CONTROL AND MEASURING INSTRUMENTS

Questions of the program for midterm control 1, 2

Course title: "The musculoskeletal system and skin in pathology "
Course code: MSSP 3308
Name and code of the OP: 6B10115 "Medicine"
Amount of study hours/credits: 30hours / 1 credits
Course and semester of study: 3rd year / 6th semester

Shymkent, 2025

The contrjl and measuring tools were developed in accordance with the working curriculum of the discipline (sillabus) and discussed at a department meeting.

Protocol: № 11 «26» 06 2025y.

Head of department, d.m.s., professor Bekmurzaeva E.K. Бекм

Midterm Assessment №1:

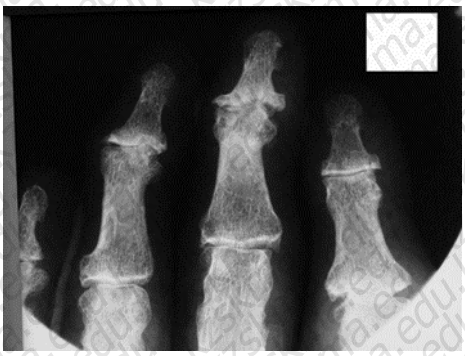
1. Tasks for demonstrating practical skills.

1. General examination of patients with disorders of the musculoskeletal system.
2. Method and technique of palpation of large joints.
3. Method and technique of palpation of small joints.
4. Interview and general examination of patients with pathology of the musculoskeletal system.
5. Taking the medical history in patients with pathology of the musculoskeletal system.
6. Features of interpretation of results of laboratory and instrumental methods of investigation for the leading syndromes of the musculoskeletal system.
7. Instrumental diagnostic methods in musculoskeletal pathologies.
8. Laboratory diagnostic methods in musculoskeletal pathologies.

Variant 1

1. A 42-year-old man was admitted to hospital complaining of migrating joint pains, shortness of breath with moderate physical exertion, and stabbing pains in the chest area. Two weeks ago he had suppurative tonsillitis. On examination: leftward displacement of the relative cardiac dullness by 2 cm, tachycardia, a systolic murmur at the apex. The ankle joints are swollen and tender. On the body there is a rash in the form of erythema migrans (ring-shaped erythema). Name the preliminary diagnosis for this patient:
   a) acute rheumatic fever
   b) rheumatoid arthritis
   c) reactive arthritis
   d) non-rheumatic myocarditis
   e) systemic lupus erythematosus
2. A 52-year-old woman visits the doctor with knee pains for 2 years, with morning stiffness lasting up to half an hour. On examination: the knee joints are deformed, there are periarticular tissue thickenings, moderate hyperthermia, palpatory crepitus. Choose the main diagnostic investigation to establish the diagnosis:
   a) X-ray of the knees
   b) densitometry
   c) joint aspiration (arthrocentesis) of the knee
   d) magnetic resonance imaging of the knees
   e) arthroscopy
3. A 52-year-old woman complains of pain and restricted movement in the finger interphalangeal joints of the hands. On inspection at the distal interphalangeal joints there are firm nodules up to 0.5 cm, moderately tender to palpation. The joints are slightly deformed; movements are restricted. On radiograph of the hand joints there is joint space narrowing and osteosclerosis. Name the preliminary diagnosis in this patient:
   a) osteoarthritis
   b) rheumatoid arthritis
   c) reactive arthritis
   d) psoriatic arthritis
   e) gout

4. A 65-year-old woman comes to the physician complaining of pain in the right knee and limitation of mobility. On radiographs of the right knee there is narrowing of the radiographic joint space, subchondral sclerosis, flattening and irregularity of articular surfaces, pronounced marginal osteophytes. Name the preliminary diagnosis in this patient:
   a) osteoarthritis
   b) arthropathy
   c) rheumatoid arthritis
   d) ankylosis
   e) chronic arthritis
5. A 35-year-old patient consulted a doctor complaining of numbness of toes. On contact with cold water there is pallor and then gradual bluish discoloration of the fingers, which becomes clearly visible. Previously she was diagnosed with Raynaud's syndrome and there is a suspicion of systemic scleroderma. Name the symptom that would help clarify the diagnosis in this patient:
   a) thickening of skin on fingers
   b) facial erythema
   c) small-vessel deformation
   d) symptoms of interstitial nephritis
   e) numbness of the tips of the feet
6. A 42-year-old woman is hospitalized and complains of pain in hands, toes, elbows, knees, morning stiffness in joints, weakness. From history: has been ill for about two years, has not sought a doctor. On examination: ulnar deviation of the hands, of the elbows, knees without deformation; feet show hallux valgus. Name the preliminary diagnosis in this patient:
   a) rheumatoid arthritis
   b) ankylosing spondylitis (Bechterew's disease)
   c) osteoporosis
   d) chondromatosis of joints
   e) deforming arthrosis (osteoarthrosis)
7. Name a symptom that should be elucidated during the medical history of a patient with osteoarthritis:
   a) onset of disease in older age
   b) the disease begins with involvement of knee joints
   c) Bechterew's disease in close relatives
   d) disease begins with involvement of the spine
   e) onset of disease in young age
8. A 38-year-old woman visited her primary care physician with complaints of pain and swelling in the wrist, metacarpophalangeal and metatarsophalangeal joints for 4 weeks, morning stiffness lasting for 30 minutes. The hand-squeeze test is positive. Describe the radiograph of the hands for this patient:



a)marginal proliferative changes in metacarpophalangeal joints
b) “perforator” sign
c) subchondral sclerosis
d) severe periarticular osteoporosis
e) widening of the joint space of the radiocarpal joints

