



SUBJECT (MODULE) DESCRIPTION

| The name of the academic subject (module) Code | Code |
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| Gastroenterology and abdominal surgery | |

| Staff | Division(s) |
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| <p>Co-ordinator: prof. habil. dr. Kęstutis Strupas, prof. dr. Gintaras Simutis, doc. dr. Goda Sadauskaite</p> <p>Others: Prof. dr. Eligijus Poškus, prof. dr. Audrius Šileikis, doc. Valdemaras Jotautas, doc. Vitalijus Sokolovas, doc. Aistė Kielaitė-Gulla, asist. Rokas Račkauskas, asist. Marius Kryžauskas, asist. Mindaugas Kvietkauskas</p> <p>Others: Doc. dr. Ieva Stundienė, asist. dr. Edita Gavelienė, asist. dr. Rolandas Vaicekauskas, asist. dr. Ilona Savlan, asist. dr. Benediktas Kurlinkus, asist. dr. Laura Mašalaitė, j. asist. Eglė Dieninytė-Misiūnė, lekt. Ieva Berankytė, lekt. Eglė Lukošiuūtė</p> | <p>Faculty of Medicine, Vilnius University. Institute of clinical medicine, Clinic of Gastroenterology, Nephrourology and Surgery, Santariškių st. 2, Vilnius</p> |

| Cycle of studies | Level of the module | Type of the subject (module) |
|---------------------------------|---------------------|------------------------------|
| Integrated studies (First step) | | Compulsory |

| Form of implementation | Period | Language(s) of instruction |
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| In the auditorium: lectures and seminars in the classroom, practical classes in the operating theatres, departments of surgery, departments of hepatology, gastroenterology and dietology center, endoscopic and ultrasonography rooms, simulation-based surgical education classroom. | VII th semester | Lithuanian and English |

| Requirements for student | |
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| Prerequisites: student must be skilled in human anatomy, human physiology, pharmacology, propaedeutic of internal medicine, biochemistry, microbiology, pathological anatomy, immunology, general surgery | Additional requirements (if present): No |

| Volume of the subject (module) in credits | Total student's workload | Contact work hours | Independent work hours |
|-------------------------------------------|--------------------------|--------------------|------------------------|
| 10 credits | 256 | 124 | 132 |

| The aim of the subject (module): developing competencies of the study program. | |
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| Objective – to know the etiology and pathophysiology of surgical diseases of the abdominal cavity organs, clinic, principles of diagnosis, differential diagnosis and treatment, classifications used, methods of surgery, and outcomes. | <p>Upon completion of the course, students must be able to subjectively and objectively evaluate patients with abdominal surgical diseases, develop an adequate examination plan, evaluate the results of performed examinations, interpret them to establish a clinical diagnosis, perform differential diagnosis, and prescribe appropriate treatment.</p> <p>Surgical diseases of the abdominal cavity organs: abdominal wall hernias, esophageal diseases (achalasia, diverticula, cancer), complications of gastroduodenal ulcers, stomach cancer, small intestine diseases (polyps, diverticula, tumors, inflammations, traumas), chronic and acute appendicitis, liver diseases (tumors, simple and parasitic cysts, abscesses, traumas), gallbladder and bile duct diseases (cholelithiasis, tumors, traumas, inflammations), pancreatic diseases (acute and chronic pancreatitis, tumors, cysts, cholelithiasis, traumas), diseases of the ileum (tumors, polyps, diverticulosis, inflammatory diseases, traumas), diseases of the rectum (cancer, prolapse), proctology (hemorrhoids, paraproctitis, fissures, anorectal fistulas), endocrine surgical diseases (thyroid, cancer; primary, secondary, and tertiary hyperparathyroidism, adrenal cancer, hormonally active adrenal cortex tumors, adrenal incidentaloma), metabolic surgery (obesity, pancreatic endocrine tumors), gastrointestinal stromal tumors (GIST), intestinal obstruction, peritonitis, mechanical jaundice, closed and open abdominal organ trauma.</p> |

