SNS COLLEGE OF ALLIED HEALTH SCIENCES

SNS Kalvi Nagar, Coimbatore -35

Affiliated To Dr. MGR Medical University

Department: Physician Assisstant

Course Name: Orthopaedics

Unit: Tumors

Topic : Chondrosarcoma

DEFINITION

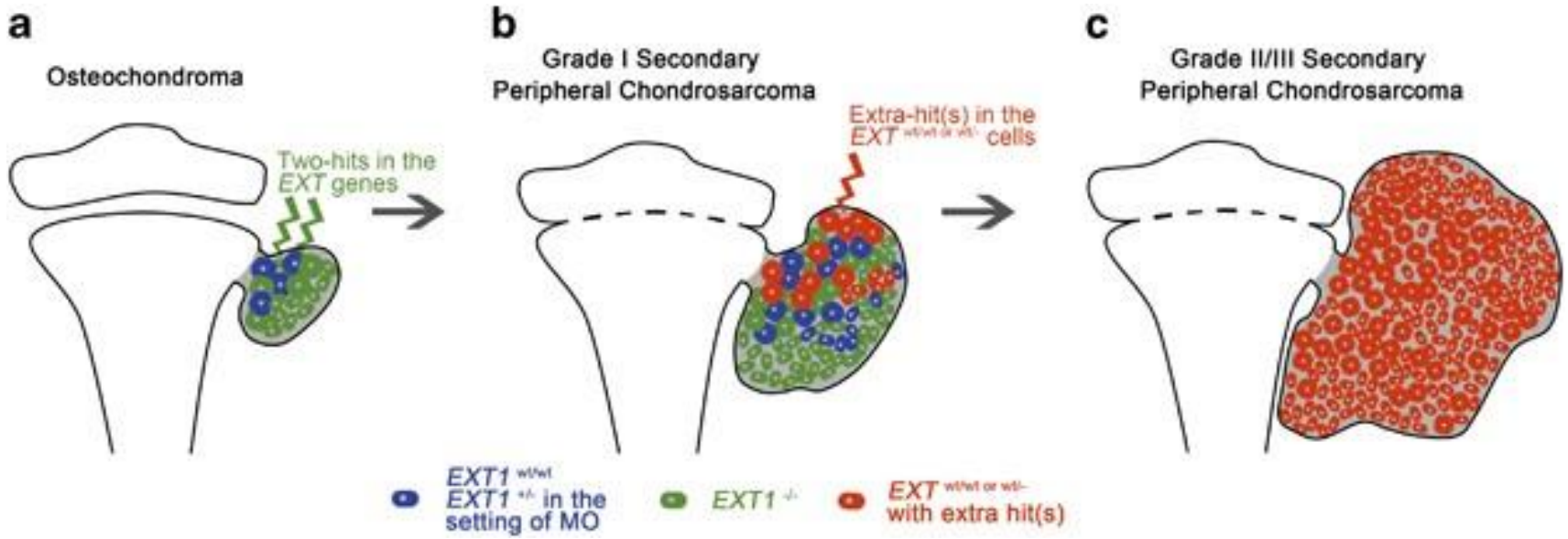
Chondrosarcoma is a bone sarcoma, a primary cancer composed of cells derived from transformed cells that produce cartilage. A chondrosarcoma is a member of a category of tumors of bone and soft tissue known as sarcomas. About 30% of bone sarcomas are chondrosarcomas. It is resistant to chemotherapy and radiotherapy.

Classification

- Primary
- Central (medullary) type
- Intracortical type
- Clear cell chondrosarcoma
- Mesenchymal chondrosarcoma
- Dedifferentiated chondrosarcoma

Secondary: Arising from pre-existing benign conditions such as the following:

- Chondroblastoma
- Irradiation induced
- Fibrous dysplasia


a
Osteochondroma
Two-hits in the
EXT genes
b
Grade I Secondary
Peripheral Chondrosarcoma
Extra-hit(s) in the
EXT cells
c
Grade II/III Secondary
Peripheral Chondrosarcoma
EXT1 wt/wt
EXT1 +/- in the
setting of MO
EXT1 -/-
EXT wt/wt or wt/-
with extra hit(s)

Incidence

• It is second most common primary malignant bone tumour. • It constitutes about 9% of primary malignancies of bone.

Age/sex

• It peaks between 40 and 60 years for primary chondrosarcoma and between 25 and 45 years for secondary chondrosarcoma.

• Male preponderance.

Locations

• It can occur in any location.

