



Non-Commercial Educational Institution
Educational-Scientific-Production Complex
«International University of Kyrgyzstan»

Quality Management System
Academic and methodological complex of the discipline
«Nephrology»
MEP of «General Medicine» ISM IUK

INTERNATIONAL UNIVERSITY OF KYRGYZSTAN
INTERNATIONAL SCHOOL OF MEDICINE
Department of Therapy



Syllabus

OF THE DISCIPLINE
«NEPHROLOGY»

Main educational program

specialty of **560001 General Medicine (for foreign citizens)**
(code, direction name / specialty)

qualification of the graduate: general practitioner
(the qualification of the graduate is indicated in accordance with SES HPE)

Full-time education

Course 3

Semester 6

Credit / Exam (6)

Total curriculum credits 2

Work program developer: PhD. Toktogula N. A.

Head of the Department: Prof. Baitova G. M.

Bishkek 2021



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1. The work program of the academic discipline

1.1.Explanatory note

- **Mission of the ISM IUK** – *training of competent specialists in the field of medicine, consistent with international standards and traditions of medical ethics, ready for continuous professional growth using modern achievements of science and practice, to solve public health problems.*

Annotation of the academic discipline

The AMC for the "Nephrology" discipline is compiled in accordance with the Regulations on the Academic and Methodological Complex of the discipline, approved by the Protocol of the Academic Council No. 6 of October 20, 2020, by the Addendum to the Regulations on the modular grade-rating system for assessing the knowledge of students in the NCEI ESPC "IUK" (Protocol No. 42 of 07.26.2018, as well as on the basis of the State educational standard of higher professional education in the direction of "Medicine", approved by the Government Decree of 2015. The AMC of the "Nephrology" discipline was developed for third-year students in the direction of "General Medicine" 560001 in compliance with the requirements of the State Educational Standard of Higher Professional Education of the Ministry of Education and Science of the Kyrgyz Republic.

There is not a single condition and disease in which the kidneys are not "interested". In this case, most often, the dysfunction is masked by the symptoms of the underlying disease, or it proceeds latently. Timely identification of the main renal symptoms, verification of the disease and adequate treatment will not only improve the patient's quality of life, but will reduce the rate of progression of chronic renal failure of the natural outcome of all chronic diseases. Studying the discipline of nephrology will expand the understanding of the causes, the variety of manifestations, the subtleties of choosing therapy for various, currently most frequent injuries. This knowledge will be useful in any branch of medicine, regardless of the chosen specialization in the future.

The study of the discipline in the 3rd year is necessary for the preparation of a general practitioner who knows the basics of clinical research of a nephrological patient with subsequent symptoms and syndromes, who knows the basics of etiology, clinical picture, classification, treatment of the main, most common diseases of the kidneys and urinary tract and their prevention.

- **Goals and objectives of the discipline**



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The purpose of the training: to work out the skills of recognizing diseases, understanding their causes and mechanisms of development, choosing the tactics of patient management.

Tasks: to be able to identify the main renal syndromes, draw up a plan for laboratory and instrumental examination of the patient, formulate a diagnosis in accordance with modern classifications, outline a rational pharmacotherapy of the disease

• **Place of discipline in the structure of MEP (prerequisites, postrequisites).**

Requirements for the preliminary preparation of the student:

To study this academic discipline (module), you need the following knowledge, skills and abilities formed by previous disciplines:

- Pathophysiology, clinical pathophysiology
- Propedeutics of internal diseases
- Pharmacology
- Pathological anatomy
- Psychology and pedagogy
- Normal physiology

Subsequently, the knowledge gained in the course of studying the discipline "Nephrology" will be necessary in the study of disciplines: "Internal medicine", "Polyclinic therapy", production practice "Physician assistant".

Competencies of students, formed as a result of mastering discipline, the planned results of mastering the discipline.