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| Objective: to know the etiology, pathogenesis, clinic, diagnosis, differential diagnosis, modern treatment, and prevention of diseases of the esophagus, stomach, intestines, liver, gallbladder and bile ducts, and pancreas. | Upon completion of the course, students must be able to examine patients with diseases of the digestive system, evaluate the results of patients' physical examination, laboratory tests, imaging studies, provide a diagnosis, and outline a treatment plan. |
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| Objectives of the subject (module) studies | Studies methods | Assessment methods |
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| <p>Upon completing this module, the student will: Gain knowledge to act honestly and adhere to ethical obligations; be empathetic; be able to think critically and self-critically; be creative; show initiative and goal-seeking ability; possess communication skills with others.</p> <p>Be able to assess the limits of their competencies and, when necessary, seek assistance; solve problems and make decisions; communicate and work in a team alongside specialists from other fields and experts in other sciences.</p> <p>Be capable of learning, seeking information from various</p> | <p>Depending on the situation, studies can be transformed into distance learning.</p> <p>Discussion, case analysis, storytelling, brainstorming, group and individual work, problem-solving, creative tasks, error</p> | <p>Written assignment: description of a clinical case according to the established procedure in the clinic. An exam can be taken after attending the planned lectures if the student participated in all practical classes and seminars during the</p> |

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| <p>sources, processing and analyzing it, and updating professional information.</p> <p>Be able to examine a patient suspected of abdominal organ pathology requiring surgery: collecting medical history, conducting a medical examination, palpation, percussion, auscultation, and other objective clinical examinations, drawing conclusions from their evaluation and making decisions.</p> <p>Understand the principles of diagnosing and differentiating main surgical diseases of abdominal organs, diagnostic algorithms, examination methods, and their importance; formulate an individual patient examination plan and justify it, evaluate the results of examinations, and provide their clinical assessment.</p> <p>Understand the principles, methods, treatment algorithms, complications, and importance of main surgical diseases of abdominal organs; select an adequate and appropriate medical or surgical treatment method, coordinating with other treatment methods in a clinical context.</p> <p>Be able to assess the suitability, potential benefits, harms of treatment methods and properly inform the patient about treatment methods and modalities, medical staff responsibility.</p> <p>Acquire knowledge to appropriately assess treatment outcomes and prognosis.</p> <p>Understand the principles of effective communication in medical practice: communication with colleagues, patients, patient relatives.</p> <p>Familiarize themselves with the devices and instruments used in surgeries.</p> <p>Be able to conduct a search for medical information sources, analyze, summarize, and present them; store and update information.</p> <p>Collect the medical history of a patient with digestive system diseases, perform a physical examination, establish a preliminary diagnosis, prepare a plan for further examinations. Evaluate the data of laboratory (immunological, serological, enzymatic, etc.), imaging (ultrasonography, radiography, magnetic resonance imaging, computed tomography, angiography, etc.) tests. Be able to diagnose in cases with simple diagnostic perspectives, conduct differential diagnosis. Prescribe adequate (etiopathogenic, symptomatic) treatment for patients with digestive system diseases, anticipate the side effects of medications and their interactions.</p> | <p>analysis, theoretical modeling, seminar, consultation, conversation, patient examinations in wards, demonstration of surgical procedure videos, practical work with surgical simulators, traditional and video lectures, searching for medical scientific information in databases and reading literature, preparation and presentation of clinical case descriptions and reports.</p> <p>Attendance at lectures is recommended, attendance at seminars and practical classes is mandatory. The attendance of students is recorded by the lecturer teaching the subject. Students are accountable for missed lectures, practical classes, and seminars according to the procedure established in the clinic.</p> | <p>semester according to the regulations set by VU MF, completed all scheduled knowledge assessment tests, submitted and defended all written assignments, and passed practical assessments. The final assessment (FA) of the subject Gastroenterology and Abdominal Surgery is based on an accumulation system, where the evaluation accumulates throughout the semester, separately evaluating tests during practical classes, the written assignment (description of a clinical case), and the exam, assigning a corresponding coefficient to each: $FA = 0.25 \times T + 0.25 \times RD + 0.5 \times E$</p> <p>T – tests during practical classes; RD – written assignment (description of a clinical case); E – exam;</p> <p>The final assessment of the subject Gastroenterology and Abdominal Surgery is rounded according to general rules.</p> |
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| Themes | Contact hours | | | | | | | Independent work assignments | |
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| | Lectures | Consultations | Seminars | Practical classes | Lab works | Practice | Total contact hours | Independent work | Assignments |
| 1. Topographic anatomy of abdominal cavity organs | 1 | | | | | | 1 | 2 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the |