9. A 34-year-old woman after an acute respiratory viral infection developed swelling and redness of the radiocarpal, elbow, metacarpophalangeal and metatarsophalangeal joints, feeling of stiffness lasting up to midnight, in the evening — low-grade fever. The above symptoms gradually increased over 3 months. Identify the changes in the complete blood count:
a) leukocytosis
b) neutropenia
c) lymphopenia
d) thrombocytopenia
e) lymphocytosis
10. Describe the changes in the metacarpophalangeal joints in this patient:

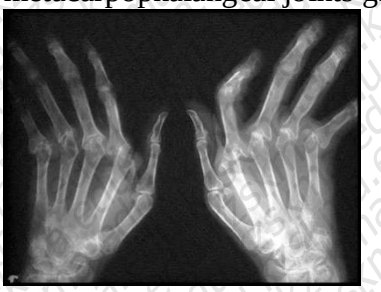


a) coarse irregular deformation
b) destruction of bone tissue
c) inflammation of periarticular soft tissues
d) rounded “soccer-ball”-type deformation
e) damage of ligamentous apparatus around joint

11. A 45-year-old woman became ill after a viral infection; her wrists, elbows, metacarpophalangeal and metatarsophalangeal joints are swollen and red; in the morning she has stiffness; in evenings her temperature rises. Describe the results of the CBC in this patient:
a) leukocytosis
b) neutropenia

c) lymphopenia
d) thrombocytopenia
e) lymphocytosis

12. Name a typical complaint related to the diagnostic criteria of this pathology of the metacarpophalangeal joints given the following radiographic picture:



a) morning stiffness
b) marked weight loss
c) muscle atrophy
d) remitting pain
e) muscle pain

13. Name the result of immunological testing in a patient with characteristic peri-articular nodules:

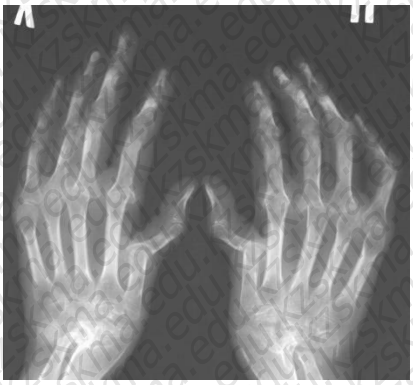


a) rheumatoid factor markedly elevated
b) rheumatoid factor negative
c) C-reactive protein not detected
d) antistreptolysin-O moderately elevated
e) antistreptolysin-O markedly elevated

14. A 42-year-old woman complains of pain in metatarsophalangeal and ankle joints, feeling of morning stiffness before lunch. Body temperature rises in evenings to 37.6-38.0 °C. She considers herself ill for about 6 months; onset of disease she associates with cooling. Her mother had similar symptoms. The ankle and metatarsophalangeal joints are symmetrically swollen, painful on pressure. The hands are also painful. Name the result of immunological testing in this patient:
a) high rheumatoid factor
b) decreased fibrinogen level
c) elevated uric acid level
d) decreased total protein in blood
e) elevated antistreptolysin-O
15. A 39-year-old patient complains of pain in metatarsophalangeal and ankle joints, feeling of morning stiffness before lunch. The ankle and metatarsophalangeal joints are symmetrically swollen, painful on compression. Body temperature is subfebrile. The

disease is associated with chilling. Patient's mother had similar symptoms. Name the changes in the immunological investigation of this patient:
a) high rheumatoid factor
b) decreased fibrinogen level
c) increased uric acid level
d) decreased total protein in blood
e) elevated antistreptolysin-O

16. A 36-year-old woman visited a doctor with complaints of pain and swelling in the wrist joint, severe pain and weakness in the hand, inability to clench the fist or hold objects; low-grade evening fever. The joints have been painful and swollen for a year, but she did not seek medical aid until the symptoms worsened. The hand-squeeze test is positive. Rheumatoid factor 52 IU/mL (normal <10 IU/mL). Describe the radiograph of the hands in this patient:



a) marginal erosions of articular surfaces
b) subchondral sclerosis
c) periarticular sclerosis
d) marginal thickening and osteophytes
e) unequal widening of the joint space

17. A 32-year-old man complains of pain and swelling of the right knee for 2–3 weeks. Body temperature rises to 38.6 °C, weakness, sweating. Name the result of the laboratory investigation in this patient:
a) elevated C-reactive protein
b) elevated uric acid
c) elevated creatinine
d) elevated ferritin
e) elevated urea
18. A 20-year-old patient complains of pain in knee joints. A few days ago he had pain and swelling in elbow joints, then in ankle joints. Two weeks ago he had tonsillitis. On examination, there is slight swelling and hyperemia of the right knee joint. Name the changes in the complete blood count of this patient:
a) leukocytosis
b) leukopenia
c) lymphopenia
d) neutropenia
e) lymphocytosis

