Radiographic Pathology for Technologists 7th edition Kowalczyk Test Bank

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MULTIPLE CHOICE

1. Which primary bone tumor should be investigated with the utilization of CT?
   a. Osteosarcoma
   b. Osteoid osteoma
   c. Chondrosarcoma
   d. Ewing sarcoma

   ANS: B

2. A patient presents to his physician with anterior shoulder pain for several months. He has had no recent injury and there is no relief with NSAIDs, ice, heat, and gentle range-of-motion exercises. Radiographs of the shoulder demonstrate small microcalcifications of the subacromial space. What is the differential diagnosis?
   a. Rotator cuff tear
   b. Labral tear
   c. Calcific tendinitis
   d. Anterior shoulder dislocation

   ANS: C

3. Which of the following characteristics does NOT assist in the differentiation between a primary metastatic bone lesion as compared to a secondary metastatic bone lesion?
   a. Soft tissue mass
   b. Periosteal reaction
   c. Length of lesion
   d. Calcification of blood vessels

   ANS: D

4. What skeletal pathology presents radiographically with a “soap bubble” appearance?
   a. Giant cell tumor
   b. Ewing sarcoma
   c. Osteoid osteoma
   d. Osteoblastoma

   ANS: A

5. Osteopetrosis requires what type of technical factor change?
   a. Increase
   b. Decrease
   c. No change

   ANS: A

6. Tenosynovitis requires what type of technical factor change?
   a. Increase
   b. Decrease

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c. No change

ANS: C

7. Which neoplasm involves a nidus?
   a. Osteoid osteoma
   b. Osteoblastoma
   c. Osteosarcoma
   d. Paget disease

   ANS: A

8. Which disease is congenital?
   a. Pott disease
   b. Osteoporosis
   c. Paget disease
   d. Osteogenesis imperfecta

   ANS: D

9. Spondylolysis is a result of a cleft or defect in the vertebral
   a. pedicle.
   b. lamina.
   c. spinous process.
   d. pars interarticularis.

   ANS: D

10. Diploë is specific to cancellous bone located in what anatomic structure?
    a. Femur
    b. Humerus
    c. Sternum
    d. Skull

    ANS: D

11. A 15-year-old male patient presents for a right knee series after sustaining a varus injury while playing football. AP, lateral, and both oblique radiographs of the knee demonstrate an avulsion fracture of the lateral tibial plateau (Segond fracture). What additional imaging modality would be best utilized in the diagnosis for this patient?
    a. CT
    b. Knee arthrography
    c. MRI
    d. Nuclear medicine

    ANS: C

12. Heberden nodes and Bouchard nodes are associated with what skeletal pathology?
    a. Osteomyelitis
    b. Osteoarthritis
    c. Paget disease
    d. Pott disease

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ANS: B

13. What skeletal pathology could be a contributing factor for a cervical rib?
    a. Scoliosis
    b. Spina bifida
    c. Spondylolisthesis
    d. Transitional vertebrae

    ANS: D

14. Which anatomic structure is NOT a common area for metastasis?
    a. Pelvis
    b. Carpals
    c. Skull
    d. Bony thorax

    ANS: B

15. “Brittle bone” disease is also known as
    a. achondroplasia.
    b. DDH.
    c. osteogenesis imperfecta.
    d. osteopetrosis.

    ANS: C

16. Congenital clubfoot is also known as
    a. DDH.
    b. syndactyly.
    c. fibrous dysplasia.
    d. talipes.

    ANS: D

17. The most common form of arthritis is
    a. osteoarthritis.
    b. gouty arthritis.
    c. psoriatic arthritis.
    d. rheumatoid arthritis.

    ANS: A

18. Marie–Strümpell disease or “bamboo spine” is a symptom of the pathology known as
    a. ankylosing spondylitis.
    b. spondylolisthesis.
    c. spina bifida.
    d. scoliosis.

    ANS: A

19. The forward slippage of one vertebra on another describes the pathology
    a. spondylitis.
    b. spondylolisthesis.

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c. spondylolysis.
d. spina bifida.

