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Информация о владельце:

ФИО: Ястребов Олег Ал Federal State Autonomous Educational Institution of Higher Education Должность: Ректор

"Peoples' Friendship University of Russia"

Дата подписания: 09.08.2022 17:20:45 Уникальный программный ключ:

ca953a0120d891083f939673078ef1a989dae18a

**Medical Institute** 

(name of the main educational unit (PMO) - the developer of the postgraduate program)

# Department of Internal Diseases with a course of cardiology and functional diagnostics named after academician V.S. Moiseev

(name of the basic educational unit (BUE) - the developer of the postgraduate program)

### WORKING PROGRAM OF THE DISCIPLINE

(name of discipline/module)	
Scientific specialty:	
3.1.18 Internal diseases	

The development of the discipline is carried out as part of the implementation of the postgraduate program:

Internal diseases: Heart failure

(name of postgraduate program)

## 1. THE PURPOSE OF MASTERING THE DISCIPLINE

The purpose of mastering the discipline "Internal diseases: Heart failure » is the preparation for passing candidate exams, as well as the development of in-depth knowledge and the acquisition of professional competencies of a researcher in the field of cardiology.

Discipline tasks:

- in-depth study of theoretical, methodological, clinical and medical and social foundations in the field of discipline " Internal diseases : Heart failure ";
- formation and improvement of professional training of a cardiologist with clinical thinking, well-versed in complex pathology, having in-depth knowledge of related disciplines;

• formation of skills in mastering the latest methods of diagnostics and treatment in the field of cardiology;

• the formation of skills and abilities of independent research and teaching activities in the field of discipline "Internal diseases: Heart failure".

## 2. REQUIREMENTS FOR THE RESULTS OF MASTERING THE DISCIPLINE

Mastering the discipline " Internal diseases : Heart failure » is aimed at preparing for the candidate's examinations, as well as mastering the following competencies:

As a result of studying the discipline, the graduate student must: know:

- etiology, pathogenesis, diagnosis, differential diagnosis, treatment, prevention of major diseases of the cardiovascular system;
- standards of diagnostics and treatment in cardiology;
- criteria for diagnosing cardiovascular diseases;

#### be able to:

- after a survey and physical examination, determine the need to prescribe the main methods of laboratory and instrumental diagnostics;
- analyze the results obtained in accordance with the clinical situation;
- outline the scope of additional studies in accordance with the prognosis of the disease, to clarify the diagnosis and obtain a reliable result;
- provide assistance in case of emergency and life-threatening diseases and conditions;
- conduct modern treatment of major cardiovascular diseases.

#### own:

- algorithm for diagnosis and differential diagnosis of major cardiovascular diseases;
- skills in performing and interpreting the main instrumental methods of research in cardiology ( EchoCG , ECG, ABPM, HM-ECG, ultrasound of the lungs);
- the main medical diagnostic and therapeutic measures for the provision of first aid in emergency and life-threatening conditions

## 3. VOLUME OF DISCIPLINE AND TYPES OF EDUCATIONAL WORK

The total complexity of the discipline " Internal diseases : Heart failure » is 4 credits (144 hours).

Table 4.1. Types of educational work by periods of mastering the postgraduate program

Type of study work		TOTAL,	Course			
- /	ac.h.	1	2	3		
Contact work, ac.h.	60		60	2	-	
including:						
Lectures (LL)		30		30		ı —
Laboratory work (LW)	30		30			
Practical/seminar classes (SP)	30	Total Wall	30	•		
Independent work of students, ac.h.	48	New Property	48	-		
Control (credit with grade), ac.h.	36		36			
Total labor input of the discipline	acc.h.	144		144	_	
Total labor input of the discipline	credit	4		4	-	

