

# *Musculoskeletal system*

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*Pathology*

- *The earliest change in osteoarthritis affects:*
- *A. Cartilage*
- *B. Bone*
- *C. Skeletal muscles*
- *D. Mesothelium*
- *E. Tendons*
  
- *Answer: A*

- *Activation of FGFR3 mutation occurs in:*
- *A. Solar elastosis*
- *B. Giant cell tumor*
- *C. Seborrheic keratosis*
- *D. Fibromatosis*
- *E. Leiomyoma*
  
- *Answer: C*

- *Which of the following represents the correct order of events in rheumatoid arthritis:*
- *A. Activated B-lymphocyte - secretory plasma cell - activate T-lymphocyte*
- *B. Activated T-lymphocyte - activate B-lymphocyte - secretory plasma cell - rheumatoid factor*
- *C. Activated macrophage - activated B-lymphocyte - rheumatoid factor*
- *D. Activated T-lymphocyte - activate macrophage - secretory plasma cell*
- *E. Activated CD4-lymphocyte - activated endothelium - secretion of rheumatoid factor*
- *Answer: B ( 2019 dentistry questions )*

- *Which disease causes enlargement and disfigurement of the face and jaws: **FIBROUS DYSPLASIA***
  
- *Big toe is a clinical manifestation of which disease:*
- *Answer: **GOUT***

- *True about teratomas in the testes:*
- *Answer: TERATOMAS ARE ALWAYS MALIGNANT IN ADULTS*

- *Which one of the following statements best characterizes degenerative joint disease of bone:*
- *A. Insidious and increase with age*
- *B. Avascular necrosis a common complication of severe cases*
- *C. Pannus formation is characteristic*
- *D. Primary disease of the synovium*
- *E. Secondary etiology is more common than idiopathic/primary*
  
- *Answer: A*



- *A 45-year-old man came to your clinic with severe big toe pain and swelling. No history of trauma was mentioned. Aspiration of the big toe interphalangeal joint revealed needle-shaped crystals with negative birefringence. The most likely diagnosis is:*
- *A. Osteoarthritis*
- *B. Acute Gouty arthritis*
- *C. Sero-negative Reiter disease*
- *D. Rheumatoid arthritis*
- *E. Pseudo-gout arthritis*
  
- *Answer: B*

- *Fibromatoses diseases are best characterized by:*
- *A. Easy surgical excision with low recurrence rate*
- *B. Fibroblast growth factor receptor 3 mutations*
- *C. Locally destructive and infiltrative lesions*
- *D. Highly pleomorphic cells under the microscope*
- *E. Almost all are superficial subcutaneous lesions*
  
- *Answer: C*

- *A 76-year-old male patient came with severe acute hip pain. Pelvic X-ray revealed a pathologic fracture at the neck of femur with multiple osteoblastic lesions of all pelvic bones and vertebrae. What would be the most cost-effective test to confirm the diagnosis in this patient:*
- *A. Open reduction and tissue biopsy*
- *B. Grade V degenerative joint disease changes*
- *C. Rheumatoid arthritis*
- *D. CT scan of abdomen and pelvis*
- *E. Serum prostate specific antibody (PSA) level*
  
- *Answer: E*

- *A 65-year-old woman presents with multiple hand joint pain and swelling. She complains of morning joint stiffness that improves slowly after initial movements. Bilateral ulnar deviation was noted on examination. Which one of the following tests will confirm your top differential diagnosis:*
- *A. Arthroscopic examination*
- *B. Rheumatoid factor*
- *C. High resolution X-ray of the hands and the feet*
- *D. Joint fine needle aspiration fluid examination*
- *E. No need for further testing; the patient has ankylosing spondylitis*
  
- *Answer: B*

- *Severe knee joint space narrowing, subchondral bone cyst formation and subchondral bone sclerosis are characteristic features of advanced cases of which one of the following:*
- *A. Ankylosing spondylitis*
- *B. Lyme disease*
- *C. Osteoporosis*
- *D. Degenerative joint disease (Osteoarthritis)*
- *E. Rheumatoid arthritis*
  
- *Answer: D*

- *In contrast to lipomas; liposarcomas are:*
- *A. Larger masses, commonly in the thigh and retroperitoneum*
- *B. Treated mainly by chemotherapy alone*
- *C. The most common soft tissue tumors*
- *D. Usually smaller in size*
- *E. Devoid of any specific genetic or molecular abnormalities*
  
- *Answer: A*

- *Rhomboid-geometric crystals were seen on joint aspirate from a 60-year-old male patient who came with right ankle joint pain and swelling. The crystals exhibit weakly positive birefringence under polarizing microscope. What is the diagnosis:*
- *A. Pseudo gout*
- *B. Sero-negative arthropathy of ankle joint*
- *C. Acute gouty arthritis*
- *D. Acute exacerbation of osteoarthritis*
- *E. Chronic gouty arthritis*
  
