MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational Institution
«BELARUSIAN STATE MEDICAL UNIVERSITY»

APPROVED
by Rector of the Educational Institution «Belarusian State Medical University»

S.P.Rubnikovich
24.09.2026
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Контрольный экземпляр

DIAGNOSIS AND TREATMENT OF SYSTEMIC CONNECTIVE TISSUE DISEASES

Curriculum of the educational institution in the additional course for the specialty

7-07-0911-01 «General Medicine»

2026

The educational institution's curriculum for the educational has been developed in accordance with the higher education standard for specialty 1-79 01 01 "General Medicine," approved and enacted by Resolution No. 14 of the Ministry of Education of the Republic of Belarus dated 01.26, 2022, on the educational plan in the specialty 1-79 01 01 «General Medicine», approved 15.04.2026, registration # 7-07-0911-01/2627/mf

COMPILERS:

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RECOMMENDED FOR APPROVAL:

by the Department of Internal Diseases, Cardiology and Rheumatology with a course of advanced training and retraining of the Educational Institution «Belarusian State Medical University»
(protocol # 12 of 30.06.2026);

by the Methodological Commission of Therapeutic Disciplines of the Educational Institution «Belarusian State Medical University»
(protocol # 1 of 24.09.2026)

EXPLANATORY NOTE

«Diagnosis and treatment of systemic connective tissue diseases» is an additional course containing systematized scientific knowledge and techniques in the field of rheumatology, studying diagnosis and treatment of systemic connective tissue diseases. The curriculum of the additional course «Diagnosis and treatment of systemic connective tissue diseases» includes the latest scientific data about rheumatic diseases.

The aim of the additional course «Diagnosis and treatment of systemic connective tissue diseases» is the formation of students' competencies for diagnosis and treatment of systemic connective tissue diseases.

The objectives of the additional course are to form students' scientific knowledge about the basic concepts of rheumatology and principles of classification of systemic connective tissue diseases, epidemiology, etiology, pathogenesis and clinical manifestations of the rheumatic diseases, causes and mechanisms of typical autoimmune diseases, the major risk factors contributing to the onset of systemic connective tissue diseases, the most important manifestations of systemic connective tissue diseases, innovative diagnosis and treatment of connective tissue diseases; skills required for objective examination of patients with systemic connective tissue diseases, diagnosis, differential diagnosis and treatment of the main rheumatic diseases, at the same time contributing to the formation of clinical thinking; and abilities for correct interpretation of data obtained during clinical, laboratory and instrumental examination, use of medical ethics and deontology rules, carrying out the treatment and monitoring its effectiveness and safety in patients with systemic connective tissue diseases.

Relations to other academic disciplines

Teaching and successful learning of the additional course «Diagnosis and treatment of systemic connective tissue diseases» is carried out on the basis of the knowledge and skills previously acquired by the students in the sections «Musculoskeletal system and connective tissue diseases» of the educational discipline «Internal Diseases».

As a result of studying the additional course «Diagnosis and treatment of systemic connective tissue diseases» the student should

know:

basic concepts of rheumatology;

principles of classification of systemic connective tissue diseases;

causes and mechanisms of development of basic rheumatologic diseases;

clinical manifestations of rheumatic diseases, classification criteria for diagnosis of the diseases;

routine and innovative diagnosis and treatment of connective tissue diseases;

normal tests values used for diagnosis of major rheumatic diseases;

clinical manifestations, diagnosis and differential diagnosis of systemic connective tissue diseases;

indications, treatment regimes, side effects of main groups of antirheumatic drugs;

non-pharmacological treatment of rheumatic diseases;

the principles of rehabilitation of the patients with systemic connective tissue diseases;

be able to:

conduct an objective examination of the patients with systemic connective tissue diseases;

evaluate the data of laboratory and instrumental examinations;

use the results of objective, laboratory and instrumental diagnosis in determining the final clinical diagnosis;

make the differential diagnosis of rheumatic diseases;

formulate the diagnosis it in accordance with the modern classifications;

determine the strategy and tactics of treatment, program of monitoring of effectiveness and safety of treatment;

determine the indications for use of glucocorticosteroids, disease-modifying antirheumatic drugs and genetically engineered biological drugs;

master:

skills of objective examination in systemic connective tissue diseases;

skills used for assessment of pain syndrome in joint diseases;

technique for interpreting test results used to diagnose major systemic connective tissue diseases;

skills for providing medical care for the most common systemic connective tissue diseases, including urgent and life-threatening conditions of the patient.