Presentation/Clinical Features

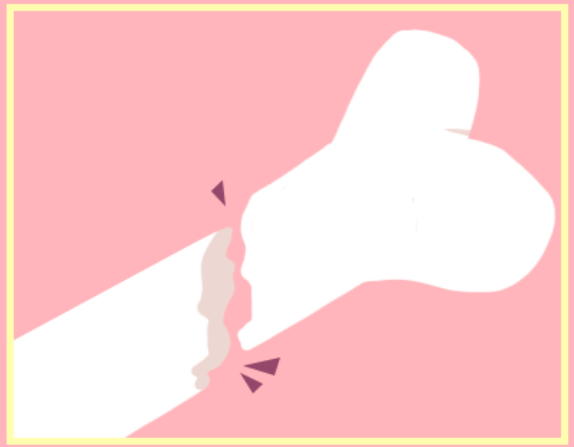
1. *Primary Chondrosarcoma*

- Usually asymptomatic
- Most of the time discovered incidentally on a bone scan or radiograph obtained for another reason
- Increasing pain (especially in the presence of pathological fracture)
- Palpable mass

2. *Secondary Chondrosarcoma*

- Conditions associated with the secondary chondrosarcoma:
- Ollier disease (multiple enchondromas)
- *Maffucci's syndrome (multiple enchondromas with soft-tissue haemangiomas)*
- Synovial chondromatosis
- Chondromyxoid fibroma
- Periosteal chondroma
- *Chondroblastoma*
- Previous radiation treatment
- Fibrous dysplasia

