## MINISTRY OF HEALTHCARE OF UKRAINE KHARKIV NATIONAL MEDICAL UNIVERSITY

Department of Internal Medicine № 3 and Endocrinology Academic year 2021-2022

## SYLLABUS OF THE EDUCATIONAL COMPONENT «Current Issue in Rheumatology»

Normative educational component

The form of education is full-time	
Area of knowledge "22" Health care Specialty "222" Internal medicine Specialization (if available) Educational and professional program of	the second (moster's) level of higher
education	the second (masters) level of higher
Course V	
The syllabus of the discipline was considered at the meeting of the Department of Internal Medicine № 3 and Endocrinology	Approved by the methodical commission of KhNMU on problems of therapeutic profile  Protocol from
Protocol from "30" August 2021 № 14	"20year N
Head of Department  prof. L.V. Zhuravlyova	(signature) prof. P.G.Kravchun (initials, surname)

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- 3. Oliinyk Mariia Oleksandrivna Candidate of Medical Sciences, Associate Professor (0503030803, mo.oliinyk@knmu.edu.ua)
- 4. Sikalo Yulia Kostyantunivna, Candidate of Medical Sciences, Associate Professor (tel. 0953392065, <a href="mailto:yk.sikalo@knmu.edu.ua">yk.sikalo@knmu.edu.ua</a>).

# INFORMATION ABOUT LECTURERS, WHO ARE TEACHING THE EDUCATIONAL COMPONENT

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Fedorov Volodumir Olexandrovich - Candidate of Medical Sciences, Associate Professor of the Department of Internal Medicine №3 and Endocrinology, Kharkiv National Medical University. Occupational interests: internal medicine, cardiology, endocrinology. Tel. 0963898114, vo.fedorov@knmu.edu.ua. Offline consultations: 8.00-15.00 at the Department of Internal Medicine № 3 and Endocrinology of KhNMU; online consultations 8.00-15.00 http://distance.knmu.edu.ua/mod/bigbluebuttonbn/view.php?id=27701. Location: classrooms of the Department of Internal Medicine №3 and endocrinology on the basis of Kharkiv Regional Clinical Hospital (Kharkiv, Independence Ave, 13).

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## Website of the department: <a href="http://vnmed3.kharkiv.ua/">http://vnmed3.kharkiv.ua/</a>.

Class schedule: Monday, Tuesday, Wednesday, Thursday, Friday (8.45-12.20 - first shift and 12.25-15.50 - second shift, according to the schedule).

Location: classrooms of the Department of Internal Medicine №3 and endocrinology

on the basis of Regional Clinical Hospital (Kharkiv, Independence Ave. 13).

#### INTRODUCTION

The syllabus of the discipline "Current Issue in Rheumatology" is compiled in accordance with the Standard of Higher Education of Ukraine (hereinafter - Standard), the second (master's) level, realm of knowledge 22 "Health care".

#### Description of the discipline (abstract).

According to the curriculum, the training of doctors at the educational and qualification level "Master" of the discipline "Current Issue in Rheumatology " is carried out in the V year (9<sup>th</sup> or 10<sup>th</sup> semesters).

The purpose of the discipline is to master fifth-year students in the methods of clinical, differential and laboratory diagnosis, treatment and prevention of rheumatic diseases, as well as the organization of rheumatological care for the population of Ukraine, prevention of complications of rheumatic diseases.

Types of classes according to the curriculum are:

- a) practical classes;
- b) independent work of students;
- c) consultations.

The subject of study of "Current Issue in Rheumatology" as a discipline is the study by students of rheumatology, internal medicine, as well as other basic disciplines (medical biology, medical and biological physics, bioorganic and biological chemistry, histology, cytology, human anatomy, pathomorphology, physiology and pathophysiology, microbiology, virology and immunology, radiology) and integrates with these disciplines. It lays the foundations for students to acquire advanced knowledge of rheumatology, as well as develops the ability to apply knowledge of pathology of internal organs in the process of further training and professional activity in accordance with the principles of evidence-based medicine.

### **Interdisciplinary connections**

"Current Issue in Rheumatology" as an academic discipline: a) is based directly on the study by students of rheumatology, internal medicine, as well as other basic disciplines (medical biology, medical and biological physics, bioorganic and biological chemistry, histology and embryology, human anatomy, pathomorphology, physiology and pathophysiology, microbiology, virology and immunology, radiology) and integrates with these disciplines;

b) lays the foundation for students to acquire advanced knowledge of rheumatology; c) forms the ability to apply knowledge of pathology of internal organs in the process of further training and professional activity in accordance with the principles of evidence-based medicine.