Total number of hours for the study of the additional course is 40 academic hours. Classroom hours according to the types of studies: practical classes – 25 hours, student independent work (self-study) – 15 hours.

Intermediate assessment is carried out according to the syllabus of the specialty in the form of a credit (9^{th} semester).

Form of higher education – full-time.

THEMATIC PLAN

Section (topic) name	Number of class hours
	practical
1. Nomenclature, principles of diagnosis and treatment of systemic connective tissue diseases	**5**
2. Diagnosis and treatment of connective tissue diseases	**10**
2.1. Systemic lupus erythematosus	5
2.2. Antiphospholipid syndrome	
2.3. Sjögren's syndrome	
2.4. Systemic sclerosis	5
2.5. Dermatomyositis, polymyositis	

Section (topic) name	Number of class hours
	practical
2.6. Mixed connective tissue disease	
3. Diagnosis and treatment of systemic vasculitis	**5**
4. Diagnosis and treatment of rheumatoid arthritis	**5**
Total hours	**25**

CONTENT OF THE EDUCATIONAL MATERIAL

1. Nomenclature, principles of diagnosis and treatment of systemic connective tissue diseases

Actuality of the problem of systemic diseases of the connective tissue: epidemiology, mechanisms of development, role of genetic factor. Age-related aspects of systemic connective tissue diseases.

Nomenclature of systemic connective tissue disease, characteristics of main groups of diseases.

Methods of physical examination of patients with systemic connective tissue diseases. Significance of anamnesis and patient's complaints in determining the nature disease. Visual analogue scale. Main clinical syndromes in patients with rheumatological disorders.

Current methods of laboratory diagnosis of systemic connective tissue diseases. Interpretation of data of laboratory tests.

Immunological diagnostics in rheumatology: modern capabilities, indications, sensitivity and specificity of tests.

The principles of diagnostic joint aspirations, indications, possible adverse events. Use of synovial fluid test in differential diagnosis of arthritis.

Instrumental methods in the diagnosis of rheumatic diseases (X-ray, computed tomography, magnetic resonance imaging, ultrasound, capillaroscopy, arthroscopy): potential of the methods, indications, diagnostic role.

Histological diagnosis of rheumatic diseases: indications, morphological characteristics of various systemic connective tissue diseases.

Methods for assessing the activity and progression of rheumatic diseases.

Basic anti-inflammatory drugs, mechanism of action. Classification. Pharmacokinetics, side effects, indications and contraindications. Side effects warning. Interactions with other drugs. The choice of drug and dose for systemic connective tissue diseases.

Genetically engineering biological therapy in rheumatology: mechanism of action. Indications, contraindications, principles of use, main classes of drugs. Safety monitoring before use. Side effects, their prevention and correction.

NSAIDs: mechanism of action, indications, contraindications, complications during use. Monitoring for the side effects, prevention and treatment. The role of cyclooxygenase. Interactions of NSAIDs with other drugs.

Glucocorticosteroids: mechanism of action, indications, contraindications, complications during use. Side effects of glucocorticosteroids, their prevention and correction. Oral corticosteroids. Pulse therapy, doses, rules, indications. Local use of glucocorticosteroids.

2. Diagnosis and treatment of connective tissue diseases

2.1. Systemic lupus erythematosus

Clinical symptoms of damage of organs and systems in systemic lupus erythematosus. Diagnostic criteria and classification, laboratory and immunological diagnosis. Assessment of the activity of systemic lupus erythematosus. Unfavorable prognosis factors. Lupus nephritis: classification, diagnosis.

Principles of treatment of systemic lupus erythematosus. Groups of drugs, treatment regimens, pulse therapy. Differentiated therapy for various lesions. Treatment approaches to lupus nephritis. Management tactics for patients with systemic lupus erythematosus at the inpatient and outpatient stages.