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| | | | | | | | | | course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of topographic anatomy of abdominal organs |
| 2. Peritonitis | 1 | | | 2 | | | 3 | 2 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of peritonitis |
| 3. Clinical examination of the abdomen | | | | 2 | | | 2 | 2 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of clinical examination of the abdomen |
| 4. Abdominal hernias | | | 2 | 3 | | | 5 | 5 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of abdominal hernias |
| 5. Surgical diseases of esophagus, stomach and duodenum | | | 2 | 3 | | | 5 | 5 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of surgical diseases and tumors of the esophagus, stomach, and duodenum |
| 6. Surgical diseases of the small intestine | | | 1 | 2 | | | 3 | 2 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of surgical diseases of the small intestine |
| 7. Surgical diseases of large bowel | | | 1 | 3 | | | 4 | 3 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of surgical diseases of the large bowels |
| 8. Bowel obstruction | | | | 1 | | | 1 | 2 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of bowel obstruction |
| 9. Diseases of appendix | | | 1 | 2 | | | 3 | 2 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual |

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| | | | | | | | | | learning environment on the topic of surgical diseases of appendix |
| 10. Obesity and Metabolic surgery | | | 2 | 2 | | | 4 | 4 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of obesity and metabolic surgery |
| 11. Endocrine surgery | | | 2 | 3 | | | 5 | 5 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of endocrine surgery |
| 12. Surgical diseases of gallbladder and its ducts | | | 2 | 3 | | | 5 | 5 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of surgical diseases of the gallbladder and bile ducts |
| 13. Diseases of pancreas | | | 2 | 3 | | | 5 | 5 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of inflammatory diseases and tumors of the pancreas |
| 14. Liver diseases | | | 2 | 3 | | | 5 | 5 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of surgical diseases of the liver |
| 15. Rectum and anal canal diseases | | | 2 | 3 | | | 5 | 5 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of surgical diseases of the rectum and anal canal |
| 16. Abdominal trauma | | | | 1 | | | 1 | 2 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of abdominal organ trauma |
| 17. Abdominal organ transplantation | | | 1 | 2 | | | 3 | 2 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the course "Gastroenterology and Abdominal Surgery" in the VU virtual learning environment on the topic of |

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| | | | | | | | | abdominal organ transplantation |
| 18. Clinical Case report | | | 2 | | | 2 | 8 | Writing a description of a clinical case according to approved guidelines for written assignments |
| Total in Surgery: | 2 | | 20 | 40 | | | 62 | 66 |

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| 19. Stages of development in gastroenterology science, contemporary structure, and latest advancements. | 2 | | | | | 2 | | Attendance of lecture |
| 20. Syndromes of liver damage | | | 1 | 2 | | 3 | 3 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of syndromes of liver damage |
| 21. Steatotic liver disease | | | 1 | 2 | | 3 | 3 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of steatotic liver disease |
| 22. Liver cirrhosis | | | 3 | 6 | | 9 | 8 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of liver cirrhosis |
| 23. Chronic viral hepatitis B and C | | | 2 | 4 | | 6 | 6 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of chronic viral hepatitis B and C |
| 24. Cholestatic, autoimmune, and rare liver diseases | | | 2 | 4 | | 6 | 6 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of cholestatic, autoimmune, and rare liver diseases |
| 25. Diseases of the esophagus | | | 2 | 4 | | 6 | 6 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of diseases of the esophagus |
| 26. Gastroduodenal diseases | | | 2 | 4 | | 6 | 6 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of gastroduodenal diseases |
| 27. Diseases of the pancreatobiliary system | | | 1 | 2 | | 3 | 3 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of diseases of the pancreatobiliary system |
| 28. Diseases of the small intestine | | | 1 | 2 | | 3 | 3 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of diseases of the small |