19. A 42-year-old man complains of severe pain in the right metatarsophalangeal joint, so severe that even touch is unbearable. He considers himself ill after overeating and visiting a sauna (bath). Name the changes in the biochemical blood analysis in this patient:
    a) elevated uric acid level
    b) elevated creatinine level
    c) elevated urea level
    d) elevated glucose level
    e) elevated ALT and AST
20. A 35-year-old woman complains of pain in wrist joints, in hands, feeling of morning stiffness until 11:00. Body temperature increases in evenings to 37.5-37.8 °C. She considers herself ill for about 3 months, associates onset with chilling and a prior acute respiratory infection. The wrist joints are symmetrically swollen, compression test positive. Name the changes in the complete blood count in this patient:
    a) increased ESR
    b) leukopenia
    c) thrombocytosis
    d) thrombocytopenia
    e) lymphocytosis

Variant 2

1. A 26-year-old female patient (weight 58 kg, height 162 cm) complains of knee joint pain occurring in the morning, more pronounced in the right knee, worsening with movement and when climbing stairs. She considers herself ill for about two weeks after exposure to cold. Choose the pathological findings on physical examination in this patient:
    a) coarse, uneven deformation of the knee joints
    b) localized temperature increase on palpation
    c) crepitus felt on palpation during passive joint movement
    d) skin over joints cold and moist on palpation
    e) active movements symmetrically limited in both joints
2. A 56-year-old woman (weight 98 kg, height 156 cm) complains of knee joint pain when standing up or descending stairs. She has been ill for about 2 years; over the last 2 weeks the pain has worsened, which she attributes to physical exertion. Choose the physical findings in this patient:
    a) round, evenly swollen knee joints
    b) localized temperature increase on palpation
    c) crepitus felt on palpation during passive joint movement
    d) significant tenderness on palpation
    e) hyperemia of the knee joints on inspection
3. A 43-year-old woman complains of weakness, 7 kg weight loss, muscle pain, severe pain and restricted movement in the wrists, morning stiffness in finger joints lasting up to 3 hours, severe pain and swelling in the metacarpophalangeal, elbow, then knee and shoulder joints. Symptoms resolve in some joints and appear in others over 3–4 months. Choose the symptom that is a diagnostic criterion of rheumatoid arthritis:
    a) morning stiffness
    b) significant weight loss
    c) knee joint involvement

d) weakness
e) muscle pain

4. A 22-year-old woman complains of morning stiffness in finger joints for 2 hours, weakness, low-grade fever. Symptoms began 6 months ago. On exam: symmetrical swelling of proximal interphalangeal joints of fingers II–IV and metacarpophalangeal joints, restricted movement, muscle hypotrophy of the lumbricals. CBC: ESR 30 mm/h. Choose the immunologic test result expected in this patient:
   a) elevated rheumatoid factor
   b) slightly elevated C-reactive protein
   c) rheumatoid factor not detected
   d) moderately elevated antistreptolysin-O
   e) sharply elevated antistreptolysin-O
5. A 38-year-old woman has been complaining of hand joint pain for 6 months. On exam: positive hand-squeeze test, restricted wrist movement. Choose a predisposing factor important for this condition:
   a) previous streptococcal infection
   b) alcohol abuse
   c) excessive consumption of spicy and smoked food
   d) overweight
   e) family history
6. A 38-year-old woman complains of knee, wrist, and metacarpophalangeal joint pain for 2 months, more in the right hand; morning stiffness up to 30 minutes. On exam: slight swelling of knees, local temperature rise, mild muscle hypotrophy of dorsal hand muscles, restricted wrist movement. Choose the diagnostic method to clarify the diagnosis:
   a) X-ray of both hands
   b) CT scan of hands
   c) X-ray of right hand only
   d) MRI of hands
   e) MRI of knees
7. A 32-year-old woman complains of morning stiffness (30–40 minutes), pain and swelling of wrist, MCP, and PIP joints; fever up to 37.5 °C; weight loss of 5 kg. All symptoms appeared after exposure to cold 2 months ago. CBC: RBCs – 3.2×10^{12}/L, Hb – 110 g/L, WBC – 8.9×10^{9}/L, Neutrophils – 78%, Lymphocytes – 16%, ESR – 29 mm/h. Choose laboratory tests to confirm diagnosis:
   a) rheumatoid factor
   b) antistreptolysin-O
   c) ferritin level
   d) serum iron level
   e) uric acid level
8. A 20-year-old woman fell ill acutely after cold exposure: temperature 38 °C; a week later developed severe wrist pain and swelling, morning stiffness lasting until noon, pain in knees and shoulders. Her condition was considered a complication of viral infection and treated with antibiotics without effect. On exam: symmetrical, severe restriction of wrist motion, swelling, local warmth, positive compression test. CBC: RBCs – 3.0×10^{12}/L, Hb – 98 g/L, WBC – 10.9×10^{9}/L, Neutrophils – 78%, Lymphocytes – 19%, ESR – 48 mm/h. Name the preliminary diagnosis:
   a) rheumatoid arthritis

b) acute rheumatic fever
c) infectious arthritis
d) gouty arthritis
e) spondyloarthritis