## 5. CONTENT OF THE DISCIPLINE

Table 5.1. The content of the discipline (module) by type of educational work

Name of the discipline section		Type of study work
Section 1.	Topic 1.1. Risk factors. Classification, clinical picture, examination methods,	LK, SZ, SR
Arterial hypertension	Topic 1.2. Drug and non-drug treatment. Surgical and interventional methods of treatment, indications and contraindications.	LK, SZ, SR
	Topic 2.1. ischemic heart disease. Risk factors. Angina pectoris. Classification (functional classes of angina pectoris), clinical symptoms, drug and non-drug treatment.	LK, SZ, SR
	Topic 2.2. Surgical and interventional methods of treatment, indications and contraindications.	LK, SZ, SR
Section 2. IHD. Risk factors. angina pectoris	Topic 2.3. Prinzmetal 's angina . Causes. clinical picture. Diagnosis, differential diagnosis, treatment tactics. Painless myocardial ischemia. Causes, clinical picture, diagnosis and differential diagnosis, treatment. Syndrome X. clinical picture, differential diagnosis, treatment features. Cardialgia: non-coronary diseases of the heart, diseases of the musculoskeletal system, lungs and pleura, esophagus, stomach, duodenum, gallbladder, pancreas and other diseases with which it is necessary to carry out a differential diagnosis	LK, SZ, SR
Section 3. OKS.  myocardial  nfarction	Topic 3.1 OKS, classification. Unstable angina: definition, pathogenesis, classification, diagnosis, differential diagnosis, drug treatment, surgical and interventional	LK, SZ, SR

Name of the discipline section		Type of study work
	treatments for unstable angina, indications and contraindications	
	Topic 3.2. Epidemiology of myocardial infarction. Risk factors. Pathogenesis. Classifications. Types of myocardial infarction. clinical picture. Diagnosis and differential diagnosis of myocardial infarction. Instrumental methods: ECG changes, their staging; echocardiography. Laboratory diagnostics. Course and complications of myocardial	LK, SZ, SR
	infarction. Treatment.  Topic 4.1. Etiology, pathogenesis, classification of cardiac	LK, SZ, SR
Section 4. Cardiac arrhythmias	arrhythmias. Ectopias, supraventricular and ventricular extrasystoles, paroxysmal tachycardias, atrial and ventricular flutter and fibrillation. Classification, clinical picture, ECG diagnostics, treatment tactics. Fibrillation ventricles. Emergency therapy.	ER, 52, 5K
	Topic 5.1. Classification of cardiac conduction disorders. Sick sinus syndrome. Sinoatrial, atrioventricular and intraventricular blockades (blockade of the legs of the His bundle, branches of the left leg) Causes of occurrence, clinical picture, ECG - diagnosis, therapeutic tactics. Complications of conduction disorders, clinical picture, diagnosis, differential diagnosis of complications. Treatment.	LK, SZ, SR
Section 5. Violations of the conduction of the heart (blockade).	Topic 5.2. Syndromes of premature excitation of the ventricles. Classification, diagnosis, differential diagnosis. Drug and non-drug treatment. Long QT syndrome. Causes, ECG diagnosis, clinical symptoms, treatment tactics. transesophageal pacing in the diagnosis and treatment of patients with cardiac arrhythmia and conduction disorders. Pacemakers. Classification. Indications and	LK, SZ, SR
	contraindications for temporary and permanent pacing. Methods of implantation of pacemakers. ECG during pacing. Peculiarities of hemodynamics during cardiostimulation. Pacemaker syndrome, mechanism of occurrence and treatment.	
Section 6	Topic 6.1. Double AK. Stenosis of the left atrioventricular orifice. Aortic valve insufficiency. Narrowing of the mouth of the aorta. Etiology, pathogenesis, clinic, diagnostic methods, differential diagnostics, treatment.	LK, SZ, SR
defects.	Topic 6.2. Stenosis and insufficiency of the tricuspid valve. Combined heart defects. Etiology, pathogenesis, clinical manifestations, diagnosis, differential diagnosis, treatment. Heart defects Surgical methods of treatment of valvular lesions of the heart. Indications and contraindications for surgical treatment.	LK, SZ, SR
Section 7. Pericarditis.	Topic 7.1. Pericarditis. Etiology, pathogenesis, classification, clinical picture, diagnosis, differential diagnosis, treatment. Indications for pericardial puncture, pericardial puncture technique. Biopsy of the pericardium. Features of clinical manifestations of pericarditis in	LK, SZ, SR