The study of this academic discipline is aimed at the formation of the following students general cultural (GC), general professional (GPC) and professional (PC) competencies:

	code / content of competency	As a result of studying the academic discipline, students must to:
2	PC-2 - is able and ready to conduct and interpret a survey,	know: - the basics of organizing outpatient and inpatient care for children, adolescents and adults,



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	physical examination, clinical examination, the results of modern laboratory and instrumental studies, to write a medical record of an adult outpatient and inpatient.	modern organizational forms of work and diagnostic capabilities of outpatient services; be able to: - collect anamnesis; interview the patient and his relatives, conduct a physical examination of the patient of various ages (examination, palpation, auscultation, blood pressure measurement, determination of pulse characteristics, respiratory rate, etc.); master: - methods of general clinical examination of patients;
3	PC-3 - is able to conduct pathophysiological analysis of clinical syndromes, substantiate pathogenetically justified methods (principles) of diagnosis, treatment, rehabilitation and prevention among adults and children, taking into account their age and sex groups;	know: - the concepts of etiology, pathogenesis, morphogenesis, pathomorphosis of the disease in an adult and adolescent, the principles of classification of diseases; basic concepts of general nosology; be able to: - interpret the results of the most common methods of laboratory and functional diagnostics, thermometry to identify pathological processes in human organs and systems; master: - interpretation patients' results of laboratory, instrumental diagnostic methods;
Diagnostic activity:		
6	PC-13 - is able to identify in patients the main pathological symptoms and syndromes of diseases, using knowledge of the basics of biomedical and clinical disciplines, taking into account the course of pathology in organs, systems of the body as a whole, to analyze the patterns of functioning of organs and	know: - functional systems of the human body, their regulation and self-regulation when exposed to the external environment in normal and pathological processes; the structure and function of the immune system in adults and adolescents, its age characteristics, mechanisms of development and functioning, the main methods of immunodiagnostics, methods for assessing the immune status and indications for the use of immunotropic therapy;



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	<p>systems in various diseases and pathological processes, use the algorithm for making a diagnosis (main, concomitant, complications), taking into account the ICD-10, carry out the main diagnostic measures to identify urgent and life-threatening conditions;</p>	<p>be able to: - analyze the histophysiological assessment of the state of various cellular, tissue and organ structures in patients;</p> <p>master: - interpretation patient's results of laboratory, instrumental diagnostic methods;</p>
Treating activity:		
7	<p>PC-14 - is able to perform basic therapeutic measures for the most common diseases and conditions in adults and children;</p>	<p>know: - the clinical picture, features of the course and possible complications of the most common diseases occurring in a typical form in children, adolescents and adults;</p> <p>be able to: - to substantiate the need for clinical and immunological examination of a sick adult and adolescent, to analyze the effect of drugs in terms of the totality of their pharmacological properties and the possibility of their use for therapeutic treatment of patients of different ages;</p> <p>master: - an algorithm for setting a preliminary diagnosis of patients with their subsequent referral for additional examination and to specialist doctors; an algorithm for setting a detailed clinical diagnosis.</p>

Requirements for the level of preparation of the student who completed the studying the program of this discipline.

As a result of studying the basic part of the cycle, the student have to:

know:

- the definition of the disease, etiology, risk factors (RF), pathogenesis, pathomorphology, classification, clinical picture, laboratory and instrumental diagnostics, principles of treatment;

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- the etiology, pathogenesis, clinic, diagnostic methods and emergency care of urgent conditions;
- to list the complications of diseases.
- the principles of drug therapy, indications and contraindications for the use of drugs (Treatment Agent).
- the prognosis of diseases, RF of development of life-threatening conditions.

Understand:

- the pathogenesis of the formation of certain syndromes and symptoms in nephrology, pathomorphology of the main syndromes;
- the results of laboratory and instrumental diagnostic methods;
- the principles of emergency care for nephrological patients;
- the principles of drug therapy and principles of treatment control.

Able to use:

- the methods of physical examination for making a preliminary diagnosis and determining a plan for the examination of a nephrological patient;
- the results of laboratory and instrumental studies in determining the tactics of treatment;
- the data of an objective examination and the results of the patient's study in writing a student's medical history with a substantiation of the clinical diagnosis.

Able to carry out:

- the recognition and correct diagnosis of the most common nephrological syndromes in their typical course;
- the assessment of the activity of the pathological process, its form, stage and phase of the course in accordance with the officially approved classifications, the severity of complications;
- the drawing up a plan for laboratory and instrumental examination to confirm the alleged diagnosis and interpret the results obtained;



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- the formulation a detailed clinical diagnosis, guided by the modern classification of diseases;
- the detailed diagnosis in a particular patient, exactly, the etiology, mechanism of development and pathomorphology of the disease, to highlight complications.