9. A 30-year-old man complains of stiffness in the thoracic and cervical spine, lower back and sacrum pain. Stiffness improves with physical activity. Ill for about a year. Schober's test: 30 cm, Forestier's sign: 2 cm. Name the preliminary diagnosis:
a) spinal osteochondrosis
b) rheumatoid polyarthritis
c) rheumatic polyarthritis
d) chronic gouty arthritis
e) spondyloarthritis
10. A 32-year-old man complains of pain and stiffness in the thoracic spine, swelling in the costosternal joints. Spinal movements are restricted in both frontal and sagittal planes. Positive Kuschlevsky sign. Name the immunological test result in this patient:
a) antistreptolysin-O sharply elevated
b) rheumatoid factor moderately elevated
c) rheumatoid factor sharply elevated
d) rheumatoid factor not detected
e) antistreptolysin-O moderately elevated
11. A 29-year-old man complains of stiffness in the cervical and thoracic spine, difficulty breathing due to pain in the back and costosternal joints. Spinal movement is limited in frontal and sagittal planes. Choose the first diagnostic method for this patient:
a) X-ray of the thoracic spine
b) CT of the thoracic spine
c) CT of the cervical spine
d) MRI of the thoracic spine
e) MRI of the sacroiliac joints
12. A 26-year-old man complains of stiffness in the thoracic and lumbar spine, lower back and sacrum pain. Stiffness improves with physical activity. Identify the symptom shown in the image:
a) tenderness
b) crepitus
c) stiffness
d) local temperature rise
e) limited mobility
13. The first radiologic sign of knee osteoarthritis is:
a) damage to the patellofemoral joint
b) tenderness on palpation
c) crepitus on movement
d) osteophyte formation
e) pain while climbing stairs
14. The leading pathogenic mechanism in osteoarthritis progression is:
a) degeneration of articular cartilage
b) synovitis
c) deposition of calcium pyrophosphate crystals
d) bone remodeling
e) muscle atrophy in adjacent groups

15. A characteristic sign of severe bilateral coxarthrosis is:
    a) “duck walk”
    b) impaired internal and external rotation of the hips
    c) limited abduction and adduction of the hip
    d) thigh muscle hypotrophy
    e) limping
16. A clinical picture of recurrent synovitis is typical for osteoarthritis of:
    a) knee joint
    b) hip joint
    c) distal interphalangeal joints of hands
    d) first metatarsophalangeal joint
    e) proximal interphalangeal joints
17. Choose the typical localization of rheumatoid nodules:
    a) periarticular tissue
    b) skin
    c) cartilage
    d) internal organs
    e) bones
18. Choose the characteristic of rheumatoid factor based on its mechanism of action:
    a) participates in activation of inflammation
    b) forms urate crystals in joints
    c) binds calcium, increasing osteoporosis
    d) promotes iron accumulation in tissues
    e) suppresses synovial fluid synthesis
19. Choose the radiographic finding in stage IV rheumatoid arthritis:
    a) ankylosis formation
    b) joint tophi appearance
    c) joint space widening
    d) subchondral sclerosis
    e) joint deformation
20. Choose the correct description of rheumatoid factor:
    a) antibodies directed against the Fc-fragment of IgG
    b) a protein involved in blood clotting
    c) a component of the complement system
    d) an enzyme that destroys joint cartilage
    e) an antigen associated with osteoarthritis

Variant 3

1. Name the diagnostic criterion characteristic of **rheumatoid arthritis** according to the clinical guidelines:
    a) morning joint stiffness lasting more than 1 hour for at least 6 weeks
    b) bilateral sacroiliitis
    c) asymmetrical joint involvement
    d) presence of annular erythema
    e) arthritis of 3 or more joints lasting 2 weeks
2. Which joints are primarily affected in **rheumatoid arthritis**?
    a) proximal interphalangeal joints and hand joints

b) knee joints
c) sacroiliac joints
d) elbow joints
e) spinal joints

3. Name a clinical sign typical for **rheumatoid arthritis**:
   a) morning joint stiffness
   b) prolonged stiffness (more than one hour)
   c) swelling of affected joints
   d) muscle dystrophy
   e) asymmetrical joint involvement
4. Choose the symptom characteristic of **rheumatoid arthritis**:
   a) morning **muscle** stiffness
   b) prolonged stiffness (more than one hour)
   c) swelling of affected joints
   d) **symmetry** of joint involvement
   e) inflammation of periarticular tissues
5. Choose the **instrumental method** for detecting joint effusion:
   a) joint ultrasound
   b) joint X-ray
   c) densitometry
   d) joint CT
   e) Doppler ultrasound
6. Choose the characteristic symptom of **gout**:
   a) involvement of the first metatarsophalangeal joint
   b) symmetrical joint involvement
   c) no joint inflammation
   d) sharp increase in body temperature
   e) no pain during physical activity
7. Choose the **genetic factor** associated with **rheumatoid arthritis**:
   a) association with HLA-DR4
   b) calcium deficiency
   c) impaired uric acid metabolism
   d) antioxidant deficiency
   e) presence of autoantibodies to insulin
8. Choose the type of pain typical for **rheumatoid arthritis**:
   a) “migratory” pain
   b) periodic pain
   c) constant pain
   d) asymmetrical pain
   e) progressive pain
9. Indicate the **disease duration** at the **advanced stage** of rheumatoid arthritis:
   a) more than 1 year with typical symptoms
   b) 6 months – 1 year
   c) 2 months
   d) 1 month
   e) less than 6 months
10. Choose the **radiological changes** typical for **rheumatoid arthritis**:
    a) erosion of articular surfaces

b) narrowing of the joint space
c) soft tissue swelling around the joint
d) osteophyte formation
e) narrowing of interarticular spaces

