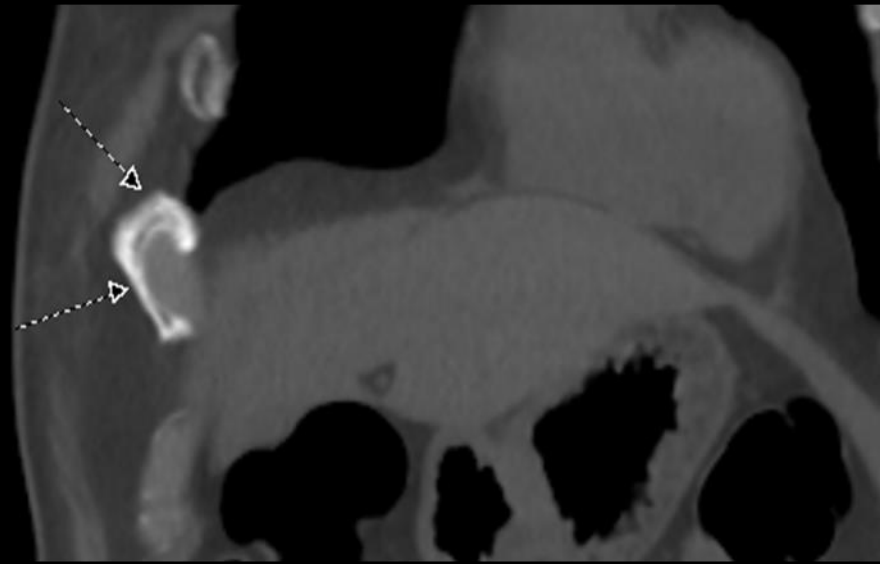
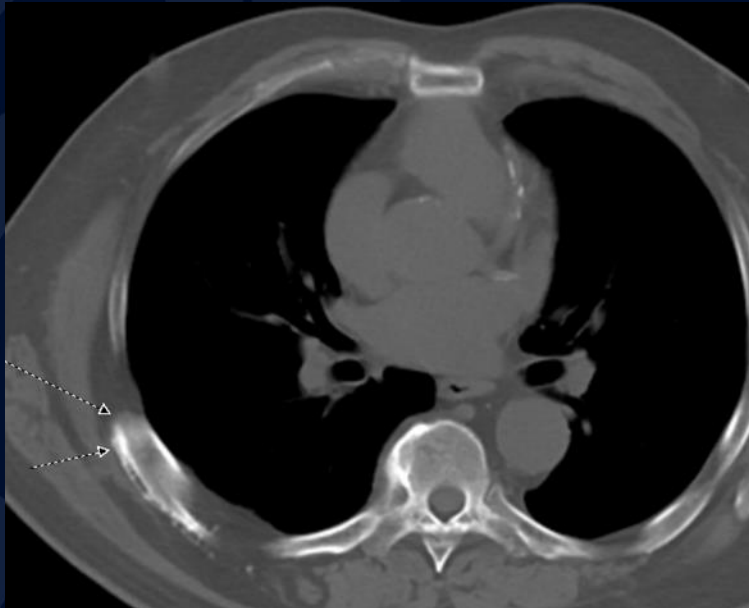
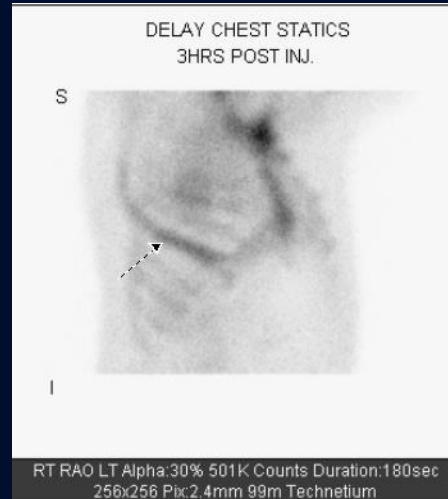