ANS: B

20. What type of arthritis has tophi associated with it?
a. Osteoarthritis
b. Gouty arthritis
c. Psoriatic arthritis
d. Rheumatoid arthritis

ANS: B

21. What imaging modality demonstrates both simultaneous evaluation of bone and soft tissues with quantitative metabolic data of osteosarcomas?
a. CT
b. Nuclear medicine bone scan
c. Sonography
d. PET scan

ANS: D

22. Tuberculosis of the spine is commonly referred to as
a. Kienbock disease.
b. Reiter syndrome.
c. Apert syndrome.
d. Pott disease.

ANS: D

23. The imaging modality that would best demonstrate osteomyelitis is
a. nuclear medicine.
b. radiography.
c. CT.
d. sonography.

ANS: A

24. One of the most common areas for metastasis for osteosarcomas is to the
a. brain.
b. breast.
c. lung.
d. colon.

ANS: C

25. A 30-year-old male presents with swelling and redness on his left knee. He states that he lays carpet and rarely wears knee pads. The orthopedic surgeon decides to aspirate the swollen area and inject it with a corticosteroid. What would be the differential diagnosis?
a. Calcific tendinitis
b. Tenosynovitis
c. Ganglion cyst
d. Prepatellar bursitis

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ANS: D

26. A malignant tumor composed of atypical cartilage is known as
    a. chondrosarcoma.
    b. osteosarcoma.
    c. enchondroma.
    d. osteoid osteoma.

    ANS: A

27. What skeletal pathology involves cysts in the metaphysis of long bones in individuals younger than 20 years of age and consists of numerous blood-filled arteriovenous communications?
    a. Unicameral bone cyst
    b. Aneurysmal bone cyst
    c. Ganglion cyst
    d. Osteoid osteoma

    ANS: B

28. What type of aggressive bone-forming neoplasm that is most often located in the bone marrow gives the radiographic appearance of a sunray or sunburst?
    a. Osteomyelitis
    b. Osteosarcoma
    c. Chondrosarcoma
    d. Multiple myeloma

    ANS: B

29. Which syndrome may involve craniosynostosis and syndactyly?
    a. Pott syndrome
    b. Reiter syndrome
    c. Kienbock syndrome
    d. Apert syndrome

    ANS: D

30. Which of the following congenital skeletal pathologies involves failure of formation of the cranial vault and is not conducive for life?
    a. Anencephaly
    b. Craniosynostosis
    c. Encephalopathy
    d. Osteomyelitis

    ANS: A

31. What imaging modality/ies would demonstrate developmental dysplasia of the hip?
    1. CT
    2. MRI
    3. Radiography
    4. Sonography
    a. 1 and 2
    b. 1 and 3

c. 3 and 4
d. 1, 2, 3, and 4

ANS: B

32. A nuclear medicine bone scan is performed for a diagnosis of osteomyelitis of the right foot. If this procedure is positive, what would the images demonstrate?
a. Symmetry of both feet
b. Increased uptake on the right foot (hot spot)
c. Decreased uptake on the right foot (cold spot)

ANS: C

33. A common radiographic finding with patients suffering from whiplash is
a. narrowed disk spaces.
b. loss of lordosis.
c. subluxation.
d. erosion of vertebral body.

ANS: B

34. The most commonly inherited disorder affecting the skeletal system is
a. enchondroma.
b. osteogenesis imperfecta.
c. achondroplasia.
d. syndactyly.

ANS: C

35. A 65-year-old female presents with bilateral knee pain and no history of injury. What radiographic procedure should be obtained initially?
a. Bilateral weight-bearing knee radiographs
b. CT of both knees
c. Arthrography of both knees
d. MRI of both knees

ANS: A

36. A 75-year-old patient with weight-bearing AP and lateral knee radiographs of the left knee demonstrates a decreased medial joint compartment and osteophyte formation on the medial femoral condyle. What would be the initial diagnosis?
a. Ewing sarcoma
b. Osteoarthritis
c. Reiter syndrome
d. Osteomyelitis

ANS: B

37. The primary site of ossification is the
a. epiphysis.
b. metaphysis.
c. diaphysis.
d. epiphyseal plate.

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ANS: C

TRUE/FALSE

1. The staging systems used for both benign and malignant skeletal lesions are identical.

   ANS: T