- *Answer: A*

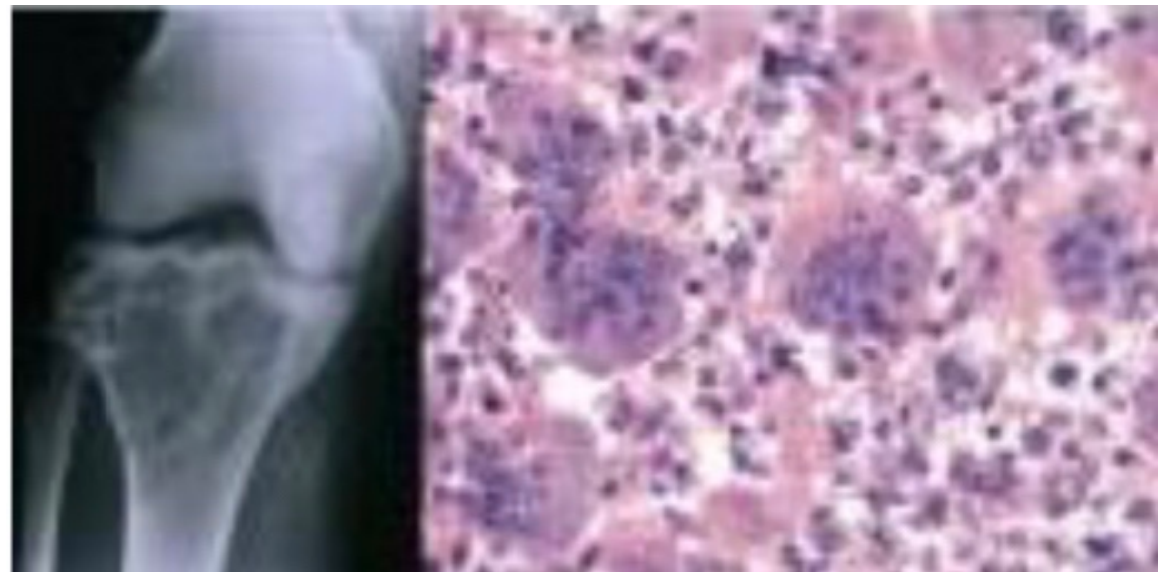
- *A 13-year-old boy was brought by his parents with right forearm pain and swelling. Imaging showed an infiltrative diaphyseal tumor with two Codman triangles one proximal and one distal. The fine needle aspiration smears revealed numerous small tumor cells with high nuclear cytoplasmic ratio. The molecular signature abnormality of this tumor is? (Pathology)*
- *A. t (11;22)(p24;q12)*
- *B. MDM2 translocation*
- *C. t (x;18)(p12;q15)*
- *D. Point mutation of osteoblast P53 tumor suppressor gene*
- *E. Gene mutation in fibroblast growth factor receptor*
  
- *Answer: A*



- *The images below belong to a 1-year-old boy who came with precocious puberty and multiple endocrine glands abnormalities. What is the most likely diagnosis:*
- *A. Leontiasis ossea / platybasia*
- *B. McCune-Albright syndrome*
- *C. Multiple hereditary chondromatosis*
- *D. Familial Paget disease of bone*
- *E. Mazabraud syndrome*
  
- *Answer: B*



- *You are evaluating a 45-year-old woman with upper leg pain. The X-ray and the open biopsy material are shown below. This disease is characterized by:*
  - *A. Association of Paget disease of bone*
  - *B. Tumor cells lack RNANKL protein*
  - *C. Cure is achieved by disarticulation from the knee joint*
  - *D. Locally aggressive neoplasm of adults*
  - *E. High frequency of metastasis*
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- *Answer: D*

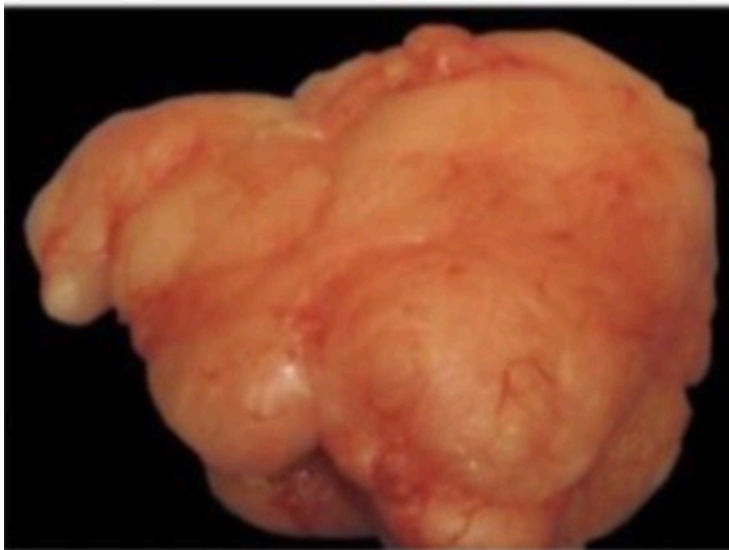


- *Osteoarthritis compared to rheumatoid arthritis is:*
- *Answer: true non-suppurative chronic arthritis*
  
- *Brown projections, diagnosis:*
- *Answer: Pigmented Villonodular Synovitis PNVS*
  
- *Giant cell tumor has:*
- *Answer: osteoclast-like cells*
  
- *True regarding fibrous tumors:*
- *Answer: It is important not to diagnose nodular fasciitis as malignant*

- *Patient with small fractures, a lot of small blue cell tumors were found. What do you expect?*
- *Answer: **translocation (11,22) (q24;q12)***



- *A patient showed up with a similar appearance as in the picture, which of the following is true:*
- *Answer: **the forming cells are typical adipocytes***



*The END*