

MICOD – 22/11/2023
Case contributor – Dr. Drushi patel

MI-COD

MSS INDIA- Case Of the Day

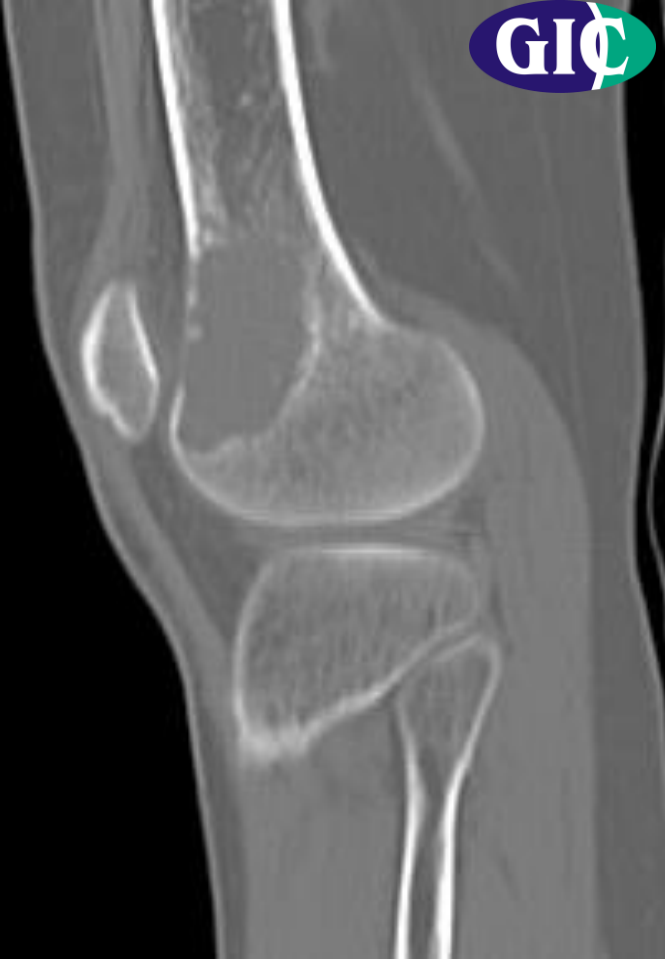


CLINICAL PRESENTATION