11. Choose the radiological sign of **rheumatoid arthritis**:
    a) corroded articular cartilage
    b) diffuse osteoporosis
    c) focal (cystic) osteoporosis of periarticular bones
    d) joint tophi
    e) narrowing of the joint space
12. Choose the **diagnostic criteria** for **rheumatoid arthritis**:
    a) morning stiffness
    b) asymmetrical joint involvement
    c) involvement of at least 3 joints for 3 months from onset
    d) always high temperature
    e) accompanied by mental disorders
13. A 43-year-old woman complains of hand pain, pain in toes, elbows, knees, morning stiffness, and weakness. History: ill for about 2 years. Ulnar deviation of hands and **hallux valgus** of feet. Name the preliminary diagnosis:
    a) rheumatoid arthritis
    b) ankylosing spondylitis
    c) rheumatic fever
    d) joint chondromatosis
    e) gout
14. A 35-year-old woman complains of pain in hands, toes, elbows, knees, and morning stiffness. On examination: hallux valgus, ulnar deviation. Choose the **informative instrumental method**:
    a) joint X-ray
    b) ultrasound
    c) MRI
    d) urography
    e) spirometry
15. Same patient. Choose the **informative laboratory test**:
    a) rheumatoid factor
    b) total protein
    c) cholesterol
    d) leukocyte count
    e) anti-TPO antibodies
16. Choose the **laboratory test** confirming the **diagnosis of gout**:
    a) uric acid
    b) urease test
    c) amylase
    d) rheumatoid factor
    e) diastase
17. Choose the **typical joint location** for **gout**:
    a) first metatarsophalangeal joint of the foot
    b) large joints of the lower limbs
    c) small joints of the upper limbs

d) third metatarsophalangeal joint of the foot
e) knee joint

18. What is the **disease duration** in the **early stage** of rheumatoid arthritis?
a) 6 months – 1 year
b) 2 months
c) 1 month
d) more than 1 year with typical symptoms
e) less than 6 months
19. A 30-year-old woman complains of ankle joint pain, morning stiffness lasting up to 30 minutes. MRI: moderate joint effusion. Name the preliminary diagnosis:
a) reactive arthritis
b) psoriatic arthritis
c) gout
d) osteoarthritis
e) ankylosing spondylitis
20. A 48-year-old man complains of knee joint deformity and pain when walking. History of trauma. X-ray: osteophytes, subchondral sclerosis. Name the preliminary diagnosis:
a) post-traumatic osteoarthritis
b) rheumatoid arthritis
c) reactive arthritis
d) psoriatic arthritis
e) gout

Control № 2

1. Tasks to Demonstrate Practical Skills

1. Predisposing factors and causes leading to the development of osteoarthritis.
2. Predisposing factors and causes leading to the development of arthritis.
3. Clinical and diagnostic features of arthritis.
4. Clinical and diagnostic features of osteoarthritis.
5. Method and technique of palpation of large joints.
6. Method and technique of palpation of small joints.
7. Method of auscultation of renal arteries.
8. Instrumental diagnostic methods for osteoarthritis.
9. Laboratory diagnostic methods for arthritis.
10. Instrumental diagnostic methods for arthritis.
11. Laboratory diagnostic methods for osteoarthritis.

---

2. Practical Skills Task (Variant 1)

Clinical Case Questions (Multiple Choice)

1. A 52-year-old woman complains of shoulder pain and restricted movement when abducting the arm. Palpation reveals tenderness in the subacromial area. What is the likely preliminary diagnosis?

a) Frozen shoulder syndrome
b) Shoulder periarthritis
c) Bursitis
d) Tendinitis
e) Rheumatoid arthritis

2. A 35-year-old woman complains of wrist joint pain and stiffness, which worsens after exposure to cold. On examination: joint swelling, local hyperemia. What is the likely preliminary diagnosis?
a) Reactive arthritis
b) Rheumatoid arthritis
c) Gout
d) Psoriatic arthritis
e) Osteoarthritis
3. A 27-year-old man complains of elbow pain during flexion and extension. On examination: swelling and local temperature increase. Which examination method should be used to clarify the diagnosis?
a) Uric acid test
b) Rheumatoid factor determination
c) Complete blood count
d) Biochemical blood test
e) Antistreptolysin-O (ASO) test
4. A 28-year-old woman complains of sacral pain after prolonged sitting. On examination: tenderness of the sacroiliac joints. Which diagnostic method should be used to clarify the diagnosis?
a) MRI of the sacroiliac joints
b) Lumbar spine X-ray
c) Pelvic ultrasound
d) Densitometry
e) Complete blood count
5. A 42-year-old man complains of swelling and pain in the ankle joints that worsen with physical activity. On examination: moderate hyperemia, limited mobility. X-ray shows joint space narrowing and marginal osteophytes. What is the preliminary diagnosis?
a) Osteoarthritis
b) Gout
c) Reactive arthritis
d) Rheumatoid arthritis
e) Psoriatic arthritis
6. A 60-year-old woman complains of knee pain that worsens when climbing stairs, and morning stiffness lasting about 10 minutes. On examination: joint deformities, crepitus on palpation. What is the likely diagnosis?
a) Osteoarthritis
b) Ankylosis
c) Gout
d) Systemic scleroderma
e) Reactive arthritis
7. A 50-year-old man complains of sudden lower back pain after lifting a heavy object. Pain radiates to the left leg and worsens with coughing. On examination: restricted lumbar movement, positive Lasègue’s sign. What is the preliminary diagnosis?