Able to analyze:

- the substantiation of the underlying disease of the clinical diagnosis in a particular patient with an assessment of the examination results and identify the criteria for the diagnosis of this disease;
- the substantiation of the etiology of the disease in the patient;
- the appointment of adequate individual therapy by filling out the "Prescription sheet" and "Temperature sheet" of the supervised patient;
- the clinical manifestations of some emergency conditions, to carry out a detailed condition, urgent diagnostics and have the skills to provide emergency medical care.

Able to evaluate:

- the scheme of non-and drug treatment of the patient in accordance with the diagnosis and morphological changes, including determining the indications and therapeutic contraindications for surgical intervention, and its urgency;
- the prognosis of the disease for the life of a particular patient;
- measures of primary and secondary prevention; the latter (including) in the supervised patient;

Master:

- the methodology for collecting complaints and anamnesis of the patient;
- the methods of propaedeutics of various body systems: examination, palpation, percussion and auscultation of internal organs;
- the skills of interpreting the anamnesis data, objective examination of the patient, his laboratory and instrumental data;



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- the skills of presenting an independent point of view, analysis and logical thinking, public speech, ethical argumentation, conducting discussions and round tables, the principles of medical deontology and medical ethics;
- the skills of informing the patient and their relatives;
- the foreign language in the volume for communication and obtaining information from foreign sources.

Recommended educational technologies

The following types of educational work are used: lecture-visualization, lecture, press conference, trainings, debates among students, master classes, discussions of various formats, business and role-playing educational games, small group method, classes using simulators, dummies, imitators, analysis of clinical cases, preparation and defense of medical history, participation in research work, conducting subject Olympiads, preparation and defense of abstracts.

1.2. The scope of the discipline and types of academic work

Form of education – full time

Academic plan for 2015	6 sem.	Total	
		in hours	in credits
Total labor intensity	56	56	1,86
Classroom works	32	32	1,06
Lectures	12	12	0,4
Practical classes	20	20	0,66
Independent work	12	12	0,4
SIWT	12	12	0,4
Type of final control			Exam

1.3. Structure of Discipline

Course	Semester	Number of Credits	Quantity of Academic		Independent work		Total hours
			Lecture	Practical classes	SIW	SIWT	
3	6		12	20	12	12	56
TOTAL			12	20	12	12	56



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1.3.1. Thematic plan for studying the Discipline.

№	Name of sections and topics of disciplines (lectures and practical classes)	Quantity of academic hours			Individual work			Formed Competencies	Used edu. techs, means and methods of edu.	Form of control
		Lectures	Practical classes	Total classroom hours	SIWT	SIW	TOTAL HOURS			
1	Anatomy and physiology of the kidney. Methods of examination of a nephrological patient. Major syndromes in nephrology (lec., prac.) Kidney abnormality (SIWT)	1	2	3	1	1	5	PC-2, PC-3, PC-13, PC-14	video lecture, debate, brainstorming	Testing, case studies, assessing the development of practical skills (abilities)
2	Glomerulonephritis (lec., prac.)	2	2	4	2	2	6	PC-2, PC-3, PC-13, PC-14	Video lectures	



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3	Pyelonephritis (lec., prac.)	1	2	3	1	1	5	PC-2, PC-3, PC-13, PC-14	Debates, video lectures	Testing, case studies, assessing the development of practical skills (abilities)
4	Amyloidosis. Classification of the causes of the development of amyloidosis, clinical manifestations, laboratory and instrumental methods for diagnosing amyloidosis (lec., prac.) Cystic kidney disease (SIW)	1	2	3	1	1	5	PC-2, PC-3, PC-13, PC-14	Video lectures, brainstorming	Testing, case studies, assessing the development of practical skills (abilities)
5	Tubulointerstitial nephropathy Clinic of acute and chronic TIN. Laboratory and instrumental diagnostics. Principles of therapy (lec., prac.) Reflux nephropathy (SIW)	2	2	4	1	1	6	PC-2, PC-3, PC-13, PC-14	Video lectures, debates	Testing, case studies, assessing the development of practical skills (abilities)