Name of the discipline section	Contents of the section (topic)	Type of study work
	trauma, tuberculosis, neoplasms, systemic lupus erythematosus, myxedema, uremia, etc. Dry pericarditis. Clinical picture, diagnosis, differential diagnosis, ECG, echocardiography. Treatment.	WOIR
	Topic 7.2. Acute effusion pericarditis. clinical picture. Diagnosis. differential diagnosis. The value of X-ray examination, echocardiography. Cardiac tamponade. Symptoms of heart failure. Treatment taking into account the etiological factor. Adhesive (constrictive) pericarditis.	LK, SZ, SR
	Etiology. The mechanism of development and features of circulatory disorders, "pseudocirrhosis of the liver. Postoperative adhesive pericarditis. Diagnosis, treatment. Indications for pericardial puncture. Indications and surgical treatment and its types.	
Section 8. Cardiomyopathies and myocarditis.	Topic 8.1 Myocarditis. Classification. Etiology and pathogenesis. Clinical manifestations. Diagnosis and differential diagnosis. Treatment. Forecast. Prevention. Cardiomyopathy. Classification. Pathogenesis of intracardiac hemodynamic disorders in dilated , hypertrophic and restrictive cardiomyopathy. Clinical manifestations. Diagnosis and differential diagnosis. course and complications. Forecast. Medical treatment. Indications for surgical treatment.	LK, SZ, SR
failure	Topic 9.1. Etiology, pathogenesis, clinic, dif. diagnosis of acute and chronic heart failure. Classification. Modern methods of examination and treatment. Acute and chronic heart failure.	LK, SZ, SR

## 6. LOGISTICS AND TECHNICAL SUPPORT OF THE DISCIPLINE

Table 6.1. Logistics of discipline

Audience type	Audience equipment	Specialized educational / laboratory equipment, software and materials for mastering the discipline (if necessary)
Lecture	An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations.  Lecture hall of the therapeutic building of the State Budgetary Institution of Health "GKB im. V.V. Vinogradov DZM, Moscow, st. Vavilova, d. 61	A set of specialized furniture; technical means: a multimedia projector, a
Lecture	An auditorium for lecture-type classes, equipped with a set of specialized furniture; board (screen) and technical means of multimedia presentations.	A set of specialized furniture; technical means: a multimedia projector, a laptop, a plasma panel, a screen, a magnetic board, a set of dummies, a set of educational videos and

Audience type	Audience equipment	Specialized educational / laboratory equipment, software and materials for mastering the discipline (if necessary)
	Lecture halls No. 1 and 2 of the therapeutic and administrative building of the State Budgetary Institution of Health "GKB im. A.K. Eramishantseva DZM", Moscow, st. Lenskaya, 15	presentations, a set of analog and digital radiographs, educational posters and tables. Software: Microsoft products (OS, office suite incl. MS)
Laboratory	Audience for laboratory and research work. Laboratory No. 545, GBUZ "GKB im. V.V. Vinogradov DZM, Moscow, st. Vavilova, d. 61	devices, fibroscan , functional diagnostics laboratory general clinical
Seminar	An auditorium for conducting seminar-type classes, group and individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and technical means for multimedia presentations.  Room No. 543 of the therapeutic building of the State Budgetary Institution of Health "GKB them. V.V. Vinogradov DZM, Moscow, st. Vavilova, d. 61	A set of specialized furniture; technical means: a multimedia projector, a laptop, a set of educational videos and presentations, a set of radiographs, an ECG, educational posters and tables. Software: Microsoft products (OS, office suite, including MS Office / Office 365, Teams.
Seminar	An auditorium for conducting seminar-type classes, group and individual consultations, current control and intermediate certification, equipped with a set of specialized furniture and technical means for multimedia presentations.  Lecture hall No. 2 of the administrative building of the GBUZ "GKB im. A.K. Eramishantseva DZM", Moscow, st. Lenskaya, 15	A set of specialized furniture; technical means: a multimedia projector, a laptop, a set of educational videos and presentations, a set of radiographs, an ECG, educational posters and tables. Software: Microsoft products (OS, office suite, including MS Office / Office 365, Teams.
For independent work of students	An auditorium for independent work of students (can be used for seminars and consultations), equipped with a set of specialized furniture and computers with access to the EIOS.	A set of specialized furniture; technical means: multimedia projector, laptop. Software: Microsoft products (OS, office suite, including MS Office / Office 365, Teams.

<sup>\* -</sup> the audience for independent work of students is required!

