



Universitat de Lleida

DEGREE CURRICULUM
NEPHROLOGY AND UROLOGY

Coordination: MARTÍN CONDE, MARÍA LUISA

Academic year 2023-24

Subject's general information

Subject name	NEPHROLOGY AND UROLOGY			
Code	100584			
Semester	2D SEMESTER - DEGREE - JUN/SET			
Typology	Degree	Course	Character	Modality
	Bachelor's Degree in Medicine	3	COMPULSORY	Attendance-based
Course number of credits (ECTS)	4.5			
Type of activity, credits, and groups	Activity type	PRALAB	PRAULA	TEORIA
	Number of credits	0.3	0.5	3.7
	Number of groups	6	4	1
Coordination	MARTÍN CONDE, MARÍA LUISA			
Department	MEDICINE AND SURGERY			
Important information on data processing	Consult this link for more information.			

Teaching staff	E-mail addresses	Credits taught by teacher	Office and hour of attention
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Learning objectives

The student will be able to

1. Process the data from the clinical history and complementary tests to establish the diagnosis of the main nephrological and urological syndromes. Acute renal failure, chronic kidney disease, nephritic syndrome and nephrotic syndrome
2. Propose the necessary procedures to establish the etiological diagnosis and the differential diagnosis
3. Recognize the anatomical-pathological characteristics of the most prevalent nephropathies
4. Evaluate arterial hypertension, target organ damage and its treatment
5. Categorize cardiorenal syndrome
6. Integrate knowledge of pharmacology in the treatment of the main nephrological syndromes
7. At the end of the subject, the student should know the most significant groups of drugs in the treatment of diseases of the urinary system and the cardiovascular system
8. At the end of the subject, the student should be able to assess the pharmacokinetic and pharmacodynamic

aspects that mediates the use of the drugs studied in the subject.

Competences

Competences Collected in the BOE 15 February 2008, Ministerial Order ECI/332/2008

Understand and recognize the normal structure and function of the human body at the molecular, cellular, tissue, organic and systems levels in the different stages of life
Recognize, diagnose and guide the main nephrological diseases
Learn the indications for biochemical, hematological, microbiological and immunological tests
Learn to interpret the results of laboratory diagnostic tests
Learn the indications for imaging tests
Assess the risk/benefit ratio of diagnostic and therapeutic procedures
Pathological anatomy of the different organs and systems
Pharmacology of the different organs and systems
Know how to properly prescribe the different drugs

Subject contents

THEORETICAL TEACHING: Nephrology, Urology and Pathological Anatomy

NEPHROLOGY CLASSES

MagNFR1 Acute Renal Failure (1): etiology, pathophysiology and pathology M. Martin
MagNFR2 Acute Renal Failure (2): clinic, differential diagnosis, prognosis and treatment M. Martín
MagNFR3 Generalities Glomerulonephritis. Pathophysiology of nephrotic syndrome M. Martín
MagNFR4 Minimal change nephrotic syndrome. Focal segmental glomerulosclerosis. Membranous Nephropathy M. Martin
MagNFR5 IgA Nephropathy and Henoch Schölein Purpura. Nephritic syndrome M. Martin
MagNFR6 Mesangiocapillary glomerulonephritis and cryoglobulinemia M. Martín
MagNFR7 Rapidly progressive glomerulonephritis. Kidney involvement in vasculitis M. Martín
MagNFR8 Secondary glomerulopathy. Lupus nephropathy M. Martin
MagNFR9 Chronic kidney disease: etiology and pathophysiology L. Craver
MagNFR10 Chronic Kidney Disease: Uremic Syndrome Clinic L. Craver