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<p>6 Kidney damage in metabolic and systemic diseases (lec)</p> <p>Diabetic nephropathy. Stages of DN development, clinical presentation, early clinical and laboratory diagnosis. Prevention and modern methods of treatment of DN (practical)</p> <p>Kidney damage in systemic vasculitis, with Shenlein-Henoch purpura, thrombotic microangiopathies, Sjogren's syndrome (practical)</p> <p>Medicinal nephropathy (practical)</p> <p>Modern concepts of nephroprotective therapy (SIW)</p> <p>SLE with kidney involvement (SIWT)</p>	2	2	4	1	1	7	PC-2, PC-3, PC-13, PC-14	Video lectures, debates, brainstorming	Testing, case studies, assessing the development of practical skills (abilities)
<p>7 Acute renal failure (Lecture, practical)</p> <p>Principles of conservative management of a patient with acute renal failure. Dialysis therapy for patients with acute kidney injury (SIWT)</p> <p>Dysmetabolic nephropathy. Kidney damage in alcoholism and drug addiction (SIW)</p>	1	2	3	1	1	6	PC-2, PC-3, PC-13, PC-14	Video lectures, debates	Testing, case studies, assessing the development of practical skills (abilities)



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8	Chronic renal failure. Modern concepts of etiopathogenesis of chronic renal failure. Clinic, diagnosis of chronic renal failure (lec, praC) APS and disseminated intravascular coagulation syndrome in nephrological practice (SIWT)	1	2	3	1	1	5	PC-2, PC-3, PC-13, PC-14	Video lectures	Testing, case studies, assessing the development of practical skills (abilities)
9	Kidney stone disease (lec, prac) Diet therapy for kidney disease (SIW) Kidney transplant (SIWT)	1	2	3	1	1	5	PC-2, PC-3, PC-13, PC-14	Video lectures	Testing, case studies, assessing the development of practical skills (abilities)
10	Emergencies in nephrology (practice) Nephrotic crisis (SIW)		2	2	2	2	5	PC-2, PC-3, PC-13, PC-14	Video lectures, brainstorming	Testing, case studies, assessing the development of practical skills (abilities)
	Total for the semester	12	20	32	12	12	56			Control work, tests
	TOTAL	12	20	32	12	12	56			



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1.3.2. Organization of Student's Individual Work

№	SIW topic	The task for the SIW (essay, report, abstract, tables, presentation, note-taking, extracts, crossword puzzles, studying the medical history, solving situational problems, exercises, cases, preparing for business games, testing on the topic)	Recommended Literature	Deadlines (week number)
1.	Cystic kidney disease (SIW)	solving situational problems, presentation, report, film demonstration	1. Diagnostic Atlas of Renal Pathology, Fogo, Agnes B 7th ED. Elsevier, 2005 2. Clinical Dialysis, Nissenson, Allen R, 4th ED. Mc Graw Hill, 2005 3. Hypertension companion to to Brenner & Rectors the Kidney, Oparil, Suzanne, 2nd Ed. Elsevier, 2005 4. Nephrology Secrets, Brown, David E, 2nd ED. Elsevier, 2003 5. Tarafdar Surjit (ed.) Lecture Notes: Nephrology 6. Harber Mark (ed.) Practical Nephrology	2
2.	Reflux nephropathy (SIW)	solving situational problems, presentation	1. Diagnostic Atlas of Renal Pathology, Fogo, Agnes B 7th ED. Elsevier, 2005	3



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			<p>2. Clinical Dialysis, Nissenson, Allen R, 4th ED. Mc Graw Hill, 2005</p> <p>3. Hypertension companion to to Brenner & Rectors the Kidney, Oparil, Suzanne, 2nd Ed. Elsevier, 2005</p> <p>4. Nephrology Secrets, Brown, David E, 2nd ED. Elsevier, 2003</p> <p>5. Tarafdar Surjit (ed.) Lecture Notes: Nephrology</p> <p>6. Harber Mark (ed.) Practical Nephrology</p>	
3.	Kidney abnormality	solving situational problems, presentation, report, film demonstration	<p>1. Diagnostic Atlas of Renal Pathology, Fogo, Agnes B 7th ED. Elsevier, 2005</p> <p>2. Clinical Dialysis, Nissenson, Allen R, 4th ED. Mc Graw Hill, 2005</p> <p>3. Hypertension companion to to Brenner & Rectors the Kidney, Oparil, Suzanne, 2nd Ed. Elsevier, 2005</p> <p>4. Nephrology Secrets, Brown, David E, 2nd ED. Elsevier, 2003</p>	4
4	Glomerulonephritis	solving situational problems, presentation, report, film demonstration	<p>1. Diagnostic Atlas of Renal Pathology, Fogo, Agnes B 7th ED. Elsevier, 2005</p>	5