a) Intervertebral hernia
b) Osteochondrosis
c) Ankylosing spondylitis
d) Reactive arthritis
e) Gout

8. A 29-year-old woman complains of numbness and weakness in the hands, with increased pain during prolonged wrist flexion. Which additional test is required to clarify the diagnosis?
a) Electroneuromyography
b) X-ray of the hands
c) MRI of the hands
d) Complete blood count
e) Uric acid test
9. A 30-year-old man complains of heel pain that is worse in the morning and stiffness in the spine. On examination: pain upon pressing on the heel tuberosities. What is the preliminary diagnosis?
a) Ankylosing spondylitis
b) Osteoarthritis
c) Gout
d) Rheumatoid arthritis
e) Reactive arthritis
10. A 56-year-old woman complains of back pain, decreased height over the past 5 years, and frequent fractures. What method should be used to clarify the diagnosis?
a) Densitometry
b) Thoracic spine X-ray
c) Lumbar spine MRI
d) Complete blood count
e) Biochemical blood test
11. A 38-year-old man complains of swelling and redness of the big toe after consuming alcohol and meat. The pain is severe and interferes with walking. What is the preliminary diagnosis?
a) Gout
b) Rheumatoid arthritis
c) Reactive arthritis
d) Psoriatic arthritis
e) Osteoarthritis
12. A 48-year-old woman complains of neck pain that worsens during prolonged static posture. On examination: restricted cervical spine movement, tenderness over spinous processes. What method is best for diagnosis?
a) MRI of the cervical spine
b) Neck vascular ultrasound
c) Cervical spine X-ray
d) Electroneuromyography
e) Rheumatoid factor test
13. A 25-year-old man complains of restricted movement of the right shoulder joint after trauma. X-ray shows narrowing of the subacromial space. What is the likely preliminary diagnosis?
a) Impingement syndrome

b) Rheumatoid arthritis
c) Bursitis
d) Periarthritis
e) Osteochondrosis

14. A 40-year-old woman complains of finger joint pain during fine motor activities and morning stiffness lasting up to 15 minutes. Palpation reveals no tenderness. What is the preliminary diagnosis?
a) Osteoarthritis
b) Rheumatoid arthritis
c) Gout
d) Reactive arthritis
e) Psoriatic arthritis
15. A 32-year-old man complains of knee pain and swelling after running. On examination: local hyperemia and increased skin temperature over the joint. What changes would be revealed by instrumental examination?
a) Presence of joint effusion
b) Thickening of articular cartilage
c) Osteophytes at joint margins
d) Joint subluxation
e) Intra-articular body
16. Which inflammatory sign is identified by palpation of joints?
a) Elevated skin temperature over the joint
b) Joint crepitus
c) Decreased skin temperature
d) Joint stiffness
e) Nodule formation
17. A 50-year-old woman complains of hip joint pain that worsens with walking and disappears at rest. Pain has lasted a year and has recently intensified. X-ray: joint space narrowing, osteophytes at the edges. What is the diagnosis?
a) Coxarthrosis
b) Rheumatoid arthritis
c) Rheumatism
d) Systemic scleroderma
e) Reactive arthritis
18. A 45-year-old man complains of back pain worsening at night and morning stiffness. Family history reveals similar complaints. On examination: thoracic kyphosis, limited spinal mobility. What is the diagnosis?
a) Ankylosing spondylitis
b) Osteochondrosis
c) Gout
d) Reactive arthritis
e) Osteoarthritis
19. A 48-year-old woman complains of shoulder pain and stiffness during movement, no trauma history. X-ray: tendon calcification. What soft tissue diagnostic method is appropriate?
a) Ultrasound of the shoulder joint
b) CT scan of the shoulder
c) MRI of the cervical spine

d) Rheumatoid factor test
e) Electroneuromyography

20. A 30-year-old man complains of knee pain and fever up to 38°C. Symptoms appeared 2 weeks after a sore throat. Ring-shaped erythema is present on the skin. What diagnostic test is needed?
a) Antistreptolysin-O (ASL-O)
b) Uric acid blood test
c) Joint aspiration (arthrocentesis)
d) Knee joint X-ray
e) Urinalysis

– Variant 2

Clinical Case Questions (Multiple Choice)