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| | | | | | | | | intestine | |
| 29. Diseases of the large bowel. Microbiota | | | 3 | 6 | | | 9 | 8 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of diseases of the large bowel and microbiota |
| 30. Fundamentals of dietetics in gastroenterology | | | 2 | 2 | | | 4 | 6 | Reading scientific and methodological literature, watching video lectures, and reviewing other visual materials in the VU virtual learning environment on the topic of fundamentals of dietetics in gastroenterology |
| 31. Clinical case report | | | | 2 | | | 2 | 8 | Writing a description of a clinical case according to approved guidelines for written assignments |
| Total in Gastroenterology: | 2 | | 20 | 40 | | | 62 | 66 | |
| Gastroenterology and Abdominal Surgery in total | 4 | | 40 | 80 | | | 124 | 132 | |

| Assessment strategy | Share in % | Time of assessment | Criteria of assessment |
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| Final tests of abdominal surgery and gastroenterology practices. | 25 % | On the last day of abdominal surgery practices, on the last day of gastroenterology practices. | The test consists of closed-ended questions of varying difficulty, ranging from comprehension to clinical situations. Each test is evaluated on a ten-point scale. The score is calculated based on the percentage of questions answered. Answering 100 percent of the questions correctly corresponds to 10 points. Test scores are not rounded |
| Clinical case report | 25 % | Until the last practical class | A structure of written work, descriptive case completeness, information consistency and accuracy. Criteria for evaluation: 1. Technical/visual conditioning. Clarity of tables and pictures, text typos and mistakes in grammar; 2. Abstract. Clear essence. 3. Introduction. The idea of the work, clear proposes 4. Clinical case report. Short presents of anamnesis, clinical investigation, treatment and outcomes; 5. Discussion. Shown strategy of literature search according to case; 6. Conclusions: Clear and specific; All criteria are evaluated between 1 and 10. 10: Excellent knowledge. 9: Very good knowledge. 8: Good knowledge, there may be minor errors. 7: Average knowledge, there are errors. 6: Satisfactory knowledge, there are substantial errors. 5: Weak knowledge, there are a lot of mistakes but the minimum requirements are met. 4-1: Unsatisfactory knowledge, the minimum requirements are not met. Very weak knowledge, there are errors in all parts. The minimum requirements are not met. All marks sum forms not rounded average |
| Final examination | 50 % | After the end of | The exam is conducted in the form of computer-based testing. The exam consists of 100 closed-ended questions (50 questions |

