

## Image in Medicine

**Bhoomi Angirish<sup>1</sup>, Bhavin Jankharia<sup>2</sup>**

### Quiz 1

**CT scan image of the chest of a 25 year old male presenting with cough and fever since 1 month.**

#### Questions :

- (1) What is the pattern of distribution of nodules ?
- (2) What is the diagnosis ?
- (3) What are the different patterns of distribution of nodules ?

#### Answers :

- (1) The nodules show random distribution pattern.
- (2) Multiple 2-3 mm sized diffusely distributed nodules are seen. Findings are in favour of miliary tuberculosis.
- (3) The distribution of nodules on HRCT can be placed into one of the three categories: Perilymphatic, centrilobular or random.

In **perilymphatic distribution**, the nodules are seen along pleural surfaces, interlobular septa and peribronchovascular interstitium. It is most commonly seen in sarcoidosis. It can also occur in silicosis, coal-worker's pneumoconiosis and lymphangitic spread of carcinoma.

In **centrilobular distribution**, the nodules spare the pleural surfaces. It is seen in diseases that enter the lungs through the airways such as hypersensitivity pneumonitis, respiratory bronchiolitis, endobronchial spread of tuberculosis.

In **random distribution** pattern, the nodules are randomly distributed relative to secondary lobule. It is seen in miliary tuberculosis, hematogenous metastases, langerhans cell histiocytosis.



### Quiz 2

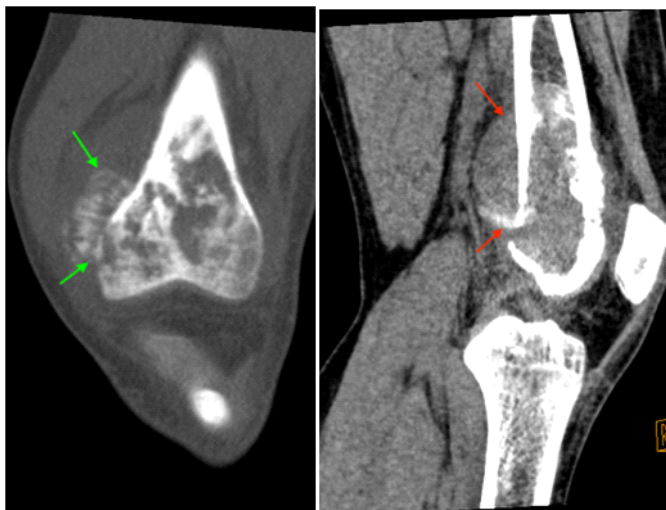
**A 18 year old male presented with painless swelling involving lower end of femur since 3 months.**

#### Questions:

- (1) What is the diagnosis ?
- (2) What are the common locations of this lesion ?
- (3) What are the types of osteosarcoma by anatomic relationship to the bone ?

#### Answers :

(1) An osteolytic lesion with wide zone of transition, showing permeative bone destruction and sunburst type periosteal reaction (green arrow) is seen involving distal meta-diaphysis of femur. Associated soft tissue component (red arrow) is seen. These imaging findings favour diagnosis of osteogenic sarcoma, which was confirmed on biopsy.



(2) Primary osteosarcomas occur at the metadiaphysis of long bones. The commonly involved locations are distal femur, proximal tibia, humerus.

(3) Primary osteosarcoma can be categorized as intramedullary and surface lesions. Intramedullary lesions include conventional, low-grade central and telangiectatic osteosarcoma. Surface lesions include parosteal, periosteal and high-grade surface osteosarcoma.

Department of Radiology, Picture This by Jankharia, Mumbai, Maharashtra 400004

<sup>1</sup>MD, DNB (Radiology)

<sup>2</sup>MD, DMRD (Radiology)