1. A 55-year-old woman complains of bone pain that worsens at night and frequent fractures. History: menopause occurred 10 years ago. Densitometry: decreased bone density. Name the laboratory method to clarify the diagnosis:
a) Blood test for vitamin D
b) Alkaline phosphatase
c) Parathyroid hormone
d) Antibodies to tissue transglutaminase
e) Creatinine level
2. A 40-year-old man complains of sudden pain and swelling of the big toe, with skin redness over the joint. The condition began after alcohol and meat consumption. Blood test: hyperuricemia. Name the test to confirm the diagnosis:
a) Synovial fluid analysis for uric acid crystals
b) Joint ultrasound
c) Foot X-ray
d) C-reactive protein (CRP) test
e) Urine biochemistry
3. A 65-year-old woman fell at home and developed pain in her right hip, with inability to stand. Name the investigation method to clarify the diagnosis:
a) X-ray of the hip joint
b) Femoral artery ultrasound
c) Blood test for alkaline phosphatase
d) Urine test for calcium
e) MRI of the hip joint
4. A 28-year-old man complains of lower back pain that worsens at night and improves with exercise. X-ray: signs of sacroiliitis. Name the immunological test to clarify the diagnosis:
a) HLA-B27
b) Rheumatoid factor
c) Urinalysis
d) Electromyography
e) Serum calcium level
5. A 35-year-old woman complains of pain in small hand joints and morning stiffness lasting more than 1 hour. Joints are swollen with skin hyperemia. Blood: positive

rheumatoid factor, ESR 35 mm/h. Name the investigation to confirm the diagnosis:
a) Anti-cyclic citrullinated peptide antibodies (anti-CCP)
b) MRI of the hands
c) Uric acid test
d) Joint ultrasound
e) Densitometry

6. A 45-year-old man complains of severe neck pain after falling from a height. Palpation: marked tenderness, restricted motion. X-ray: compression fracture of C6 vertebral body. Name the additional investigation:
a) CT scan of cervical spine
b) Osteodensitometry
c) Soft tissue ultrasound
d) Serum calcium level
e) ECG
7. A 60-year-old woman complains of knee pain worsening with walking, and crepitus. Gradual onset, no trauma. X-ray: joint space narrowing, subchondral sclerosis, osteophytes. Name the additional test to confirm the diagnosis:
a) Joint ultrasound
b) Densitometry
c) C-reactive protein (CRP) test
d) Joint aspiration
e) MRI of the knees
8. A 50-year-old man complains of lower back pain worsening when bending forward. On exam: stiffness, tenderness on palpation. X-ray: reduced intervertebral disc height and osteophytes. Name the additional diagnostic method:
a) MRI of the lumbar spine
b) Electromyography
c) Rheumatoid factor test
d) Vascular duplex scanning
e) Bone biopsy
9. A 25-year-old man complains of sacral pain worsening at rest. X-ray: signs of sacroiliitis. Name the immunological test to confirm the diagnosis:
a) HLA-B27
b) Rheumatoid factor
c) Antistreptolysin-O (ASLO)
d) Complete blood count
e) Calcium level
10. A 30-year-old woman complains of joint pain in her hands and morning stiffness for about 2 hours. Symptoms have lasted for 3 months. Name the test to confirm the diagnosis:
a) Anti-cyclic citrullinated peptide antibodies
b) Uric acid level
c) Rheumatoid factor
d) C-reactive protein
e) Complete blood count
11. A 37-year-old man complains of severe lower back pain after falling from a height. Name the investigation to clarify the diagnosis:
a) Lumbar spine X-ray

b) Lumbar spine CT
c) Lumbar spine MRI
d) Ultrasound of the affected area
e) Complete blood count

12. A 34-year-old woman complains of pain in the proximal interphalangeal joints of her hands and morning stiffness lasting over 1 hour. Blood: elevated ESR, positive rheumatoid factor. What is the preliminary diagnosis?
a) Rheumatoid arthritis
b) Reactive arthritis
c) Osteoarthritis
d) Gout
e) Psoriatic arthritis
13. A 56-year-old woman complains of neck pain that worsens with prolonged static posture. X-ray: reduced intervertebral disc height. What is the preliminary diagnosis?
a) Osteochondrosis
b) Ankylosing spondylitis
c) Gout
d) Rheumatoid arthritis
e) Osteoarthritis
14. A 32-year-old man complains of heel pain that worsens in the morning. On exam: tenderness of the heel tuberosities. What is the preliminary diagnosis?
a) Ankylosing spondylitis
b) Gout
c) Reactive arthritis
d) Osteoarthritis
e) Psoriatic arthritis
15. A 48-year-old woman complains of hip pain worsening during walking. X-ray: osteophytes, flattening of joint surface. What is the preliminary diagnosis?
a) Coxarthrosis
b) Rheumatoid arthritis
c) Gout
d) Reactive arthritis
e) Systemic scleroderma
16. A 60-year-old man complains of acute big toe pain that worsens at night. Ultrasound shows uric acid crystal deposits. What is the preliminary diagnosis?
a) Gout
b) Osteoarthritis
c) Reactive arthritis
d) Rheumatoid arthritis
e) Psoriatic arthritis
17. A 45-year-old woman complains of pain in the metacarpophalangeal joints and morning stiffness lasting up to 2 hours. Blood: positive rheumatoid factor. What is the most informative test to confirm the diagnosis?
a) Anti-cyclic citrullinated peptide antibodies (anti-CCP)
b) Joint MRI
c) Joint ultrasound
d) Complete blood count
e) Biochemical blood test