**Prerequisites and co-requisites of the discipline.** Anatomy, physiology, histology, pathological anatomy, pathological physiology, internal diseases; clinical pharmacology, surgery.

Page in Moodle: http://distance.knmu.edu.ua/course/view.php?id=3991

1. PURPOSE AND TASKS OF THE COURSE

- **1.1.** The purpose and objectives of the discipline. The purpose of teaching the course "Current Issue in Rheumatology" is to acquire and deepen the knowledge, skills, abilities and other competencies in rheumatology required in professional activities, which are established on the basis of educational and professional program.
- 1.2. The main objectives of the course "Current Issue in Rheumatology" include the acquisition of competencies by students in accordance with the general and professional competencies of the educational-professional program "Medicine" of the second (master's) level of higher education in 222 Medicine, qualification master of medicine: determining the necessary list of laboratory and instrumental studies and evaluation of their results, establishing a preliminary and clinical diagnosis of the disease, diagnosing emergencies and providing emergency medical care, keeping medical records, the ability to apply knowledge in practical situations, understanding the subject area and professional activities, the ability to adapt and act in a new situation, making an informed decision, the ability to work in a team, act socially responsibly and consciously.
- **1.3.** Competences and learning outcomes, the formation of which is facilitated by the discipline.
  - **1.3.1.** The study of the discipline provides students with the acquisition of **competencies:**

**integral:** ability to solve typical and complex specialized tasks and practical problems in professional activities in the field of health care, or in the learning process, which involves research and / or innovation and is characterized by complexity and uncertainty of conditions and requirements;

#### general:

- ability to apply knowledge in practical situations;
- -knowledge and understanding of the subject area and understanding of the profession:
- ability to exercise self-regulation and maintain a healthy lifestyle;
- ability to adapt and act in a new situation;
- ability to choose a communication strategy;
- ability to work in a team;
- interpersonal skills;
- ability to communicate in English language both orally and written;
- skills of using information and communication technologies;
- ability to think, analyze and synthesize;
- ability to learn and be modernly trained;
- ability to apply knowledge in practical situations;
- ability to evaluate and ensure the quality of work performed;
- determination and persistence in terms of tasks and responsibilities;
- ability to act socially responsibly and consciously.

## special (professional):

-ability to establish a preliminary clinical diagnosis of the disease;

- ability to evaluate the results of laboratory and instrumental studies;
- ability to diagnose emergencies;
- skills of performing of diagnostic medical manipulations;
- ability to keep medical records;
- ability to process state, social, economic and medical information;
- -ability to take measures to improve the efficiency of resource use;
- ability to market diagnostic medical services.
- **1.3.2.** The study of the discipline provides students with the acquisition of the following program learning outcomes (PLO):
  - **PLO 1.** To formulate a preliminary diagnosis of the most common diseases of the cardiovascular system
  - **PLO 2.** To make a plan for examination of the patient and analyze the data of laboratory and instrumental examinations for the most common diseases of cardiovascular system and their complications
  - **PLO 3.** To perform a differential diagnosis, substantiate and formulate a clinical diagnosis of the most common diseases of cardiovascular system
  - **PLO 4.** To diagnose and provide medical care in emergencies
  - **PLO 5.** To perform diagnostic manipulations
  - **PLO 6.** To keep medical records, process governmental, social and medical information.
- **1.3.3.** The study of the discipline provides students with the following social skills (Soft skills): stress resistance, the ability to adapt to the situation, sociability, the ability to work in a team, the desire to learn, critical thinking, and the ability to plan.

# 2. INFORMATION SCOPE OF THE COURSE

Field of knowledge, direction of training,		Characteristics of the discipline		
Name of indicators	educational and qualification level	full-time form of study	evening form of study	
Number of credits – 3	Realm of knowledge 22 "Health care"	Norma (option		
		Year of pre	paration:	
The total number of hours	Specialty "222" Internal medicine	5th		
- 90.		Semes	ter	
		9 <sup>th</sup> , 10 <sup>th</sup>		
		Lectu	res	
		-		
		Practical,	seminar	
Hours for day (or evening)		20 hours		
form of study:	Education and qualification	Labora	tory	
classrooms - 20 independent work of the student - 70	level:	-	-	
	The second (master's) level	Individua	l work	
		70 hours		
		Individual ta	sks: hours.	
		Type of control: o	lifferential test	