2.2. Antiphospholipid syndrome

Role of antiphospholipid antibodies in development of antiphospholipid syndrome. Clinical manifestations depending on localization and pattern of thrombosis. Classification. Diagnostic criteria. Importance of laboratory detection of anti-cardiolipin IgG and/or IgM, anti-β2 glycoprotein I IgG and/or IgM, lupus anticoagulant. Catastrophic antiphospholipid syndrome diagnosis.

Treatment of antiphospholipid syndrome. Use of antiplatelet agents, anticoagulants, low molecular weight heparin. The goals of the prophylactic treatment.

2.3. Sjögren's syndrome

Clinical and laboratory manifestations of Sjögren's syndrome. Complications. The concept of primary and secondary Sjögren's syndrome. Causes of secondary Sjögren's syndrome.

Immunological diagnosis of Sjögren's syndrome. Methods determining the state and functioning of lacrimal and salivary glands. Treatment of Sjögren's syndrome.

2.4. Systemic sclerosis

Clinical manifestations of systemic sclerosis: lesions of skin, blood vessels, Raynaud's syndrome, articular syndrome, visceral damages.

Diagnostic criteria for systemic sclerosis. Laboratory and instrumental methods of diagnosis of systemic sclerosis. Laboratory and instrumental diagnosis, the role of musculocutaneous flap biopsy. Basic principles for the diagnosis of early manifestations of systemic sclerosis. Differential diagnosis.

Management of systemic sclerosis (non-drug, drug). Treatment of Raynaud's syndrome in patients with systemic sclerosis.

2.5. Dermatomyositis, polymyositis

Clinical and laboratory manifestations of polymyositis and dermatomyositis.

Diagnostic criteria, differential diagnosis. Diagnostic algorithm in patients with muscle weakness.

Treatment principles of polymyositis and dermatomyositis. Groups of drugs, indications, contraindications, side effects, treatment regimens. Indications for

immunosuppressive therapy in patients with polymyositis and dermatomyositis. Biological therapy for inflammatory myopathies: drugs, indications, contraindications, treatment regimens, side effects.

2.6. Mixed connective tissue disease

Diagnosis criteria for mixed connective tissue disease. Symptoms and complications.

Laboratory and immunological changes, methods for verifying the diagnosis. Role of detection of high levels of antibodies to the U1 ribonucleoprotein (anti-RNP).

Differential diagnosis of mixed connective tissue disease.

General principles for the treatment of mixed connective tissue disease.

3. Diagnosis and treatment of systemic vasculitis

Classification of systemic vasculitis (2012 International Chapel Hill Consensus). Vasculitis associated with systemic disease (lupus vasculitis, rheumatoid vasculitis).

ANCA-associated small vessel vasculitis: microscopic polyangiitis, granulomatosis with polyangiitis, eosinophilic granulomatosis with polyangiitis.

Immune complex small vessel vasculitis: anti-glomerular basement membrane (anti-GBM) disease, cryoglobulinemic vasculitis, IgA vasculitis (Henoch-Schönlein), hypocomplementemic urticarial vasculitis (anti-C1q vasculitis).

Clinical manifestations, diagnostic criteria, complications and treatment principles of small vessel vasculitis. Groups of drugs, indications and contraindications, side effects, treatment regimes.

Nomenclature of medium, large and variable vessel vasculitis.

Polyarteritis nodosa: clinical manifestations, diagnostic criteria, principles of treatment.

Clinical manifestations, classification criteria, diagnosis, differential diagnosis and treatment of Takayasu arteritis.

Clinical manifestations and classification criteria for giant cell arteritis. Diagnosis and treatment of giant cell arteritis.

Behcet's disease: clinical symptoms, diagnostic criteria, principles of treatment.

4. Diagnosis and treatment of rheumatoid arthritis

ACR 1987 Criteria for the Classification of Rheumatoid Arthritis. ACR/EULAR 2010 rheumatoid arthritis classification criteria. Serological variants of rheumatoid arthritis.

Early manifestations of rheumatoid arthritis, late articular syndrome, extra-articular lesions, complications. Special clinical forms (Felty's syndrome, adult Still's disease). Radiological diagnosis. Scales for assessing the activity of the disease, assessment of functional disorders.