# 7. EDUCATIONAL-METHODOLOGICAL AND INFORMATION SUPPORT OF THE DISCIPLINE

#### Main literature:

- 1. D. Zipes, P. Libby et all. Braunwald's Heart Disease: A Textbook of Cardiovascular Medicine, 2-Volume Set, 11th Edition. Elsevier, 2018. 2128.
- 2. Hurst's The Heart, 14th Edition. V. Fuster, R. A. Harrington, J. Narula, Z. J. Eapen. McGraw-Hill Education, 2017. 2208
- 3. Heart Failure: A Companion to Braunwald's Heart Disease, 3rd Edition. D. Mann, G. M. Felker. Saunders, 2015. 784
- 4. Harrison's Principles of Internal Medicine, 20th Edition. D. Kasper, A. S. Fauci, S. L. Hauser, D. L. Longo, J. L. Jameson, J. Loscalzo . McGraw -Hill Education/Medical, 2018.
- 5. Davidson's Principles and Practice of Medicine, 23rd Edition. S. H. Ralston, ID Penman, M. W. J. Strachan. Elsevier, 2018. 1440
- 6. Feigenbaum's Echocardiography. 8th edition. WF Armstrong, T. Ryan. wolters Kluwer . 2018. 2841.
- 7. Evidence Based Medicine 5th Edition. S. Straus, P. Glasziou, S. Richardson, B. Haynes. Elsevier, 2018. 336.
- 8. Fundamentals of internal medicine. In 2 vols. T. 1 / Ed. V.S. Moiseev, Zh.D. Kobalava, I.V. Maev, A.D. Kaprin, E.I. Gusev, M.V. Shestakova, S.V. Moiseev. Scientific edition, a guide for doctors. [2nd ed., Revised. and additional] Moscow: Medical Information Agency LLC, 2020. 688 p.: ill.
- 9. Internal diseases: textbook: in 2 volumes / ed. A.I. Martynova, Zh.D. Kobalava, S.V. Moiseev. 0 4th ed., revised. Moscow: GEOTAR-Media, 2021. T.I. 784 p.: ill. DOI: 10.33029/9704-5886-0-VNB-2021-1-784.
- 10. Clinical guidelines for arterial hypertension in adults. 2020. <a href="https://scardio.ru/content/Guidelines/2020/Clinic\_rek\_AG\_2020\_unlock\_ed.pdf">https://scardio.ru/content/Guidelines/2020/Clinic\_rek\_AG\_2020\_unlock\_ed.pdf</a>
- 11. Clinical guidelines for stable coronary heart disease. 2020. <a href="https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_IBS-unlocked.pdf">https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_IBS-unlocked.pdf</a>
- 12. Clinical practice guidelines for acute ST -segment elevation MI . 2020. <a href="https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_OKS\_sST-unlocked.pdf">https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_OKS\_sST-unlocked.pdf</a>
- 13. Clinical guidelines hypertrophic cardiomyopathy. 2020. <a href="https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_Kardiomyopati-ya-unlocked.pdf">https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_Kardiomyopati-ya-unlocked.pdf</a>
- 14. Clinical guidelines Bradyarrhythmias and conduction disorders. 2020. <a href="https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_Bradiaritmiya-unlocked.pdf">https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_Bradiaritmiya-unlocked.pdf</a>
- 15. Clinical guidelines Infective endocarditis and infection of intracardiac devices.

  2021. <a href="https://scardio.ru/content/Guidelines/2020/KP">https://scardio.ru/content/Guidelines/2020/KP</a> Inf Endocardit-unlocked.pdf
- 16. Clinical guidelines Chronic heart failure.
  2020. https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_HSN-unlocked.pdf
- 17. Clinical guidelines Atrial fibrillation and flutter. 2020. <a href="https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_FP\_TP-unlocked.pdf">https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_FP\_TP-unlocked.pdf</a>

- 18. Clinical recommendations supraventricular tachycardia.
  2020. <a href="https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_NT-unlocked.pdf">https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_NT-unlocked.pdf</a>
- 19. Clinical guidelines Ventricular arrhythmias. Ventricular tachycardia and sudden cardiac death <a href="https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_ZHNR-unlocked.pdf">https://scardio.ru/content/Guidelines/2020/Clinic\_rekom\_ZHNR-unlocked.pdf</a>
- 20. ESC 2020 guidelines for the diagnosis and treatment of patients with atrial fibrillation, Russian Journal of Cardiology 2021;26(9):4701 CLINICAL RECOMMENDATIONS doi:10.15829/1560-4071-2021-4701
- 21.2021 ESC Guidelines for the diagnosis and treatment of acute and chronic heart failure. 2021. https://doi.org/10.1093/eurheartj/ehab368
- 22. Guidelines on Prevention, Diagnosis and Treatment of Infective Endocarditis Executive Summary European Heart Journal (2015) 25, 267–276
- 23. American College of Cardiology/European Society of Cardiology Clinical Expert Consensus Document on Hypertrophic Cardiomyopathy European Heart Journal 2021
- 24. ACC/AHA/ESC guidelines for the management of patients with atrial fibrillation. European Heart Journal 2021
- 25. Guidelines on diagnosis and treatment of pulmonary arterial hypertension European Heart Journal 2020