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			<p>2. Clinical Dialysis, Nissenson, Allen R, 4th ED. Mc Graw Hill, 2005</p> <p>3. Hypertension companion to to Brenner & Rectors the Kidney, Oparil, Suzanne, 2nd Ed. Elsevier, 2005</p> <p>4. Nephrology Secrets, Brown, David E, 2nd ED. Elsevier, 2003</p> <p>5. Tarafdar Surjit (ed.) Lecture Notes: Nephrology</p> <p>6. Harber Mark (ed.) Practical Nephrology</p>	
5	Dysmetabolic nephropathy. Kidney damage in alcoholism and drug addiction (SIW)	solving situational problems, presentation, report, film demonstration	<p>1. Diagnostic Atlas of Renal Pathology, Fogo, Agnes B 7th ED. Elsevier, 2005</p> <p>2. Clinical Dialysis, Nissenson, Allen R, 4th ED. Mc Graw Hill, 2005</p> <p>3. Hypertension companion to to Brenner & Rectors the Kidney, Oparil, Suzanne, 2nd Ed. Elsevier, 2005</p> <p>4. Nephrology Secrets, Brown, David E, 2nd ED. Elsevier, 2003</p> <p>5. Tarafdar Surjit (ed.) Lecture Notes: Nephrology</p> <p>6. Harber Mark (ed.) Practical Nephrology</p>	6



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6	Diet therapy for kidney disease (SIW)	solving situational problems, presentation, report, film demonstration	1. Tarafdar Surjit (ed.) Lecture Notes: Nephrology 2. Harber Mark (ed.) Practical Nephrology	7
7	Nephrotic crisis (SIW)	solving situational problems, presentation, report, film demonstration	1. Diagnostic Atlas of Renal Pathology, Fogo, Agnes B 7th ED. Elsevier, 2005 2. Clinical Dialysis, Nissenson, Allen R, 4th ED. Mc Graw Hill, 2005 3. Hypertension companion to to Brenner & Rectors the Kidney, Oparil, Suzanne, 2nd Ed. Elsevier, 2005 4. Nephrology Secrets, Brown, David E, 2nd ED. Elsevier, 2003 5. Tarafdar Surjit (ed.) Lecture Notes: Nephrology 6. Harber Mark (ed.) Practical Nephrology	8
8	DIC syndrome in nephrological practice	solving situational problems, presentation, report, film demonstration	1. Diagnostic Atlas of Renal Pathology, Fogo, Agnes B 7th ED. Elsevier, 2005 2. Clinical Dialysis, Nissenson, Allen R, 4th ED. Mc Graw Hill, 2005 3. Hypertension companion to to Brenner & Rectors the Kidney, Oparil, Suzanne, 2nd Ed.	9



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			Elsevier, 2005 4. Nephrology Secrets, Brown, David E, 2nd ED. Elsevier, 2003 5. Tarafdar Surjit (ed.) Lecture Notes: Nephrology 6. Harber Mark (ed.) Practical Nephrology	
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1.4. Control questions for the course:

1. Acute glomerulonephritis (AGN). Definition. Etiology.

Classification. The main links of pathogenesis. Clinical picture
various forms of AGN.

2. Laboratory, instrumental criteria for the diagnosis of acute
glomerulonephritis. The principles of therapy.

3. Chronic glomerulonephritis: definition, predisposing
factors, classification, etiopathogenesis.

4. Chronic glomerulonephritis (CGN), latent form, clinical
picture, diagnostic criteria, laboratory instrumental
diagnostics. The principles of therapy.

5. Chronic glomerulonephritis (CGN), hypertensive form,
clinical picture, diagnostic criteria, laboratory



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instrumental diagnostics. The principles of therapy.