18. Duration of illness at the **earliest stage** of rheumatoid arthritis:
    a) Less than 6 months
    b) 6 months – 1 year
    c) 2 months
    d) 1 month
    e) More than 1 year with typical symptoms
19. A 55-year-old woman complains of lower back pain worsening at rest and improving with movement. X-ray: osteophytes, reduced intervertebral disc height. What is the preliminary diagnosis?
    a) Osteochondrosis
    b) Ankylosing spondylitis
    c) Gout
    d) Rheumatoid arthritis
    e) Spondylolisthesis
20. A 32-year-old man complains of elbow pain during flexion. Ultrasound shows tendon inflammation. What is the preliminary diagnosis?
    a) Lateral epicondylitis
    b) Osteoarthritis
    c) Rheumatoid arthritis
    d) Gout
    e) Bursitis

№3 – Variant 3

Clinical Case & Theoretical Questions (Multiple Choice)

1. A 60-year-old overweight woman complains of knee joint pain that worsens when walking and climbing stairs. X-ray shows osteophytes and joint space narrowing. What is the preliminary diagnosis?
   a) Osteoarthritis
   b) Rheumatoid arthritis
   c) Gout
   d) Reactive arthritis
   e) Ankylosing spondylitis
2. A 28-year-old man complains of restricted movement and pain during exertion after trauma to the right knee. What is the best investigation to assess the ligaments?
   a) MRI of the knee joint
   b) Computed tomography
   c) Magnetic resonance imaging (same as a)
   d) Arthroscopy
   e) X-ray
3. A 35-year-old man complains of lower back pain that worsens at night and morning stiffness lasting about an hour. Symptoms improve with physical activity. What is the preliminary diagnosis?
   a) Ankylosing spondylitis
   b) Osteoarthritis
   c) Gout

d) Reactive arthritis
e) Rheumatoid arthritis

4. Choose a lab test to detect inflammation in osteoarthritis:
   a) C-reactive protein (CRP)
   b) Rheumatoid factor
   c) Antistreptolysin-O (ASO)
   d) Uric acid
   e) Alkaline phosphatase
5. Choose a lab test that indicates progression of osteoporosis:
   a) Alkaline phosphatase
   b) ESR
   c) Rheumatoid factor
   d) Uric acid
   e) Hemoglobin
6. Choose a test to detect predisposition to autoimmune joint disease:
   a) Anti-cyclic citrullinated peptide antibodies (anti-CCP)
   b) Creatinine
   c) Glucose
   d) Ferritin
   e) Total protein
7. Choose a lab test to confirm suspected infectious arthritis:
   a) Synovial fluid culture
   b) Rheumatoid factor
   c) Antistreptolysin-O
   d) Glucose
   e) Urine biochemistry
8. Choose a marker that indicates systemic inflammation:
   a) Elevated fibrinogen
   b) Decreased uric acid
   c) Decreased ESR
   d) High glucose
   e) Low hemoglobin
9. Choose an investigation to assess bone mineral density in osteoarthritis:
   a) Densitometry
   b) Joint MRI
   c) Joint ultrasound
   d) Rheumatoid factor
   e) Uric acid
10. Choose a test to distinguish gout from rheumatoid arthritis:
    a) Uric acid
    b) ESR
    c) Anti-CCP
    d) Alkaline phosphatase
    e) Fibrinogen
11. Choose a lab test used to confirm ankylosing spondylitis:
    a) HLA-B27
    b) Rheumatoid factor
    c) Antistreptolysin-O

d) Blood biochemistry
e) ESR

12. Choose a test to identify synovial fluid changes for diagnosing gout:
a) Uric acid crystals
b) Rheumatoid factor
c) Protein content
d) Calcium level
e) ESR
13. Choose a test to assess the risk of developing osteoporosis in cases of low bone density:
a) Vitamin D level
b) ESR
c) Tissue transglutaminase antibodies
d) Ferritin level
e) Antistreptolysin level
14. Choose a test to assess inflammatory activity in rheumatoid arthritis:
a) C-reactive protein (CRP)
b) Alkaline phosphatase
c) Uric acid
d) Hemoglobin
e) Creatinine
15. Choose an investigation to confirm infectious origin of joint inflammation:
a) Synovial fluid analysis
b) Densitometry
c) Rheumatoid factor
d) Antistreptolysin-O
e) Glucose
16. Choose a test to confirm reactive arthritis associated with infection:
a) Antistreptolysin-O
b) Rheumatoid factor
c) ESR
d) Uric acid
e) Calcium
17. Choose a test to determine the autoimmune nature of arthritis:
a) Rheumatoid factor
b) ESR
c) Uric acid
d) Hemoglobin
e) Total protein
18. Choose a test that indicates development of osteoporosis:
a) Alkaline phosphatase
b) Uric acid
c) ESR
d) Glucose
e) Creatinine
19. Choose a lab test to confirm the diagnosis of systemic scleroderma:
a) Anticentromere antibodies
b) ESR
c) Calcium

d) Fibrinogen
e) Uric acid

20. A 42-year-old woman complains of neck pain that worsens with head movement. X-ray shows decreased intervertebral disc height. Choose the investigation to assess the soft tissue condition:
a) MRI of the cervical spine
b) CT of the cervical spine
c) Neck vessel ultrasound
d) Electroneuromyography
e) Complete blood count

2. Case History Filling and Defense

The format and requirements for case history writing and oral defense are available in the **library collection of the department and academy**.