# 2.1. Description of the discipline

## 2.2.1 Lectures

№	Name of the topic	Number of hours	Type of lecture
1.			
	Total hours		

## 2.2.2 Seminars

No	Name of the topic	Number of hours	Method of teaching	Forms of control
1				
	Total hours			

## 2.2.3 Practical classes

No	Name of the topic	Number of hours	Method of teaching	Forms of control
1	Diagnostic methods in rheumatology. Organization of rheumatological	5	Presentations, videos, guidelines for teachers and students for full-	Current control (oral questioning, testing)

	service in Ukraine. Regulations. Modern methods of diagnosing rheumatic diseases.		time and distance learning	
2	Osteoporosis. Etiology, pathogenesis, pathomorphology, clinic, diagnosis, treatment.	5	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
3	Differential diagnosis of joint syndrome. Methods of examination of joints. Features of joint lesions in rheumatic diseases Laboratory. X-ray and ultrasound signs of joint damage	5	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
4	Modern methods of treatment of rheumatic diseases. The main groups of antirheumatic drugs. Drugs, dosage regimen, side effects.	5	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
	Total hours	20		

# 2.2.4. Laboratory classes.

№	Name of the topic	Number of hours	Method of teaching	Forms of control
1				
	Total hours			

# 2.2.5. Individual work

№	Name of the topic	Number of hours	Method of teaching	Forms of control
1	Subject and main tasks of rheumatology. Medical, social and economic aspects of rheumatology. Organization of rheumatological service in Ukraine. Nomenclature and	5	Presentations, videos, guidelines for teachers and students for full-time and distance learning	Current control (oral questioning, testing)

	classification of rheumatic diseases			
2	Modern methods of diagnosing rheumatic diseases. General clinical laboratory and biochemical methods Immunological methods	8	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
3	Modern methods of diagnosing rheumatic diseases X-ray, ultrasound methods and others	5	Presentations, videos, guidelines for teachers and students for full-time and distance learning	Current control (oral questioning, testing)
4	Osteoporosis. Etiology, pathogenesis, pathomorphology, clinic, diagnosis, treatment. Classification, clinic. Diagnosis, diagnosis criteria. Treatment, prevention.	7	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
5	Methods of examination of joints. Determination of joint function	5	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
6	Features of joint lesions in rheumatic diseases	5	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
7	Determination of the activity of the inflammatory process. Laboratory tests for joint syndrome.	5	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
8	X-ray and ultrasound signs of joint damage	5	Presentations, videos, guidelines for teachers and students for full-time and distance learning	Current control (oral questioning, testing)
9	The main groups of antirheumatic drugs	5	Presentations, videos, guidelines for teachers and	Current control (oral questioning, testing)

10	NSAIDs. Groups, dosing regimen, side effects	5	students for full- time and distance learning  Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
11	Glucocorticoids., Anticoagulants. Drugs, dosage regimen, side effects	5	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
12	Pulse therapy. Biotherapy. Methods, indications, contraindications, side effects.	5	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
13	Features of treatment of post-covid syndrome	5	Presentations, videos, guidelines for teachers and students for full-time and distance learning	Current control (oral questioning, testing)
14	Diagnosis of pulmonary embolism	5	Presentations, videos, guidelines for teachers and students for full- time and distance learning	Current control (oral questioning, testing)
	Total hours	70		

#### 3.EVALUATION POLICY

**3.1.** The evaluation of educational success of students is performed on the basis of the current "Instructions for evaluating the educational activities of students of KhNMU".

It is recommended to conduct practical classes with the inclusion of:

- 1) control of the initial level of knowledge with the help of tests made in the format of a question with 5 answer options, 1 of which is correct;
- 2) questioning of students on the topic of the lesson;
- 3) management of 1-2 patients with diseases and conditions corresponding to the subject of the lesson, followed by discussion of diagnosis, differential diagnosis with the use of principles of evidence-based medicine and in accordance with National and European guidelines and protocols;
- 4) consideration of the results of additional research methods (laboratory and instrumental), which are used in the diagnosis and differential diagnosis, according

to the topic of the class;

5) control of the final level of knowledge using multiple choice questions and case-based questions.

Mastering of the topic (current control) is controlled in a practical lesson in accordance with specific goals, mastering of semantic sections - in practical final lessons. It is recommended to use the following tools to assess the level of preparation of students: computer tests, case-based questions, evaluation of laboratory tests, including interpretation of their results, analysis and evaluation of instrumental tests results, evaluation of parameters that characterize the functions of the human body, control of practical skills.