MagNFR11 Renal replacement therapy: Dialysis and Renal Transplantation M. Martin
MagNFR12 Renal tubulopathies: Fanconi syndrome, renal tubular acidosis, Bartter syndrome and nephrogenic diabetes insipidus M. Martin
MagNFR13 Diabetic nephropathy M. Martín
MagNFR14 Myeloma nephropathy and amyloidosis. Light chain nephropathy. Immunotactoid and fibrillary glomerulonephritis L. Craver
MagNFR15 Diseases of the renal arteries and veins; Vasculorenal hypertension and ischemic nephropathy. Diseases of the renal microcirculation: Benign and malignant hypertensive nephroangiosclerosis M. Martín
MagNFR16 Kidney disease in pregnancy M. Martin
MagNFR17 Thrombotic microangiopathy and hemolytic uremic syndrome M. Martín
MagNFR18 Hereditary kidney diseases M. Martín
MagNFR19 Tubulointerstitial and toxic nephropathy M. Martín

UROLOGY CLASSES

MagURO1 OBSTRUCTIVE UROPATHY JR Bordalba
MagURO2 RENAL LITHIASIS M. Palomera
MagURO3 BPH/SYMPTOMS OF THE LOWER URINARY TRACT JR Bordalba
MagURO4 INFECTIOUS AND INFLAMMATORY PATHOLOGY JR Bordalba

MagURO5 CHILDREN'S UROLOGY D. Garcia

MagURO6 MALE INFERTILITY JR Bordalba
MagURO7 ERECTION AND EJACULATION DISORDERS JR Bordalba
MagURO8 TESTICULAR AND PENIAL NEOPLASIA JR Bordalba
MagURO9 PROSTATE NEOPLASIA D. Garcia
MagURO10 RENAL NEOPLASIA D. Garcia
MagURO11 UROTHELIAL NEOPLASIA D. Garcia
MagURO12 UROLOGICAL EMERGENCIES I JR Bordalba
MagURO13 UROLOGICAL EMERGENCIES II JR Bordalba
TEMARI PATHOLOGICAL ANATOMY
MagAP1 ALL P. Gallel
MagAP2 ALL P. Gallel
MagAP3 ALL P. Gallel

SEMINARS

Two hours of group 1/4 seminars (groups A, B, C and D)

SemAP1 On-site Group A P. Gallel

SemAP1 On-site Group B P. Gallel

SemAP1 On-site Group C P. Gallel

SemAP1 On-site Group D P. Gallel

SemNFR1 A ACUTE RENAL FAILURE SEMINAR M. Martín

SemNFR1 B ACUTE RENAL FAILURE SEMINAR M. Martín

SemNFR1 C ACUTE RENAL FAILURE SEMINAR M. Martín

SemNFR1 D ACUTE RENAL FAILURE SEMINAR M. Martín

SemNFR2 A GLOMERULAR PATHOLOGY SEMINAR M. Martín

SemNFR2 B GLOMERULAR PATHOLOGY SEMINAR M. Martín

SemNFR2 C GLOMERULAR PATHOLOGY SEMINAR M. Martín

SemNFR2 D GLOMERULAR PATHOLOGY SEMINAR M. Martín

SemNFR3 A CHRONIC RENAL FAILURE SEMINAR I.Craver

SemNFR3 B CHRONIC RENAL FAILURE SEMINAR I.Craver

SemNFR3 C CHRONIC RENAL FAILURE SEMINAR I.Craver

SemNFR3 D CHRONIC RENAL FAILURE SEMINAR I.Craver

Two hours of seminar for group 1/8- Nephrology Service

SemNFR4 A RENAL REPLACEMENT TREATMENT SEMINAR M. Martín

SemNFR4 B RENAL REPLACEMENT TREATMENT SEMINAR M. Martín

SemNFR4 C RENAL REPLACEMENT TREATMENT SEMINAR M. Martín

SemNFR4 D SEMINAROI RENAL REPLACEMENT TREATMENT M. Martín

PHARMACOLOGY SEMINARS

SemFAR1 Diuretics (I) J. BOIX

SemFAR2 Diuretics (II) J. BOIX

SemFAR3 Antagonists of the renin-angiotensin-aldosterone system J. BOIX

Seminar 1. Diuretic drugs (1).

