively in the class throughout the semester.

Classroom materials will be available via Moodle.

#### 4.2. Learning tasks

The course includes the following learning tasks:

- Theoretical activities and planned to acquire the specific skills of the subject and the general and transverse graduation practices.
- The subject is structured in 30 sessions of teaching large groups of 1 hour and 10 teaching sessions to small groups of 4 hours (for student)
- The content of theoretical teaching sessions will be supported by the literature previously recommended.

"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"

#### 4.3. Syllabus

The course will address the following topics:

##### **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
- 7.- Emergency management in Pneumology. Hemoptysis and pulmonary embolism. CT value
- 8.- Radiology in space-occupying lesions of the abdomen (LOES). Diagnostic Clinical guidelines.
- 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 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

- 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 at a CT brain at key anatomical points and recognize normal patterns

- 3.-Breast. Identifying normal patterns and descriptions 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. Generalities. Applications of nuclear medicine in malignant bone diseases and nonneoplastic osseous disorders.

- 2.-Clinical applications of nuclear medicine in urology and neurology

- 3.-Radioguided surgery. Sentinel lymph node biopsy and other radioguided surgeries

- 4.-PET-CT I. Concept. Radiotracers. <sup>18</sup>F-FDG PET-TC. Generalities

- 5.-PET-CT II. Clinical applications of <sup>18</sup>F-FDG PET-TC in oncology 1.

- 6.- PET-TC III. Clinical applications of <sup>18</sup>F-FDG PET-TC in oncology 2. Other radiotracers. Non-oncologic applications of PET-TC.

- 7.- Metabolic therapy. Differentiated thyroid cancer. Hiperthyroidism. Teragnosis

#### **Seminars:**

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 do we use it?

3. Nuclear Medicine in thyroid diseases

4. Patient with a breast tumor. Role of Nuclear Medicine

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. Breast Tumors. Indications of radiotherapy. Integration with other cancer therapies.

#### **Seminars:**

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

The seminar topics are:

- 1.-Prostate tumors. Clinical Practice Guidelines
- 2. Rectum and gastrointestinal tumors. Clinical Practice Guidelines

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

Physical Medicine and Rehabilitation theory block:

- 1.- Neurorehabilitation: Spinal cord injury and brain injury due to head trauma and stroke
- 2.- Orthoprosthesis
- 3.- Child Rehabilitation
- 4.- Lymphedema rehabilitation

Physical Medicine and Rehabilitation Seminars where the following topics will be discussed:

- 1.- Rehabilitation in musculoskeletal pathology: Painful shoulder
- 2.- Rehabilitation in musculoskeletal pathology: hip fracture in the elderly
- 3.- Rehabilitation of pelvic floor pathology
- 4.- Cardiorespiratory rehabilitation
- 5.- Neurorehabilitation: Diagnostic-therapeutic update in Spinal Cord Injury
- 6.- Neurorehabilitation: Exploration of the patient with Spinal Cord Injury. ASIA Scale

#### **4.4. Course planning and calendar**

Scheduled sessions and presentation of works

They appear in the Guide as the organization of 8<sup>th</sup> semester is planned

<http://medicina.unizar.es/cuarto-curso>

Further information concerning the timetable, classroom, office hours, assessment dates and other details regarding this course will be provided on the first day of class or please refer to the "Facultad de Medicina" website and the Degree website

<http://medicina.unizar.es>, <http://moodle2.unizar.es>

#### **4.5. Bibliography and recommended resources**

The updated bibliography of the subject is consulted through the web page of the library:

<http://psfunizar10.unizar.es/br13/egAsignaturas.php?codigo=26723>