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| | | practical classes and passing the tests. | <p>from the abdominal surgery section and 50 questions from the gastroenterology section) of varying difficulty (from understanding to clinical situations). Each exam test is evaluated on a ten-point scale. The exam score is calculated based on the percentage of questions answered. 100% correct answers correspond to 10 points. Exam test scores are not rounded.</p> <p>Evaluated as follows:</p> <p>10: Excellent knowledge. Evaluation level. 95-100 correct answers.</p> <p>9: Very good knowledge. Evaluation level. 85-94 correct answers.</p> <p>8: Good knowledge, there may be minor errors. Evaluation level. 75-84 correct answers.</p> <p>7: Average knowledge, there are errors. Evaluation level. 65-74 correct answers.</p> <p>6: Satisfactory knowledge, there are substantial errors. Evaluation level. 55-64 correct answers.</p> <p>5: Weak knowledge, there are a lot of mistakes but the minimum requirements are met. Evaluation level. 45-54 correct answers.</p> <p>4: Unsatisfactory knowledge, the minimum requirements are not met. Evaluation level. 35-44 correct answers.</p> <p>3: Unsatisfactory knowledge, the minimum requirements are not met. Evaluation level. 25-34 correct answers.</p> <p>2: Unsatisfactory knowledge, the minimum requirements are not met. Evaluation level. 15-24 correct answers.</p> <p>1: Unsatisfactory knowledge, the minimum requirements are not met. Evaluation level. 5-14 correct answers.</p> <p>0: Unsatisfactory knowledge, the minimum requirements are not met. Evaluation level. 1-4 correct answers.</p> <p>The exam test must be retaken according to the procedure established by VU MF in case of unsatisfactory knowledge, when the number of correct answers in the exam test is no more than 44.</p> |
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| Author | Published in | Title | Volume of a periodical or publication | Place of publishing, publishing house, or Internet reference |
|------------------------|--------------|-----------------------------------|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compulsory literature | | | | |
| Pundzius J ir kt. | 2013 | Chirurgija | I and II volumes | Kaunas, UAB „Vitae Litera“ |
| Strupas K. | 2004 | Peritonitas | Monography | Vilnius, VU leidykla |
| Strupas K. | 2013 | Kepenų transplantacija | Monography | Vilnius, VU leidykla |
| Doherty G.M. | 2015 | Book | Book | The McGraw-Hill Education http://accessmedicine.mhmedical.com/book.aspx?bookid=1202 |
| Brunicaudi F.C. et al. | 2015 | Schwartz's Principles of Surgery, | Book | The McGraw-Hill Education |

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| | | 10 Edition | | http://accessmedicine.mhmedical.com/book.aspx?bookid=980 |
| - | - | VMA uploaded lectures and their summaries. | - | - |
| Supplementary literature | | | | |
| Beiša V. | 2006 | Skydliaukės chirurgija | Practical book | Vilnius, Inforastras |
| Beiša V. | 2008 | Pirminio hiperparatiroidizmo diagnostika ir chirurginis gydymas | Practical book | Vilnius, Inforastras |
| Noreika L. | 2002 | Pilvapilvės topografija | Practical book | Vilnius, VU leidykla |
| Pundzius J. | 2008 | Klinikinis pilvo tyrimas | Practical book | Vilnius, Charibdė |
| Žeromskas P., Poškus E. | 2010 | Chirurginės koloproktologijos konspektai | Practical book | Vilnius, VU leidykla |
| Brimas G. | 2005 | Chirurginis nutukimo gydymas | Practical book | Vilnius, Ciklonas |
| Simutis G. | 2005 | Tulžies pūslės ir latakų chirurginės ligos | Practical book | Vilnius, VU leidykla |
| Strupas K., Simutis G., Kontrimavičiūtė E., V.Uvarovas | 2008 | Klinikinės chirurgijos diagnostikos ir gydymo vertinimo sistemos | Practical book | Kaunas, Vitae Litera |
| Šileikis A. | 2008 | Ūminis pankreatitas | Practical book | Vilnius, VU leidykla |
| Townsend C. Jr. et al. | 2012 | Sabiston textbook of surgery, 19th edition | Book | Saunders, Elsevier |
| Dan L. Longo, Anthony S. Fauci | 2016 | Harrison's Gastroenterology and Hepatology, 3rd Edition | Handbook | McGraw Hill |
| Edited by Stephen C. Hauser | 2018 | Mayo Clinic Gastroenterology and Hepatology Board Review 5rd edition. | Handbook | Oxford University Press |
| Edited by Shanthi Srinivasan, Lawrence S. Friedman | 2017 | Sitaraman and Friedman's essentials of gastroenterology | Handbook | John Wiley & Sons |
| - | - | www.ueg.eu | Guidelines | UEG online |
| - | - | www.esge.com | Vebinars, e learnings | ESGE |
| - | - | UpToDate | Up to date medical information | Company in the Wolters Kluwer Health division of Wolters Kluwer |