#### Additional literature:

- 1. The ESC Textbook of Cardiovascular Medicine. T. F. Lüscher , J. A. Camm , G. Maurer, P. Serruys . Oxford University Press, 2018.
- 2. Oxford Textbook of Advanced Heart Failure and Cardiac Transplantation Oxford Medicine. M.J. Domanski, M.R. Mehra, M.A. Pfeffer. Oxford University Press, 2016. 442.
- 3. The ESC Textbook of Intensive and Acute Cardiovascular Care. M. Tubaro , P. Vranckx , S. Price, C. Vrints . Oxford University Press, 2015. 799.
- 4. The EHRA book of Pacemaker, ICD, and CRT Troubleshooting. H. Burri, C. Israel, J.-C. Deharo. Oxford, 2015. 310.
- 5. The EACVI Textbook of Cardiovascular Imaging. JL Zamorano et al. Oxford University Press, 2015. 678.
- 6. The ESC Handbook on Cardiovascular Pharmacology. JC Kaski, KP Kjeldsen. Oxford University Press, 2019. -960.
- 7. How to Read a Paper: The Basics of Evidence-based Medicine and Healthcare, 6th Edition | Trisha Greenhalgh. T. Greenhalgh . Blackwell bmj Books , 2006.
- 8. Internal Diseases with the Basics of Evidence-Based Medicine and Clinical Pharmacology: A Guide for Physicians / Moiseev V.S., Kobalava Zh.D.; Ed. V.S. Moiseeva. M.: GEOTAR-Media, 2008. 832 p.
- 9. Ultrasound diagnosis of disorders of the morphofunctional state of the myocardium and coronary arteries in various heart diseases: Textbook / Korovina E.P., Safarova A.F. M .: Publishing house of RUDN University, 2008. 265 p.
- 10. Echocardiography in various modifications in the evaluation of therapeutic interventions for various diseases of the heart and great vessels: Textbook /

- Safarova A.F., Korovina E.P.; RUDN; M .: Publishing House of RUDN, 2008. 247 p.
- 11. Korovina E.P. Ultrasound diagnosis of morphological disorders of large main arteries: Textbook. Publishing House of RUDN University, 2008. 145 p. Application: CD ROM (Electrical resource). 89.14.
- 12. Moiseev V.S. Heart disease: A guide for doctors / M.: MIA, 2008. 528 p.
- 13. Moiseev V.S., Moiseev S.V., Kobalava Zh.D. Heart Disease. M.: "Medical Information Agency", 2008
- 14. Cardiomyopathy and myocarditis / V. S. Moiseev. M. : GEOTAR-Media, 2012. 352 p.
- 15. Acute heart failure / V. S. Moiseev. M.: Medical Information Agency, 2012. 328 p.
- 16. Nasonov E.L., Nasonova V.A. Rheumatology. National leadership. Moscow, GEOTAR-Media 2008
- 17. Chuchalin A.G. Pulmonology. National leadership. Moscow, GEOTAR-Media 2010
- 18. Abramova N.A., Alexandrov A.A., Andreeva E.N., Dedov I.I., Melnichenko G.A. Endocrinology. National leadership. Moscow, GEOTAR-Media 2013
- 19. Nephrology. National leadership. Ed. ON Mukhina. GEOTAR-Media, M., 2009, 720 s
- 20. Guide to hematology. Ed. A.I. Vorobieva in 3 volumes. Moscow. Newdiamed 2002
- 21. "Internal Diseases" by Tinsley R. Harrison Classics of modern medicine, Moscow 2008.
- 22. Differential diagnosis in the clinic of internal diseases. V.A. Vinogradov, 2009
- 23. Moiseev V.S., Shelepin A.A. Alcohol and heart disease. Moscow, GEOTAR Media . 2009 168s.
- 24. Clinical pharmacology / Ed. V.G. Kukes . 4th ed., revised . and additional ; Electronic text data. M. : GEOTAR-Media, 2009. 1056 p.
- 25. Emergency care in therapy and cardiology / Ed. Yu.I. Grinstein , M. GEOTAR-Media, 2009. 224 p.
- 26. Internal illnesses. Cardiovascular system / Roitberg G.E., Strutynsky A.V. MEDpress-inform , 2011.
- 27. Moiseev V.S., Kiyakbaev G.K. Cardiomyopathy and myocarditis. Moscow, GEOTAR -Media . 2013. 352s
- 28. Moiseev V.S., Nikolaev A.Yu. , Garmash I.V. Alcoholic disease. Moscow, GEOTAR- Media.- 2014 480s