F/28 YRS

**Presented with knee pain
and generalised body aches**

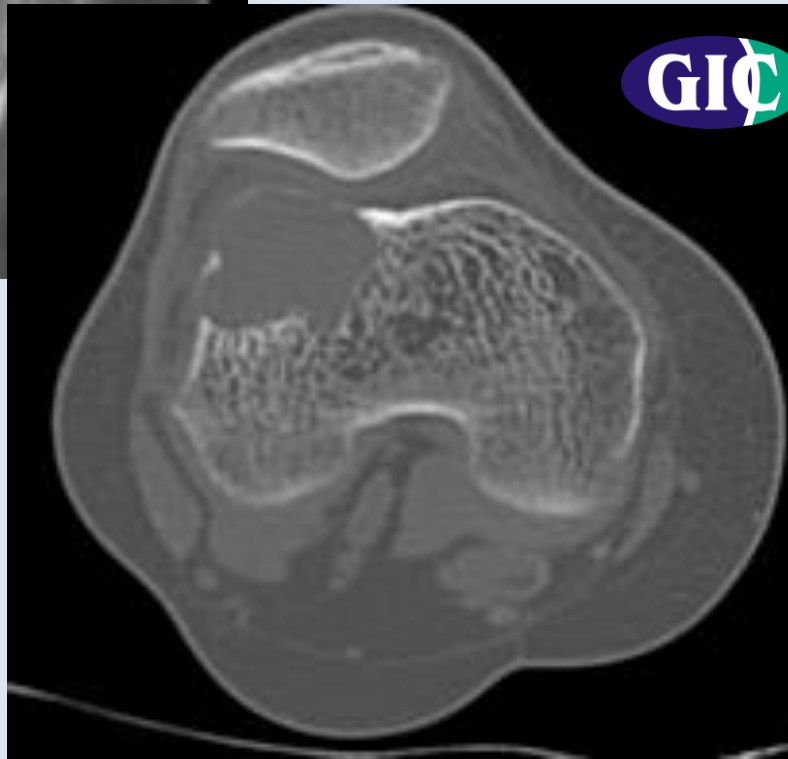
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