Current control (CC) is performed by the lecturer of the academic group at the last lesson. Mastering of the topic (current control) is controlled in a practical lesson in accordance with specific goals. The following tools are used to assess the level of preparation of students: computer tests, case-based questions, interpretation and evaluation of laboratory tests, analysis and evaluation of instrumental studies and parameters that characterize the functions of the human body, control of practical skills. The final test (FT) must be conducted in accordance with the curriculum during the semester on a schedule, in a class. Work off of missed classes is performed by the lecturer of the academic group. Grade assessment is performed according to the traditional 4-point system: "excellent", "good", "satisfactory" and "unsatisfactory". The conversion of the average grade for current educational activities into a multipoint scale is performed in accordance with the "Instructions for the assessment of the educational activities of students..." or taking into consideration the average grade calculated in electronic journal. The minimum number of points a student must obtain for the current activity during the study of the section is 70 points, the maximum number of points - 120.

**Assessment of individual work of students**. Individual work of students, which is provided by the topic of the lesson along with classroom work, is assessed during the current control of the topic in the relevant lesson.

Assessment of individual student tasks is performed under the conditions of the teacher's tasks (report of the abstract in a practical lesson, report with a presentation in a practical lesson, report at scientific and practical conferences of the department or university, writing abstracts, articles, participation in the All-Ukrainian competitions). Points (up to 10) are added as incentives. The total amount of points for current educational activities must not exceed 120 points.

**Organization of final test.** Admission to the final test is determined in points of current educational activity, namely: min - 70, max - 120 points. Final test is performed by the lecturer of the academic group. If the test is not passed, the dates of rescheduling are set and test should be passed until the beginning of the next semester. Final test results are assessed as "worked out", "not worked out".

## **Performing of the final test:**

- 1. Passing of 20 multiple-choice questions and 20 case-based questions in the course section on Moodle platform. Evaluation criterion 95-100% of correct answers, "passed failed".
  - 2. Assessment of practical skills acquisition (assessment criteria "performed"

or "failed").

3. Assessment of theoretical knowledge is done according to the question cards, which contain three theoretical questions from the sections of the discipline. The criteria for assessing theoretical knowledge can be seen in a table:

Assessment of theoretical knowledge

				Ö
Number	«5»	<i>u</i> 4ss	<i>(</i> /2)	Oral answer for For each answer student
of quest	<i>(())</i>	<b>((4))</b>	((3))	Oral answer for For each answer student tickets, which include receives 10 to 16 points, the theoretical part of which corresponds to:
1	16	13	10	the theoretical part of which corresponds to:
2	16	13	10	the discipline
3	16	13	10	«4» - 13 points;
	48	39	30	«3» - 10 points.

### Grading of the course.

Grading of the course is done according to the student's activities in class and in appropriate section in Moodle. The range of points, possible to obtain for the course is between 70 and 120. Final test is done both in class orally and also includes multiple choice questions and case based questions at Moodle platform. Final test results are assessed as "worked out", "not worked out".

Upon completion of the course, the person responsible for the organization of educational and methodical work at the department or the lecturer puts the proper number of points and the corresponding note in the student's record book and also fills in the student's academic progress list on the discipline form Y-5.03B - undifferentiated test.

Note "**not worked out**" is written to students who were admitted to the undifferentiated test, but did not pass it and those, who were not admitted to the test.

## The list of questions for final test

- 1. Diagnostic criteria for major rheumatic diseases.
- 2. Assessment of the functional state of the joints.
- 3. Evaluation of the results of X-ray examination of the joints.
- 4. Basic therapy of rheumatic diseases ..
- 5. Pulse therapy: indications, contraindications, methods, complications.
- 6. Basic rules of joint puncture, intra-articular and periarticular injections.
- 7. Basic principles of primary and secondary prevention of rheumatic diseases.
- 8. Selection of patients for sanatorium treatment.
- 9. Principles of selection of nonsteroidal anti-inflammatory drugs.
- 10. Principles of selection of adequate doses of glucocorticoids.
- 11. Evaluation of immunological examination of the patient.
- 12. The main clinical manifestations of rheumatic diseases.
- 13. Basic principles of examination of patients with rheumatic diseases.
- 14. Basic principles of treatment of rheumatic diseases.