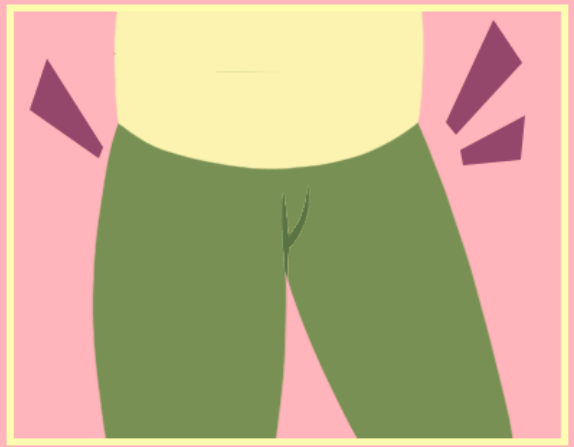
Frequent Signs of Chondrosarcoma



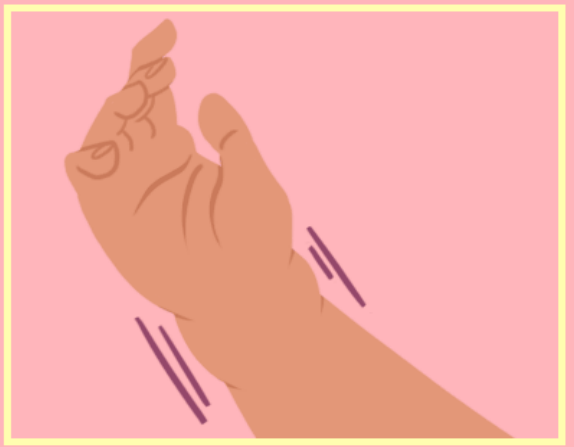
Fracture

Pain

Limping



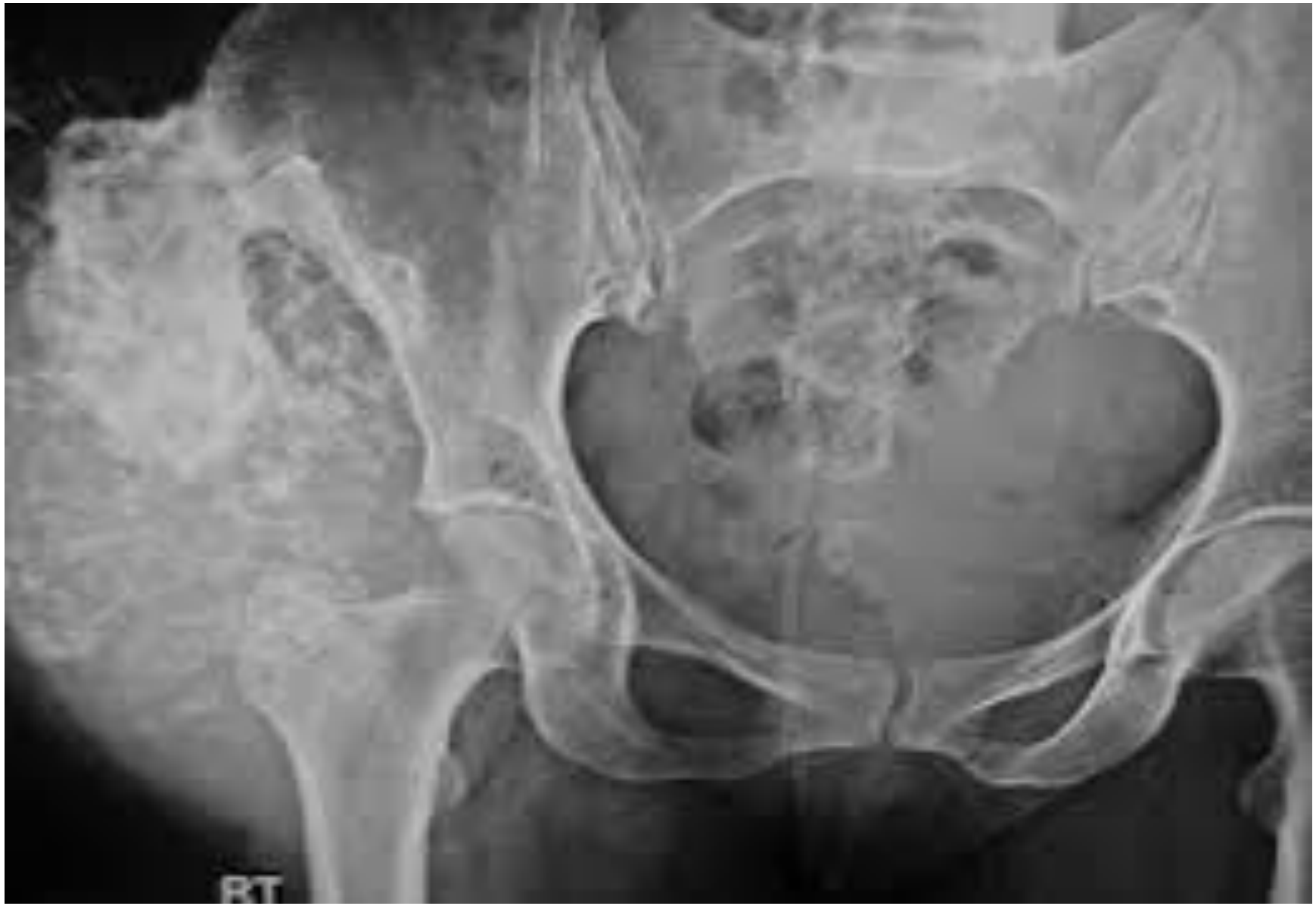
Reduced and painful



Joint swelling and stiffness

Diagnostic Evaluvation

- History collection
- Physical Examination
- X-Ray
- Computed tomography (CT Scan)
- MRI
- Radiological findings :There is expansion of the medulla in the central type and thickening of the cortex with spotty calcification (popcorn calcification). The tumour may also appear as a lobulated swelling from the end of a long bone or ilium with patchy and fluffy areas of calcification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Treatment

- Treatment of choice is surgical. It does not respond to chemotherapy or radiotherapy. Limb-sparing surgery by en-bloc resection and reconstruction of the skeletal defect is the treatment of choice.
- High-grade massive tumours with soft-tissue involvement need amputation at the appropriate level.
- Chemotherapy has no role in the treatment of conventional chondrosarcoma and radiotherapy likewise has a limited role and is indicated only as a palliative measure for surgically inaccessible lesions.

