DESCRIPTION OF COURSE UNIT FOR DOCTORAL STUDIES AT VILNIUS UNIVERSITY

Scientific Area/eas, Field/ds of Science	Medical and Health Sciences (M 000): Medicine (M 001)			
Faculty, Institute, Department/Clinic	Faculty of Medicine, Institute of Clinical Medicine, Clinic of Gastroenterology, Nephrourology and Surgery			
Course unit title (ECTS credits, hours)	**General Urology** 7 credits (196 hours)			
Study method	**Lectures**	**Seminars**	**Consultations**	**Self-study**
Number of ECTS credits	-	-	1	7
Method of the assessment (in 10 point system)	Presentation and evaluation of the report: the report is presented on a target topic, which is coordinated with the consulting lecturers (the doctoral student must analyse, review and present the latest scientific publications related to the target topic). Criteria for evaluating the report (minimum qualifying score - 5): (a) relevance, novelty and accordance to the chosen topic (2 points); (b) general structure and scope of the report, clear presentation of the knowledge, reasoning, conciseness and concreteness (2 points); c) Summary, presentation and justification of conclusions (1 point) d) raising problematic issues, presenting the application of the reviewed knowledge in the dissertation (3 points); e) organization of visual aids, ability to participate in a discussion, management of questions, oratory skills (2 points).			

PURPOSE OF THE COURSE UNIT

The anatomy of the urinary system and the male genital organs, the most common diseases and the principles, indications and contraindications of modern medical and surgical treatment are studied. Course followed the guidelines of the European Association of Urologists.

THE MAIN TOPICS OF COURSE UNIT

Topographic anatomy of the kidneys and adrenal glands, ureters, bladder, urethra, prostate, testes, male seminal ducts, penis and scrotum, the main surgical incisions for access to them.
The most common anatomical variations and anomalies of the kidneys, urinary tract, and male genital system.
The most common causes, symptoms, diagnostic methods and basic principles of treatment of obstructive uropathy. Methods of urinary drainage: nephrostomy, uretheral stenting, suprapubic drainage, urinary diversion methods.
Principles of diagnosis, conservative and surgical treatment of injuries of renal ureters, bladder, urethra, prostate, testicles, penis and scrotum.
Classification of urinary tract infection, diagnostic microbiological and laboratory test methods. Basics of antibacterial therapy for the most common urological inflammatory diseases. Causes, pathophysiology and biochemical markers of urosepsis syndrome. Measures for the prevention and treatment of urinary tract infections.

Mechanisms of urinary tract stone pathogenesis, modern methods of diagnosis and prevention. Extracorporeal lithotripsy of urinary tract stones. Methods of endoscopic urinary stone removal (cystolithotripsy, ureteroscopy, percutaneous operations).
Indications for kidney transplantation, peculiarities of recipient and donor selection. Surgical transplantation technique, medical treatment after kidney transplantation. Complications after kidney transplantation in the early and late period (surgical, immunological, infectious, oncological).
Risk factors for kidney tumours, diagnosis, algorithms for surgical and medical treatment.
Risk factors for ureteral and bladder tumours, diagnosis, algorithms for surgical and medical treatment. Early screening for bladder cancer.
Risk factors for prostate cancer, early screening using a prostate-specific antigen test. Diagnosis and classification of prostate cancer. Methods of surgical, radiological and medical treatment. Active monitoring for prostate cancer.
Risk factors for testicular tumours, diagnosis, algorithms for surgical and medical treatment.
Risk factors for penile tumours, diagnosis, algorithms of surgical, radiological and medical treatment.
Urinary disorders in men and benign prostatic hyperplasia: diagnosis, principles of medical and surgical treatment.
Hyperactive bladder: diagnosis, principles of medical and surgical treatment.
Causes of urinary incontinence in women, diagnosis, conservative and surgical treatment methods.
Causes of urinary incontinence in men, diagnosis, conservative and surgical treatment methods.
Causes, diagnosis and surgical treatment of urethral strictures (meatotomy, uretrotomy, uretroplasty). Surgery for hypospadia and epispadias
Testicular surgery: hydrocele, testicular enucleation and orchectomy, testicular implants.
Male seminal duct surgery: vasectomy, epididymectomy, treatment of seminal duct anatomy, spermatocele.
Varicocele risk factors, diagnosis, indications and methods of surgical treatment.
Penile surgeries: circumcision, frenuloplasty, surgical treatment of priapism, surgical treatment of Peironie's disease, phaloplasty, penile implants.
Diagnosis and principles of treatment of male sexual dysfunction. Erectile dysfunction. Premature ejaculation.
Risk factors for male infertility, diagnosis, principles of treatment.

RECOMMENDED LITERATURE SOURCES

1. Campbell-Walsh Urology 12th Edition, 2020
2. Hinmans‘s Atlas of Urologic Surgery , 4th edition. 2019
3. Acute kidney injury and regenerative medicine. Yoshio Terada, Takashi Wada, Kent Doi, 2020
4. Practical Urology: Essential Principles and practice. Christopher R. Chapple, William D. Steers.2011
5. Smith and Tanagho‘s General urology, 19th edition, 2020
6. Urologic Surgical Pathology. Liang Cheng, Gregory T. Maclennan, David G. Bostwick. 2020
7. Smith‘s Textbook of Endourology 4th Edition, 2019.
8. Minimally Invasive Urology. Sara L. Best, Stephen Y. Nakada, 2014
9. Genitourinary radiology. Sixth edition. N.Reed Dunnick, 2017
10. Emergency Urology. D.Thurtle, M.Sut, James J. Armitage. 2017

CONSULTING LECTURERS
1. Coordinating lecturer: Arūnas Želvys (Assoc. Prof. Dr.).
2. Feliksas Jankevičius (Prof. Dr.).
3. Aušra Černiauskienė (Assoc. Prof. Dr.).
APPROVED:
By Council of Doctoral School of Medicine and Health Sciences at Vilnius University: 29th of September 2022
Chairperson of the Board: Prof. Janina Tutkuvienė