- 15. Osteoporosis. Current issues of diagnosis and treatment
- 16. Features of joint damage in various rheumatic diseases.
- 17. The subject and main tasks of rheumatology.
- 18. Medical, social and economic aspects of rheumatology.
- 19. Organization of rheumatology service in Ukraine.
- 20. Nomenclature and classification of rheumatic diseases.
- 21. General clinical laboratory methods of examination.
- 22. Biochemical methods of examination.
- 23. Immunological methods of examination.
- 24. Complications of NSAID therapy.
- 25. NSAID-hepato- and nephrotoxicity of drugs.
- 26. The main groups of antirheumatic drugs.
- 27. X-ray and ultrasound signs of joint damage.
- 28. Pulse therapy. Methods, indications, contraindications, side effects.
- 29. Biotherapy. Drugs, indications, contraindications, side effects.
- 30. Features of treatment of a postcovid syndrome.

#### 5. DISCIPLINE POLICY

To achieve the goals of training and to complete the course successfully, it is necessary to join the work from the first day; attend lectures regularly; read the material before its consideration in a practical lesson; not to be late and not to miss classes; come to the department dressed in a medical uniform, have medical shoes, stethoscope, notebook, pen; perform all necessary tasks and work on everyday basis; be able to interact with a partner or work in a group; ask for help and get it when you need it.

Academic mobility and interchangeability of credits (volume of 1 credit corresponds to 30 hours) is provided. Students can discuss different tasks, but should perform them individually. Students are prohibited to cheat, use any kind of software, tips, mobile phones, tablets or other electronic gadgets during the lesson. Students are not allowed to be late at practical classes. Missed practical classes are worked of hour by hour to the group lecturer or to the duty teacher. Work offs and consultations are held daily from 15.00 to 17.00, also on Saturdays in accordance with the "Regulations on the work off procedures for students" from 07.12.2015 № 415.

Students with special needs should meet with the lecturer or warn him before the start of classes; it can be also done by the group monitor at the request of the student. If you have any questions, please contact the lecturer.

#### 5. ACADEMIC INTEGRITY

At the Department of Internal Medicine № 3 and Endocrinology, an adherence to academic integrity as a mandatory component of the internal quality assurance system of the educational program is necessary. Observance of academic integrity

takes place according to the current legislation:

- Order №305 of 27.08.19 on the organization of the educational process in KhNMU.
- Code of Academic Integrity of KhNMU.
- Order No 165 of 02.07.2020 on measures to develop the system of academic integrity in KhNMU.
- Regulations on academic integrity.
- Regulations on the Commission for Academic Integrity, Ethics and Conflict Management of KhNMU.
- Recommendations of the National Agency for Quality Assurance in Higher Education.
- Law of Ukraine "On Education", Article 42.

#### 6. RECOMMENDED LITERATURE

#### **Basic**

- 1. Bolezni sustavov: Rukovodstvo dlya vrachei/ pod.red. V.I. Mazurova. SPb.: SpetsLit, 2008. 397 s.: il.
- 2. Diagnostika ta likuvannya revmatichnikh zakhvoryuvan': nachal'nii posibnik /A.S. Svintsits'kii. K.: VidavnichiidimMedkniga, 2017. 372 S.
- 3. Natsional'nii pidruchnik z revmatologiï/ Za red. V.M. Kovalenka, N.M. Shubi. K.: MORION, 2013. 672 s. s il.
- 4. Nasonov E.L., Alekberova Z. S., Galushko E.A. Revmatologiya. Rossiiskie klinicheskie rekomendatsii. GEOTAR-Media. 2019. 464 s.
- 5. Prakticheskaya revmatologiya: sovremennye aktsenty /Pod red. Yaremenko O.B.// Spravochnik vracha K. OOO Biblioteka «Zdorov'e Ukrainy», 2015. 536 s.
- 6. Zhuravl'ovaL.V. Obrani lektsii z revmatologii/ Navchal'nii posibnik .- L.V.Zhuravl'ova, M.O. Oliinik, Yu.O.Sikalo, V.O.Fedorov.-Kharkiv.- 2019.- 350s.
- 7. Rebrov A.P., Aparkina A.V., Gaidukova I.Z. (2015) Osobennosti aksial'nykh spondiloartritov, vklyuchaya ankiloziruyushchii spondilit i psoriaticheskii artrit, u lits raznogo pola. Sovrem.revmatologiya, 1: 35–37 (DOI: 10.14412/1996-7012-2015-1-35-38).MSD Manual. Professional version. Cardiovascular disorders. <a href="https://www.msdmanuals.com/professional/cardiovascular-disorders">https://www.msdmanuals.com/professional/cardiovascular-disorders</a>. Assessed Aug., 2021.
- 8. Davidson's Principles and Practice of Medicine23rd Edition. Editors: Stuart Ralston, Ian Penman, Mark Strachan Richard Hobson. Elsevier. 2018. 1440p.
- 9. USMLE Step 2 CK Lecture Notes 2017: Internal Medicine (Kaplan Test Prep). 2016. Published by Kaplan Medical. 474 pages.