Differential diagnosis with joint diseases (reactive arthritis, psoriatic arthropathy, ankylosing spondylitis, gout, osteoarthritis and main types of infectious arthritis). Differential diagnosis of articular and periarticular lesions.

Principles of treatment of rheumatoid arthritis. Basic treatment of rheumatoid arthritis: drugs and treatment regimens, side effects, their monitoring and prevention.

Genetically engineering biological therapy. The role of NSAIDs, corticosteroids. Symptomatic treatment, local therapy.

Non-drug treatment methods in management of rheumatoid arthritis (physiotherapy, arthroscopy, orthopedic aids, plasmapheresis): indications, method selection.

ACADEMIC DISCIPLINE «DIAGNOSIS AND TREATMENT OF SYSTEMIC CONNECTIVE TISSUE DISEASES» CURRICULAR CHART

Section, topic #	Section (topic) name	Number of hours	Self-studies	Form of control
		practical		
1.	**Nomenclature, principles of diagnosis and treatment of systemic connective tissue diseases**	**5**	**4**	Interview; solving situational tasks
2.	**Diagnosis and treatment of connective tissue diseases**	**10**	**7**	
2.1.	Systemic lupus erythematosus	5	4	Interview; assessment based on role-playing; solving situational tasks
2.2.	Antiphospholipid syndrome			
2.3.	Sjögren's syndrome			
2.4.	Systemic sclerosis	5	3	
2.5.	Dermatomyositis, polymyositis			
2.6.	Mixed connective tissue disease			
3.	**Diagnosis and treatment of systemic vasculitis**	**5**	**2**	Interview; assessment based on role-playing; solving situational tasks
4.	**Diagnosis and treatment of rheumatoid arthritis**	**5**	**2**	Interview; assessment based on role-playing; solving situational tasks; tests; credit
	Total	**25**	**15**	

INFORMATION AND INSTRUCTIONAL UNIT

LITERATURE

Basic (relevant):

1. Internal diseases : textbook. In 2 Vols. Vol. 2 / ed. by A. I. Martynov, J. D. Kobalava, S. V. Moiseev. - Moskow : Geotar-Media, 2022. - 614 p.

Additional:

2. Internal medicine : textbook : in 2 books. Book 2. Diseases of the Digestive System, Kidney, Rheumatic and Hematological Diseases / N. M. Seredyuk, - Kyiv : AUS Medicine Publishing, 2020. - 463 p.

3. Autoimmune rheumatic diseases: principles of diagnosis and treatment : study guide/ L. R. Vykhristenko, N. A. Podolinskaya, Y. A. Dikareva, Ye. V. Sidorenko, – Vitebsk : VSMU, 2020. – 131 p.

LIST OF AVAILABLE DIAGNOSTIC TOOLS

The following forms of current certification are used to diagnose competencies:
interview;
assessment based on role-playing;
solving situational tasks;
tests.

LIST OF AVAILABLE TEACHING METHODS

Traditional method;
active (interactive) methods:
problem-based learning (PBL);
case-based learning (CBL).

LIST OF PRACTICAL SKILLS

Name of practical skills	Form of practical skills control
1. DAS28 use to assess the activity of rheumatoid arthritis	Point-of-care testing (POCT)
2. X-ray interpretation	Point-of-care testing (POCT), clinical case-based assessment
3. Interpretation of bone mineral density (BMD) studies.	Point-of-care testing (POCT)
4. Use of visual analogue scale (VAS) in pain measurement	Point-of-care testing (POCT)
5. Examination planning for a patient with rheumatic disease	Point-of-care testing (POCT), clinical case-based assessment
6. Diagnosis making for a patient with rheumatic disease	Point-of-care testing (POCT), clinical case-based assessment
7. Treatment planning for a patient with rheumatic disease	Point-of-care testing (POCT), clinical case-based assessment

COMPILERS:

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Curriculum content, composition and the accompanying documents comply with the established requirements.

Head of the Educational and Methodological Department of the Office of Educational Activities of the Educational Institution «Belarusian State Medical University» — E.N.Belaya

24.09.2026

Methodologist of the Educational and Methodological Department of the Office of Educational Activities of the Educational Institution «Belarusian State Medical University» — N.A.Kukashinova

24.09.2026