Distinguish osmotic diuresis from saluretic. Place mannitol as a diuretic. Pharmacologically characterize carbonic anhydrase inhibitors. Describe the pharmacological properties of diuretics that act at the level of the loop of Henle. Explain the mechanism of action, effects and applications of thiazide diuretics.

Seminar 2. Diuretic drugs (2).

Expose the characteristics of antialdosterone diuretics. Prevent complications that occur in patients treated with diuretics. Assess other drugs that secondarily have diuretic activity. Define the concept of hydrosaline balance. Characterize the different types of imbalances. Pharmacologically assess intravenous perfusion solutions.

Seminar 3. RAAS (Renin-Angiotensin-Aldosterone-System) antagonist pharmacology.

Discuss the physiology of the RAAS and the effects of angiotensin II. Characterize angiotensin converting enzyme (ACE) inhibitor drugs. Refer to the most relevant aspects of its pharmacokinetics. Describe the effects and infer the indications of ACEIs. Place other blocking drugs of the renin-angiotensin-aldosterone system (RAAS). Refer and compare other drugs in the treatment of arterial hypertension.

Methodology

The master classes (whole group) will be ON SITE and attendance will not be compulsory. The didactic material used by the teacher will be available. The seminars will be IN SITE, compulsory attendance and in small groups (1/4 of the class, 1/8 NFR4 seminar), will deal with clinical cases with an exam of the case (uploaded in advance) at the beginning of each seminar. The seminar 4 NFR4 of nephrology is subject to the presentation of previous work

Practices

Activity	Objective	Format
Classes	Introduction and guide to personal work Full explanation of a topic. Attendance is not controlled and knowledge is assessed in the theoretical exam	Whole group
Seminars PHARMACOLOGY	The evaluation of the PHARMA seminars will be carried out and evaluated within the cardiology subject	Whole group
Seminars NEPHROLOGY	Iconographic participatory class in small groups oriented to review clinical cases. Evaluation exam of the case uploads in advance will be held at the beginning of the activity	On Site 1/4 Group 1/8 Group SemNFR4
Practices	Nephrology Service workshop (Sem NFR4)	1/8 group
Mentoring	Resolution of doubts (Sakai portal messages always with a copy to the teacher's email) Individual	Individual

Evaluation

FINAL THEORETICAL EVALUATION 60%: PRESENTIAL TEST EXAM

The conceptual and theoretical knowledge will be evaluated at the end of the course through an on site multiple choice examination. The result obtained in this exam will constitute 60% of the final grade. The areas of knowledge of Nephrology, Urology and Pathological Anatomy will be assessed final theoretical evaluation.

In order to pass the subject, it is necessary to obtain a grade equal to or greater than 5 out of 10 in the exam.

Only those who have passed the theoretical part will add the mark of the continuous evaluation to obtain the final mark.

NEFRO/URO/APA exam:

Multiple choice exam. 90 multiple choice questions with 5 possible answers each and only 1 valid. The correct answers add 1 point, the erroneous answers deduct -0.25 points and the unanswered ones are neutral to evaluation

NEPHRO/URO/APA EXAM

Final Exam is tipus test. 90 question multiple choice exam : 5 possible answers and just 1 valid. Right guess adds 1 point, failed answers deduct -0.25 points and blank answers are neutral to evaluation.

La distribución de preguntas será la siguiente: 90 exam questions will be distributed as follows: Nephrology: 54 ; Urology: 30; Pathology: 6.

In order to pass the subject, it is necessary to obtain a grade equal to or greater than 5 out of 10 in the exam

Duration of exam: 120 minutes.

RECUPERACIÓN:

The total recovery of the subjects will take place in September. Evaluation criteria will be the same
Students who fail the September's exam will keep the mark obtained in the continuous evaluation for future exams, but they have the option of taking the continuous evaluation again. In this case, the grade obtained in the last evaluation will always prevail.

FINAL CONTINUOUS EVALUATION 40%

Continuous evaluation represent 40% of final degree and is not recoverable. Its result is kept .

- **Seminars (Nephrology) : On site. Attendance is compulsory**

ALTERNATIVE EVALUATION: current regulations will be applied