6. Chronic glomerulonephritis (CGN), nephrotic form,
clinical picture, diagnostic criteria, laboratory

instrumental diagnostics. Principles of therapy

7. Chronic glomerulonephritis (CGN), mixed form, clinical
picture, diagnostic criteria, laboratory instrumental

diagnostics. The principles of therapy.

8. Chronic glomerulonephritis (CGN), hematuric form,
clinical picture, diagnostic criteria, laboratory

instrumental diagnostics. The principles of therapy.

9. Classification and morphological manifestations of glomerulopathies.

10. Morphological manifestations of tubulopathies.

11. Morphology of nephrosclerosis and chronic renal failure.

12. Indicators: daily proteinuria, microalbuminuria,
macrohematuria, microhematuria, albumin / creatinine in urine,
protein / creatinine in the urine.

13. Glomerulonephritis: definition, predisposing factors,
classification of the main links of pathogenesis.

14. Clinical, laboratory, instrumental diagnostic criteria



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glomerulonephritis, principles of therapy.

15. Criteria for diagnosis, tactics of therapy of rapidly progressing glomerulonephritis.

16. Clinical manifestations, diagnosis of nephritic syndrome (poststreptococcal).

17. Clinical manifestations, classification, diagnosis of nephrotic syndrome; the concept of congenital, infantile type of nephrotic syndrome.

18. Definition of the concept of steroid sensitivity, steroid resistance, steroid addiction.

19. Evaluation of renal function (calculation by the Schwartz formula).

20. Treatment and dispensary observation of nephritic syndrome.

21. Treatment, dispensary observation of debut, recurrence of nephrotic syndrome; steroid-dependent and steroid-resistant nephrotic syndrome.

22. Pyelonephritis: definition, predisposing factors, classification of the main links of pathogenesis.

23. Clinical, laboratory, instrumental diagnostic criteria acute and chronic pyelonephritis, principles of therapy.



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24. Criteria for the diagnosis of acute kidney injury according to AKIN.
25. Criteria for diagnosing AKI severity and outcomes according to pRIFLE.
26. Indications and contraindications for acute hemodialysis.
27. Renal replacement therapy in CKD V.
28. Bacteriological examination of urine: dip-slide method, collection medium portion of urine, bladder catheterization, urinary puncture bubble. Collection principles and methods, interpretation of the results of each method.
29. Determination of infection of the upper urinary tract.
30. Determination of complicated and uncomplicated variants of infection urinary tract.
31. Determination of the severity of urinary tract infection.
32. Principles of therapy for urinary tract infections.
33. Diagnostic criteria and principles of treatment of acute tubulointerstitial nephritis.
34. Diagnostic criteria and principles of treatment of chronic tubulointerstitial nephritis.
35. Renal amyloidosis: definition, predisposing factors, classification of the main links of pathogenesis.



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36. Clinical, laboratory, instrumental diagnostic criteria

amyloidosis of the kidneys, principles of therapy.

37. Clinical anatomy and physiology of the genitourinary organs.

38. Anuria. Classification, differential diagnostics. Sharp retention of urine.

39. Diet therapy. Sanatorium treatment of nephrological patients.

40. Acute pyelonephritis. Etiology, pathogenesis, classification, clinic, diagnostics, treatment.

41. Chronic pyelonephritis. Etiology, pathogenesis, classification, clinic, diagnostics, treatment.

42. Kidney transplantation. History. Indications and contraindications.

Immunological bases of donor selection. Waiting list.

Cadaveric kidney transplant and living donor transplant,

Advantages and disadvantages.

43. Management of patients after allotransplantation. Modern schemes immunosuppression. Preparations. Pharmacokinetics and pharmacodynamics.

Monitoring the effectiveness of immunosuppression. Complications.

Prevention of complications.

44. Tuberculosis of the kidneys, ureters, bladder. Definition.



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Epidemiology. Pathogenesis. Classification. Clinical manifestations.

Differential diagnosis. Laboratory diagnostic methods.

Treatment (medication, surgical). Complications. Prevention.

45. Kidney damage in infectious diseases. Definition.

Epidemiology. Pathogenesis. Clinical manifestations. Treatment.

46. Urolithiasis. Prevalence and epidemiology.

Definition. Classifications. Etiology and pathogenesis. Clinical manifestations. Major complications. Differentiation from diagnostics of urolithiasis. Laboratory diagnostic methods.