#### **Additional**

- 1. Golovach I.Yu.; Egudina €.D. Podagra: poglyad na vidomu khvorobu kriz' prizmu ostannikhvidkrittiv ta suchasnikhrekomendatsii «Kardiologiya, Revmatologiya, Kardiokhirurgiya» №1 (62), berezen' 2019 r.
- 2. Kondratyuk V.E., Tarasenko O.N. GIPERURIKEMIYa TA PODAGRA: SUChASNII STAN PROBLEMI. Ukraïns'kii revmatologichnii zhurnal. №65 (3) 2016 : 30-37Rainer TH, Cheng CH, Janssens HJ, et al. Oral prednisolone in the treatment of acute gout: a pragmatic, multicenter, doubleblind, randomized trial. AnnInternMed. 2016;164:464-471.
- 3. Terkeltaub RA, Furst DE, Digiacinto JL, Kook KA, Davis MW.Novel evidence-based colchicine dose-reduction algorithm to predict and prevent colchicine toxicity in the presence of cytochrome P450 3A4/P-glycoprotein inhibitors.Arthritis Rheum 2011 Aug.63(8):2226-37.
- 4. Agency for Healthcare Research & Quality. Analgesics for Osteoarthritis: An Update of the 2006 Comparative Effectiveness Review. AHRQ. Available at <a href="https://effectivehealthcare.ahrq.gov/topics/osteoarthritis-pain/research">https://effectivehealthcare.ahrq.gov/topics/osteoarthritis-pain/research</a>. October 24, 2011; Accessed: March 15, 2019.
- 5. Agency for Healthcare Research & Quality. Treatment of Osteoarthritis of the Knee: An Update Review. AHRQ. Available at <a href="https://effectivehealthcare.ahrq.gov/topics/osteoarthritis-knee-update/research-2017">https://effectivehealthcare.ahrq.gov/topics/osteoarthritis-knee-update/research-2017</a>. May 4, 2017; Accessed: March 15, 2019.
- 6. Ben Salem C, Slim R, Fathallah N, Hmouda H. Drug-induced hyperuricaemia and gout.Rheumatology (Oxford). 2016 Aug 7.
- 7. Bennell KL, Kyriakides M, Hodges PW, Hinman RS. Effects of two physiotherapy booster sessions on outcomes with home exercise in people with knee osteoarthritis: a randomized controlled trial. *ArthritisCareRes* (*Hoboken*). 2014 Nov. 66(11):1680-7. [Medline].
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- 9. <u>Bruyère Olivier</u>, <u>Cooper Cyrus</u>, <u>Pelletier Jean-Pierre ae all</u>. Rekomendatsiï shchodo algoritmu vedennya patsientiv iz osteoartrozom kolinnogo sugloba v evropi ta po vs'omu sviti: zvit spetsial'noï komisiï evropeis'kogo tovaristva z vivchennya klinichnikh ta ekonomichnikh aspektiv osteoporozu ta osteoartrozu (ESCEO). Ukraïns'kii revmatologichnii zhurnal. <u>№65 (3) 2016</u>.: 15-29
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#### 7. INFORMATION RESOURSES

Сторінка в Moodle <a href="http://distance.knmu.edu.ua/course/view.php?id=3992">http://distance.knmu.edu.ua/course/view.php?id=3992</a>.

- 1. <a href="https://www.eular.org/recommendations\_management.cfm">https://www.eular.org/recommendations\_management.cfm</a>
- 2. <a href="https://www.rheumatology.org/Practice-Quality/Clinical-Support/Clinical-Practice-Guidelines">https://www.rheumatology.org/Practice-Quality/Clinical-Support/Clinical-Practice-Guidelines</a>
- 3. https://lupus-academy.org/
- 4. <a href="https://www.aplar.org/">https://www.aplar.org/</a>
- 5. https://rheumahub.org.ua/

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