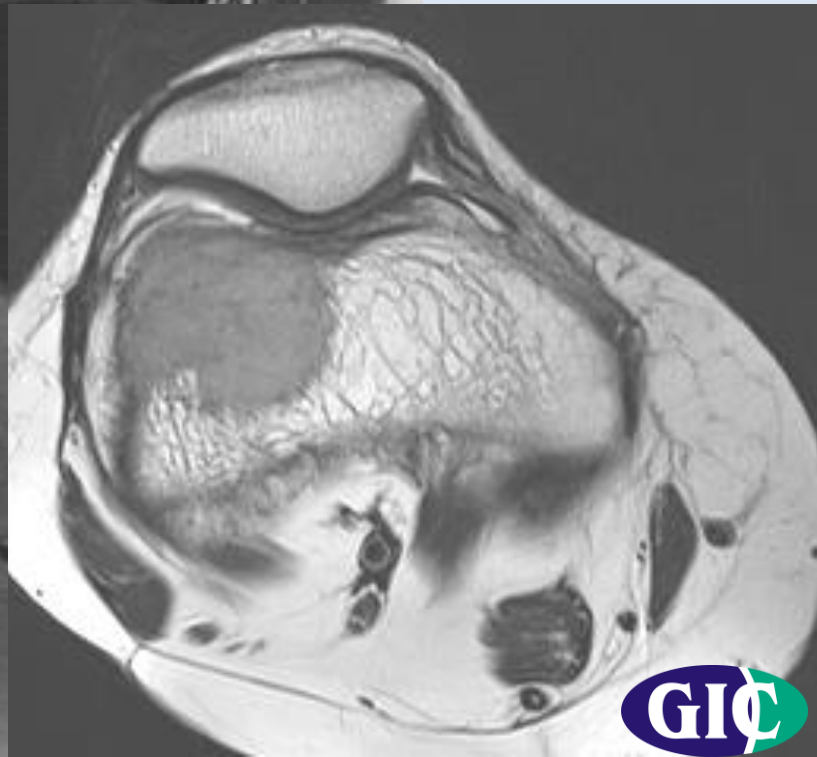
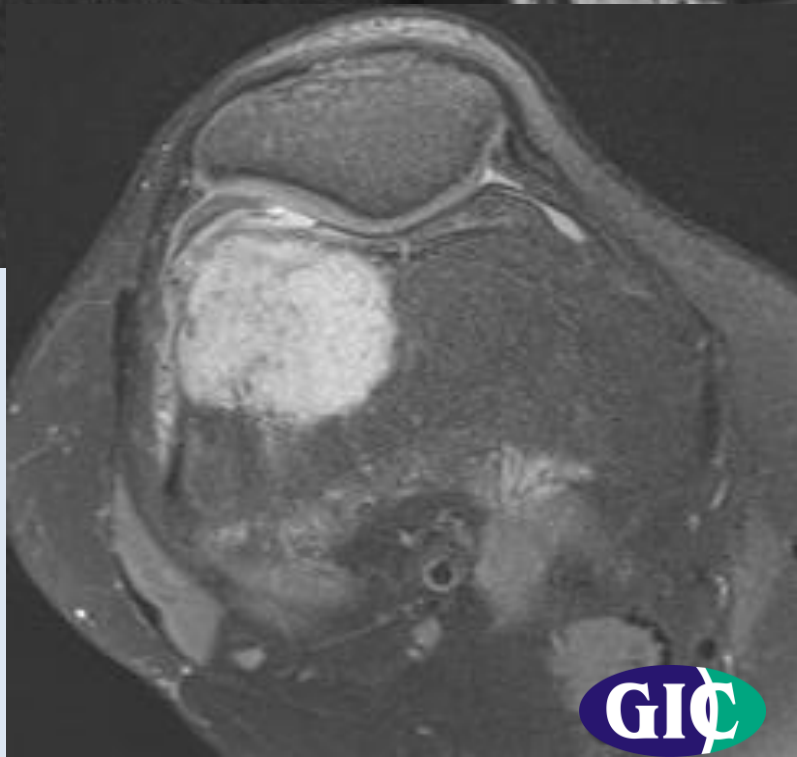
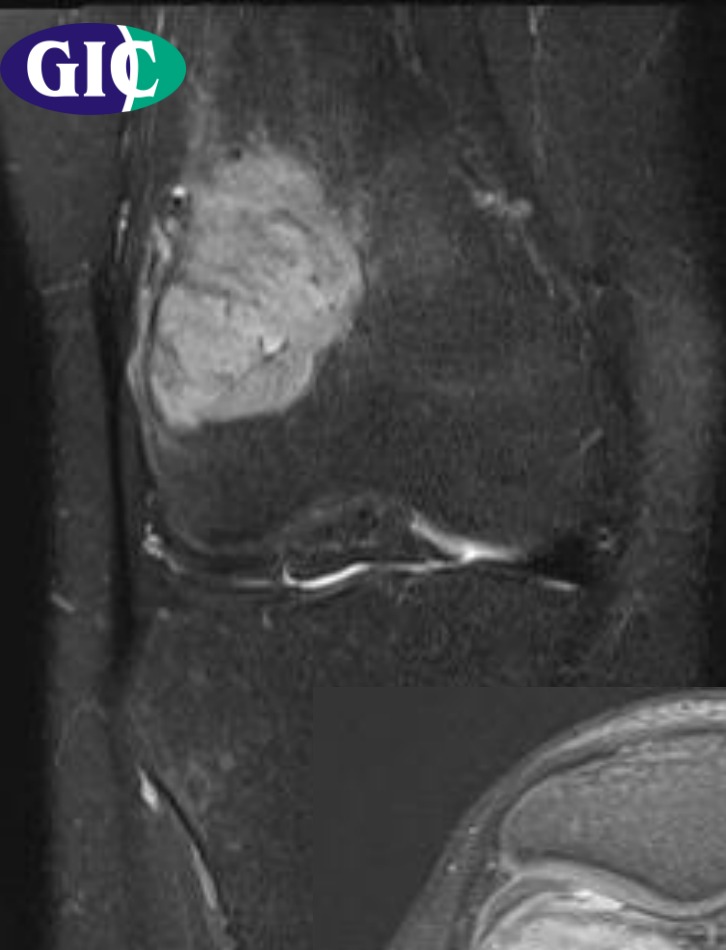