## Resources of the information and telecommunications network "Internet":

- 1. RUDN ELS and third-party ELS, to which university students have access on the basis of concluded agreements:
  - RUDN Electronic Library System RUDN EBS http://lib.rudn.ru/MegaPro/Web
  - ELS "University Library Online" http://www.biblioclub.ru
  - EBS Yurayt <a href="http://www.biblio-online.ru">http://www.biblio-online.ru</a>
  - ELS "Student Consultant" www.studentlibrary.ru
  - EBS "Lan" <a href="http://e.lanbook.com/">http://e.lanbook.com/</a>
  - -EBS "Trinity Bridge"

- 2. Databases and search engines:
- electronic fund of legal and normative-technical documentation <a href="http://docs.cntd.ru/">http://docs.cntd.ru/</a>
  - Yandex search engine https://www.yandex.ru/
  - Google search engine https://www.google.ru/
  - abstract database SCOPUS http://www.elsevierscience.ru/products/scopus/
  - 3. Special information resources:
  - Portal of the All-Russian Scientific Society of Cardiology and the Association of Pediatric Cardiologists of Russia. https://scardio.ru
  - Portal of the European Association of Cardiology. http://www.escardio.org/
  - American Heart Association website. http://www.heart.org/HEARTORG/
  - RUDN Electronic Library System; http://lib.rudn.ru/4
  - RUDN Educational Portal (http://web-local.rudn.ru);
  - Scientific electronic library (http://elibrary.ru/defaultx.asp);
  - ONLINE universal library (http://biblioclub.ru);
  - BENTHAM OPEN Electronic Journal Library (http://www.benthamscience.com/open/az.htm);
  - Elsevier Electronic Journal Library (http://www.elsevier.com/about/open-access/open-archives)
  - Medical online library MedLib (http://med-lib.ru/);
  - Recommendations of the Russian Society of Cardiology www.scardio.ru
  - U. S. National Library of Medicine National Institutes of Health: http://www.ncbi.nlm.nih.gov/pubmed/
  - Scientific electronic library: http://library.ru/defaultx.asp
  - U. S. National Library of Medicine National Institutes of Health: http://www.ncbi.nlm.nih.gov/pubmed/
  - Scientific electronic library: http://library.ru/defaultx.asp
  - Website of the Russian Respiratory Society www.pulmonology.ru
  - Information and educational portal for doctors www.univadis.ru
  - Journal of the American College of Cardiology.
  - JACC: Heart failure.
  - JACC: Cardiovascular Imaging.
  - circulation.
  - Circulation: Heart failure.
  - European Heart Journal.
  - European Journal of Heart Failure.
  - European Heart Journal Cardiovascular Imaging.
  - EP Europace.
  - JAMA: Cardiology
  - JAMA: Internal Medicine.

Educational and methodological materials for independent work of students in the development of the discipline/module\*:

1. Course lectures on discipline "Internal diseases: Heart failure ".

- 2. Guidelines for the implementation of practical tasks in the discipline "Internal diseases: Heart failure".
- 3. Guidelines for independent work on the discipline " Internal diseases : Heart failure ".
- \* all educational and methodological materials for independent work of students are placed in accordance with the current procedure on the page of the discipline in TUIS!

# 8. EVALUATION MATERIALS AND SCORE-RATING SYSTEM FOR ASSESSING THE LEVEL OF FORMATION OF COMPETENCES IN THE DISCIPLINE

Evaluation materials and a point- rating system for assessing the development of the discipline are presented in the Appendix to this Work Program of the discipline " Internal diseases: Heart failure ".

\* - OM and BRS are formed on the basis of the requirements of the relevant local normative act of the Peoples' Friendship University of Russia.

#### **DEVELOPERS:** Head cafe Internal Medicine with a Course in Cardiology and Functional Diagnostics named after Academician V.S. Moiseeva, Doctor of Medical Sciences, Professor, Corresponding Member of RAS Kobalava Zh.D. Position, BUP Surname I.O. Associate Professor, Department of Internal Medicine with a course of cardiology and functional diagnostics named after Academician V.S. Kotova E.O. Moiseeva, Ph.D. Position, BUP Surname I.O. **HEAD OF BUP:** Head cafe Internal Medicine with a Course in Cardiology and Functional Diagnostics named after Academician V.S. Moiseeva, Doctor of Medical Sciences, Professor, Corresponding Kobalava Zh.D. Member of RAS Name of BUP Surname I.O.