70 year old male with history of metastatic prostate cancer presents with cough

Elena G. Violari, MD
David Karimeddini, MD





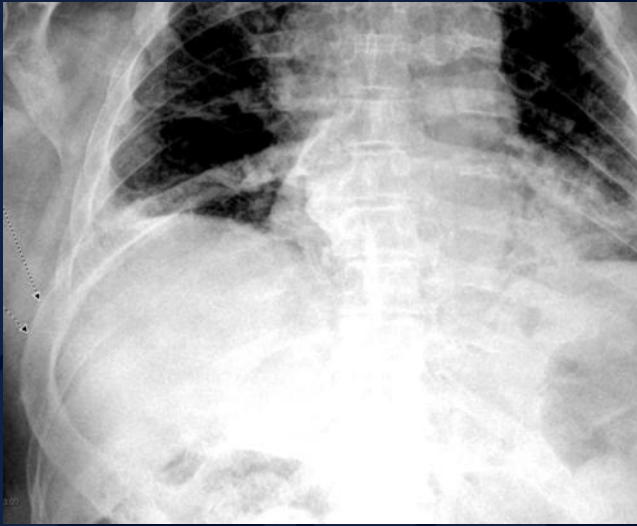




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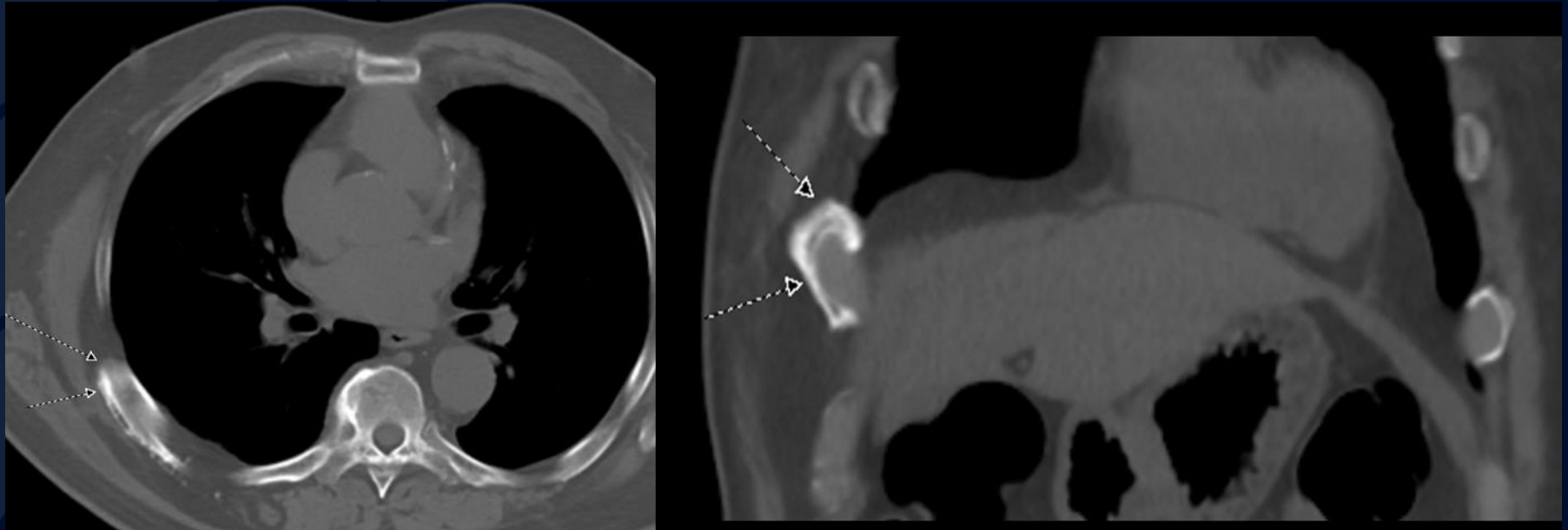
Paget disease of the rib

Plain radiographs



Expansion and sclerosis of the right 6th rib.

Chest CT



Expansion and sclerosis of the right 6th rib.

Paget Disease (bone)

Paget disease of the bone:

- Chronic bone disorder characterized by excessive abnormal bone remodeling.
- Frequently affects the pelvis, spine, skull and proximal long bones and has characteristic radiographic features.

Distribution of Paget disease:

- Mono-ostotic (10-35%) or poly-ostotic (65-90%).
- Skull: 25-65%.
- Spine: 30-75%.
- Pelvis: 30-75%.
- Proximal long bones: 25-30%.

Paget Disease (bone)

- **CT Findings:**

- Early lesions: Lytic, thinned cortex
- Later lesions: Mixed lytic/sclerotic
- Disordered, thickened trabeculae
- Cortical thickening
- Deformity: Protrusio, varus hips, anterior bowing tibia, basilar invagination
- Enlargement of involved bone in all dimensions
- Lesion in long bone begins at subchondral region, progresses toward diaphysis
- Sharp oblique delineation at lesional border with normal bone
- Termed blade of grass or flame-shaped

- **MR Findings:**

- Histologic composition of marrow space changes from lytic through blastic disease
- Often contains more marrow fat than adjacent normal bone

- **Bone scan: ↑↑ uptake when lesions are active**

Paget Disease (bone)

Fibrous Dysplasia:

- Calvarial and base of skull distribution identical. Appearance may not be distinguishable from Paget disease
- If homogeneous ground-glass appearance is present, diagnostic of fibrous dysplasia (FD)
- FD may enlarge bone but generally without trabecular coarsening or cortical thickening

Sclerotic Metastases:

- Blastic lesions in same distribution as Paget disease
- No trabecular coarsening or enlargement of bone

Multiple Myeloma:

- Early lytic lesions of Paget disease may be similar
- Myeloma does not enlarge bone or trabeculae

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