

Image in Medicine

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Quiz 1

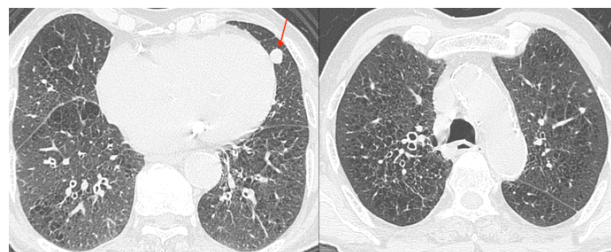
Axial CT scan images of a smoker with smoking index of 12.5 pack year shows combined pulmonary fibrosis and emphysema (CPFE) and a solid round nodule in inferior lingula.

Questions:

(1) The solid nodule (arrow) seen in inferior lingula measures 10 mm. What is the Lung-RADS category?

2) What are the management recommendations of this nodule?

3) What are the guidelines for LDCT screening?



Answers:

1) **Category 4A** - Suspicious. The Lung-RADS category 4A includes **solid nodule** 8mm and <15mm at baseline OR growing <8mm OR new <6 to 8mm and **part solid nodule** 6mm with solid component 6mm to <8mm OR with a new or growing <4mm solid component.

2) The management recommendations for 4A category nodule are 3 month LDCT or alternatively PET/CT may be used, when there is a 8mm solid component.

3) The 2013 US preventive service task force (USPSTF) recommendations for lung cancer screening includes individuals between 55-80 years with ≥30 pack year. The proposed 2020 USPSTF recommendations are age group of 50-80 years with ≥20 pack year. These includes current smokers or individuals who have quit smoking within past 15 years.

Quiz 2

A 32 year old lady presented with painless swelling around lower thigh since 3 months.

Questions:

(1) What is the diagnosis?

(2) What are the common locations of this lesion?

(3) What are the differential diagnosis?

Answers:

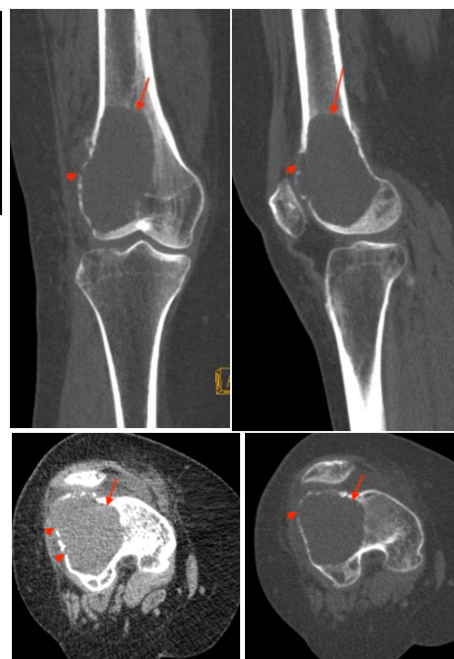
(1) A well defined osteolytic lesion (arrows) with non-sclerotic margins and with narrow zone of transition is seen in the metaphysis of lower end of femur, extending into the epiphysis and reaching adjacent to the articular surface. There is thinning and focal breach (arrowheads) of the overlying cortex. These imaging findings are typically seen in giant cell tumour (GCT), which was confirmed on biopsy.

(2) The most common locations of GCT are around knee involving distal femur and proximal tibia. Other known locations are distal radius, sacrum and vertebral body.

(3) The imaging differentials of GCT are

i) Chondroblastoma: which is an epiphyseal lesion and occurs in immature skeleton whereas GCT is epi-metaphyseal lesion occurring in closed growth plate.

ii) Chondromyxoid fibroma: shows well defined sclerotic margins, whereas GCT shows non-sclerotic margins.



iii) Aneurysmal bone cyst: usually occurs in younger age group, however it may co-exist with GCT.

Picture This by Jankharia, Mumbai, Maharashtra
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