Instrumental diagnostic methods.

47. Rheumatic diseases with kidney damage. Definition.

Variants of secondary nephropathies. Etiopathogenesis. Pathomorphology changes in the kidneys. Clinical manifestations. Diagnostics. Treatment.

48. Nephrogenic anemia. Pathogenesis. Diagnostics, control, treatment.

Iron preparations, erythropoietin preparations.

49. Alport syndrome. History. Prevalence. Age

Aspects. Inheritance types, classification. Etiopathogenesis. Clinic.

Diagnostics. Forecast. Treatment.

50. Indications and contraindications for nephrobiopsy. Possible



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complications. Bleeding. Methods of prevention and treatment.

Indications and contraindications for nephrobiopsy in special categories patients (diabetes mellitus, the elderly, patients with significant impaired renal function, systemic vasculitis).

1.5. EDUCATIONAL – METHODOLOGICAL AND INFORMATIONAL SUPPORT OF THE DISCIPLINE

List of recommended literature:

1. Diagnostic Atlas of Renal Pathology, Fogo, Agnes B 7th ED. Elsevier, 2005
2. Clinical Dialysis, Nissenson, Allen R, 4th ED. Mc Graw Hill, 2005
3. Hypertension companion to Brenner & Rectors the Kidney, Oparil, Suzanne, 2nd Ed. Elsevier, 2005
4. Nephrology Secrets, Brown, David E, 2nd ED. Elsevier, 2003
5. Tarafdar Surjit (ed.) Lecture Notes: Nephrology
6. Harber Mark (ed.) Practical Nephrology
7. Ronco Claudio, Bellomo Rinaldo, Kellum John A., Ricci Zaccaria (eds.) Critical Care Nephrology
8. Comprehensive Clinical Nephrology, Feehally, John, 3rd ED. Mosby 2007.
9. Renal Diseases Prevevtion and Management: A physicians perspective, Feehally, John, Jaypee Brothers, 2008.



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10. Seldin and Giebischs the Kidney: Physiology and Pathophysiology, Alpern, Robert. J, Vol I 4th ED. Academic Publisher, 2008
11. Seldin and Giebischs the Kidney: Physiology and Pathophysiology, Alpern, Robert. J, Vol II 4th ED. Academic Publisher, 2008
12. Comprehensive Pediatrics Nephrology, Geary, Denis. F (ED), 1st ED. Elsevier 2008.
13. Evidence-Based Nephrology, Molony, and Donald. A, John wiley, 2009
14. Handbook of Dialysis, Daugirdas, John. T, 4th ED. Lippincott, 2009
15. Manual of Nephrology, Schrier, Robert.W,7th ED. Lippincott, 2009
16. Oxford Handbook of Dialysis,Levy, Jeremy,2nd ED. Oxford, 2007
17. Ganongs Review of Medical Physiology, Barrett, Kim. E (Etal), 24rd ED. Mc Graw Hill, 2012
18. Renal Disease Techniques and Protocols, Goligorsky, Michael. S, Humana Press, 2003
19. Renal and Electrolyte Disorders,Schrier, Robert. W, 7th ED. Lippincott, 2010
20. Acid-Base Disorder and their Treatment, Gennari, John F (Et al), Taylot & Francis, 2005
21. Primer on Kidney Diseases, Greenberg, Arthur, 5th ED. Saunders, 2009
23. The Kidney, Brenner & Rector - 8th ED. Saunders, 2008
24. Critical Care Nephrology, C. Ron co – 2nd ED. Saunders, 2009.



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25. Oxford desk Reference Nephrology, Jonathan Barratt, Kevin harris, Peter Topham, 1st Indian ED, 2009.

JOURNALS

International

1. Transplantation
2. Kidney International
3. Hemodialysis International
4. Clinical Journal of the American Society of Nephrology Indian
5. Indian Journal of Nephrology

Online Journals

1. BMC Nephrology
2. Clinical and Experimental Nephrology
3. International Urology and Nephrology
4. Journal of Artificial Organs
5. Hong Kong Journal of Nephrology
6. Clinical Queries: Nephrology
7. Journal of American society of Hypertension
8. Journal of Cardiothoracic- Renal research
9. Indian Journal of Transplantation



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10. Pediatric Nephrology