1. Low-grade Chondrosarcoma

- Controversial
- Extended curettage

2. High-grade Chondrosarcoma

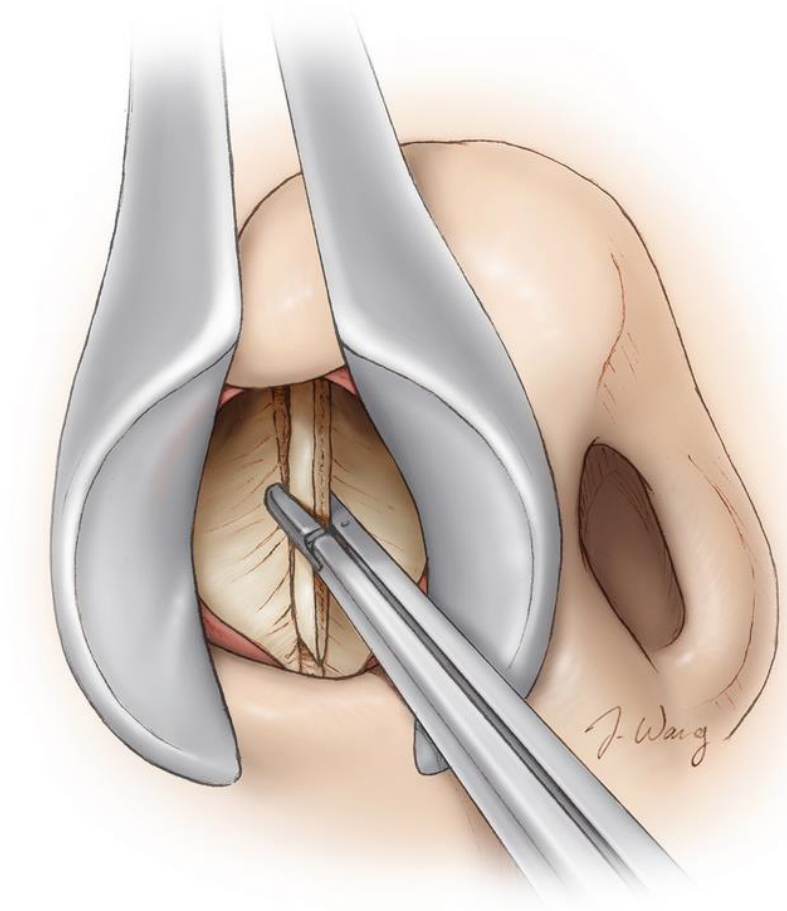
- Wide or radical resection or amputation.

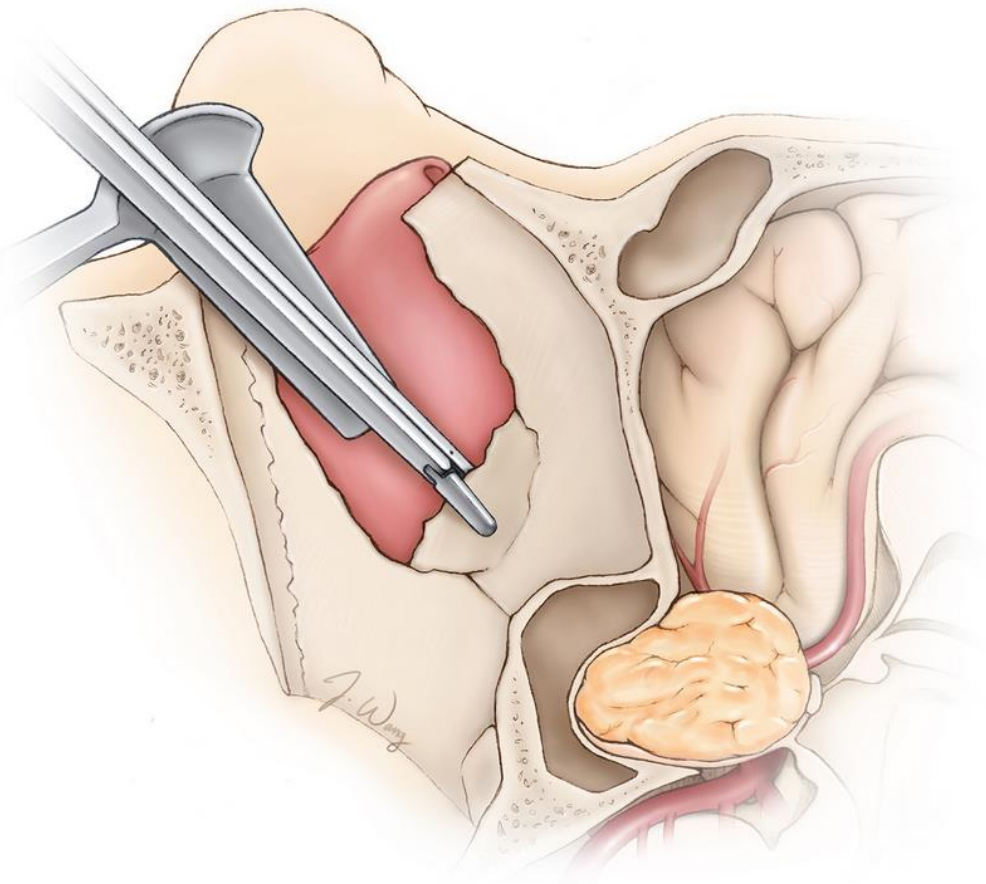
3. For Lesions in an Expendable Location

- Primary wide resection without a biopsy may be indicated to decrease the chance of tumour contamination.

4. Pulmonary Metastases

- It should be treated with surgical resection.






Thank
You!