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DIFFERENTIAL DIAGNOSIS ?

CT & MRI KNEE

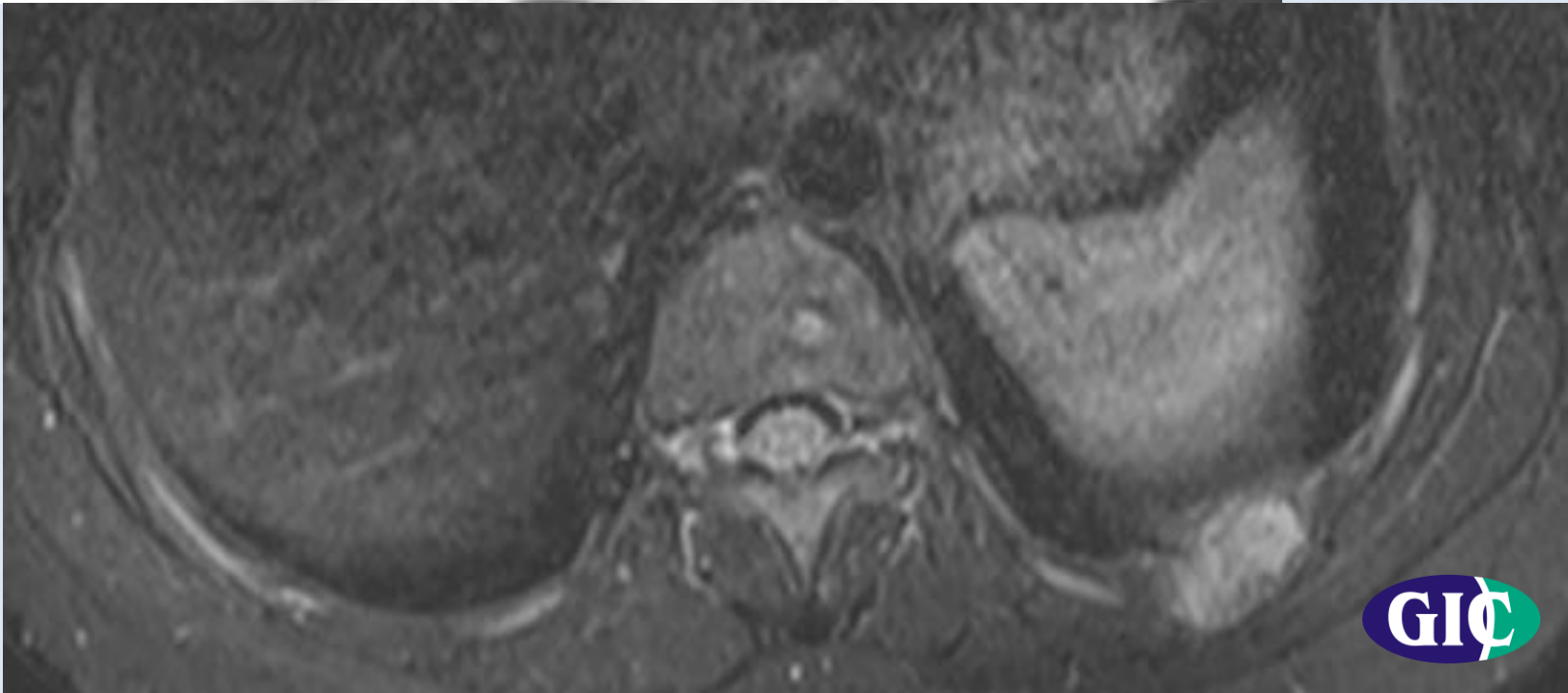
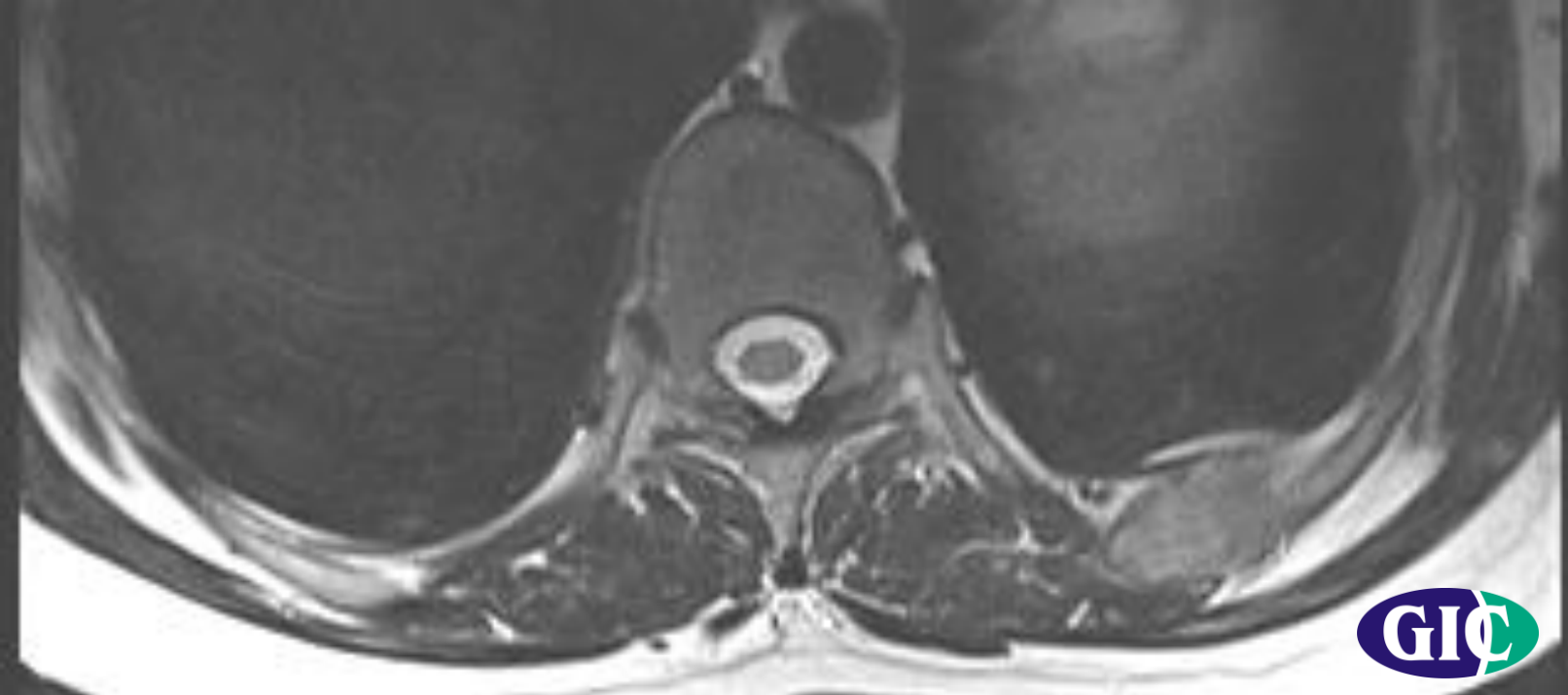
- **A well-defined expansile lytic lesion involving antero-lateral aspect of distal metaphysis of femur with cortical thinning and mild adjacent soft tissue edema.**
- **Diffuse osteopenic changes involving visualized bones with prominent trabeculae.**
- **Differential consideration were of**
 1. **Brown tumour – in view of osteopenia**
 2. **Chondromyxoid fibroma**
 3. **Giant cell tumour**

- Blood calcium profile suggested
 - Raised S. Calcium
 - Raised S.. Parathormone
 - Raised S. Alkaline Phosphatase





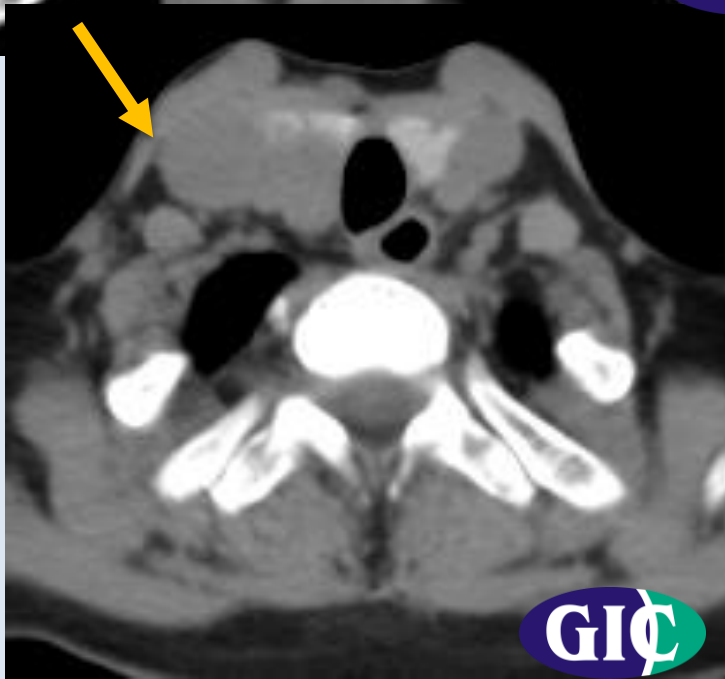
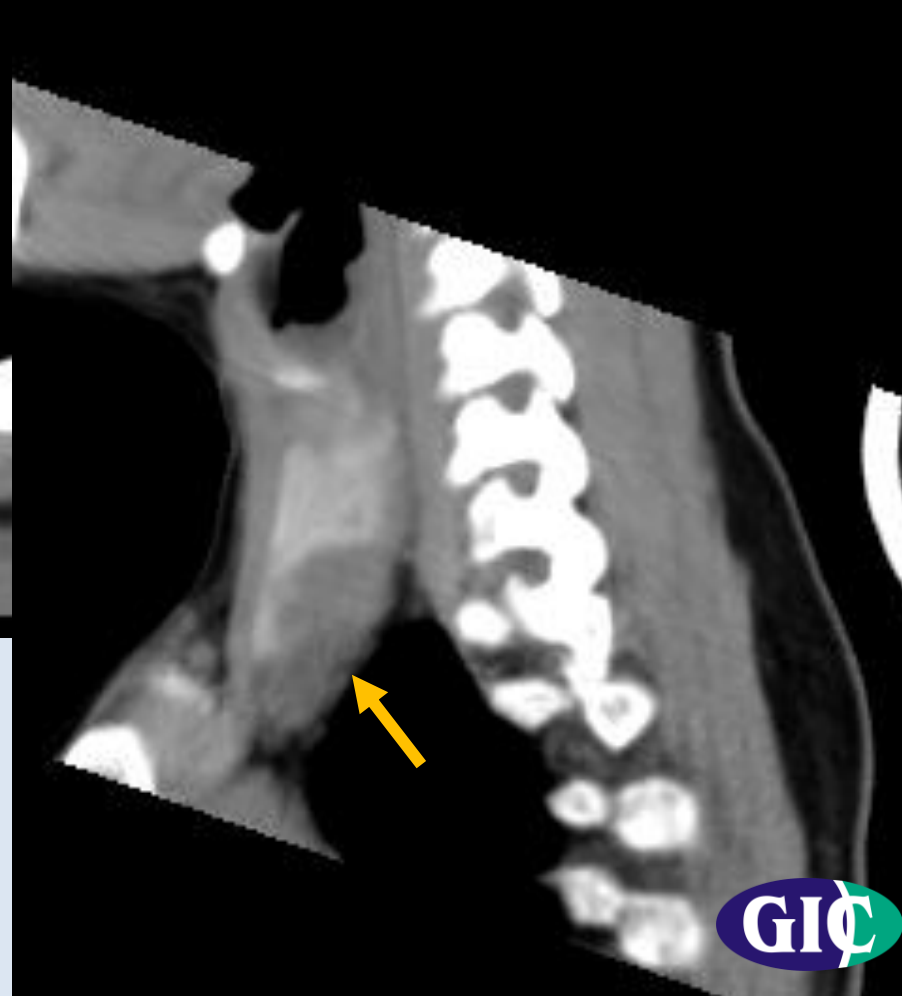




MRI SPINE

- Diffuse STIR hyperintensity in visualized all vertebrae and ribs - secondary to red marrow hyperplasia.
- Rugger jersey appearance of spine
- Focal expansile lesion at posterior aspect of left 9th rib – suggesting possibility of brown's tumour.

CT PLAIN NECK



Right parathyroid lesion
HPE : adenoma

DIAGNOSIS :

PARATHYROID ADENOMA WITH OSSEOUS MANIFESTATIONS OF PRIMARY HYPERPARATHYROIDISM

- Rugged jersey spine
- Brown tumours
- Osteopenia

HYPERPARATHYROIDISM

Supported biochemically by either an elevated serum PTH level or an inappropriately normal level in the setting of hypercalcemia.

Increased levels of the parathyroid hormone

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Increased osteoclastic activity.

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Bone resorption

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Cortical thinning (sub-periosteal resorption) & osteopenia.

HYPERPARATHYROIDISM

Subtypes

Primary hyperparathyroidism

- [Parathyroid adenoma](#)
- [Parathyroid hyperplasia](#)
- [Parathyroid carcinoma](#)
- [Parathyromatosis](#)

Secondary hyperparathyroidism

caused by chronic hypocalcemia

CAUSES :

- [renal osteodystrophy](#)
- [Malnutrition](#)
- [Vitamin D deficiency](#)

Results in [parathyroid hyperplasia](#)

Tertiary hyperparathyroidism

autonomous parathyroid adenoma caused by the chronic overstimulation of hyperplastic glands in renal insufficiency

HYPERPARATHYROIDISM

- Subperiosteal bone resorption
- Terminal tuft erosion (acro-osteolysis)
- Rugger jersey spine
- Osteopenia
- Brown tumors
- Salt and pepper sign – SKULL
- Chondrocalcinosis