AUSTRALIAN SARCOMA GROUP
ASM, ADELAIDE
Chondral tumours

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Benign Chondroid Tumour

Osteochondroma

Enchondroma

Periosteal chondroma

Chondroblastoma

Chondromyxoid Fibroma

Enchondroma

Asymptomatic

Small intramedullary

Hands feet

Femur and proximal humerus

Macro and Radiologic

Round lobulated ca++ mass

Sharply demarcated

Cortex and bone contour not altered except small bones

Hot on bone scan

Microscopy

Histology alone is often inadequate to differentiate a hypercellular enchondroma from a low grade chondrosarcoma

Histologic features of enchondroma

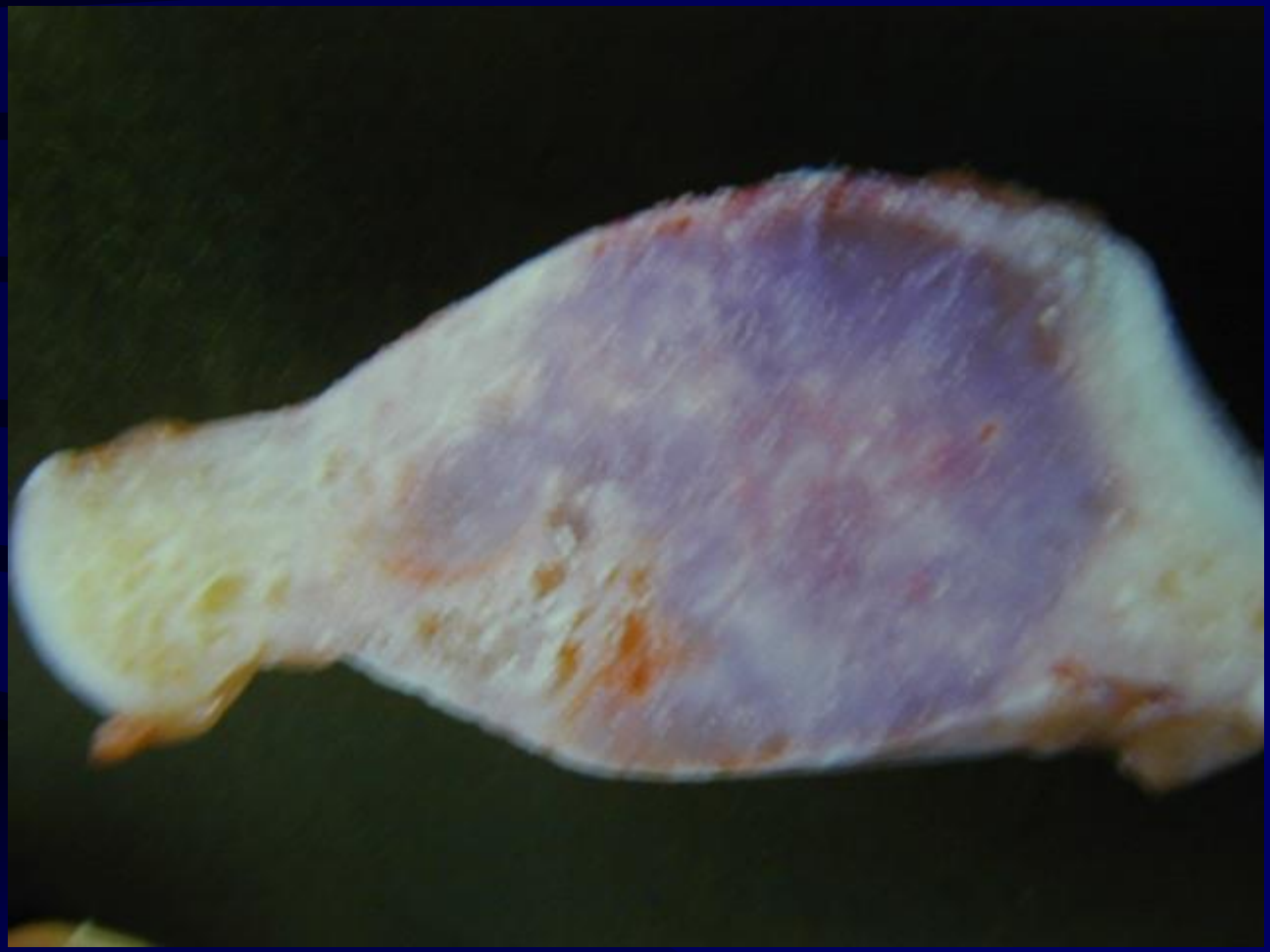
Lobulated architecture

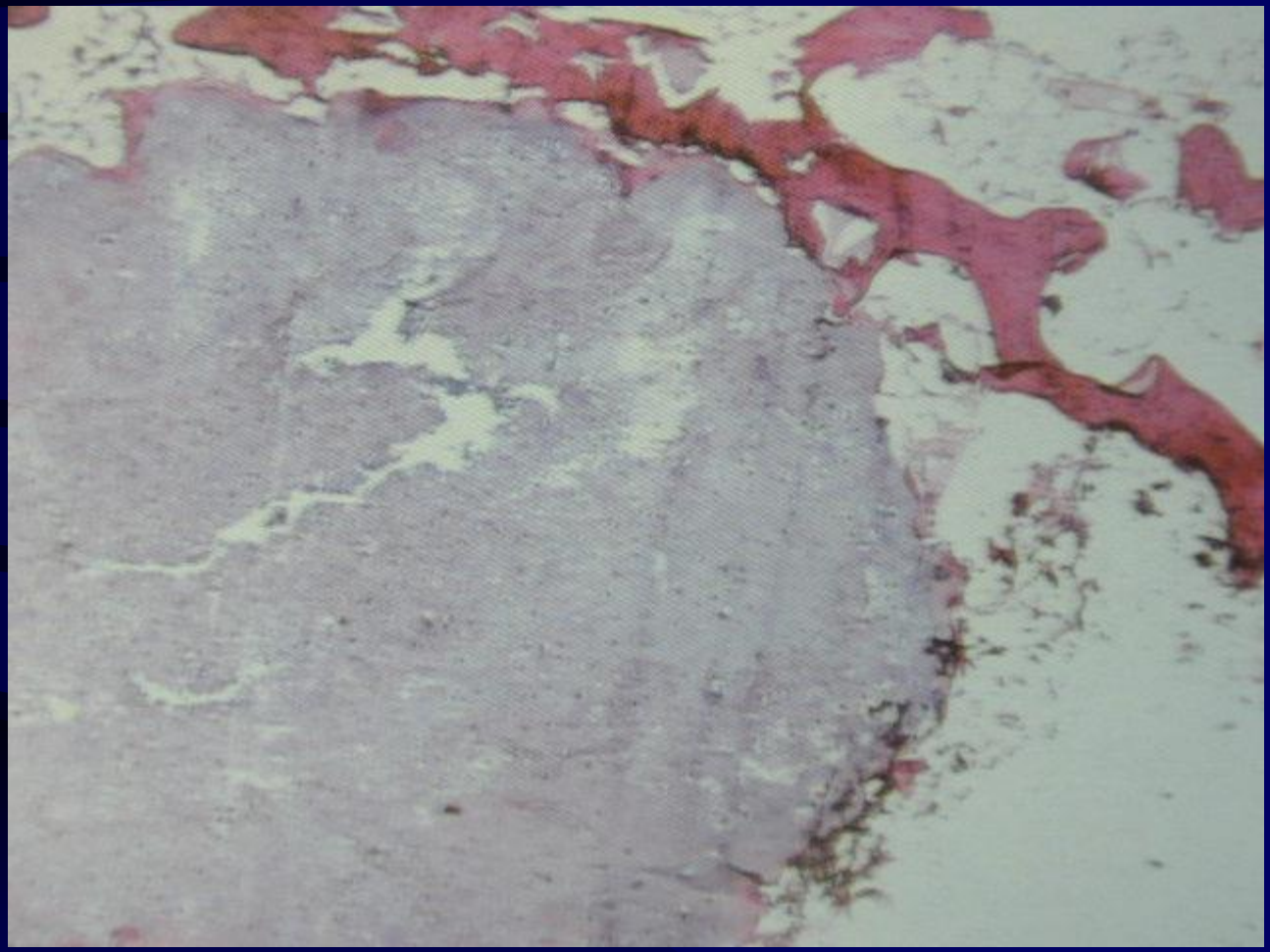
Low cellularity, mature cartilage

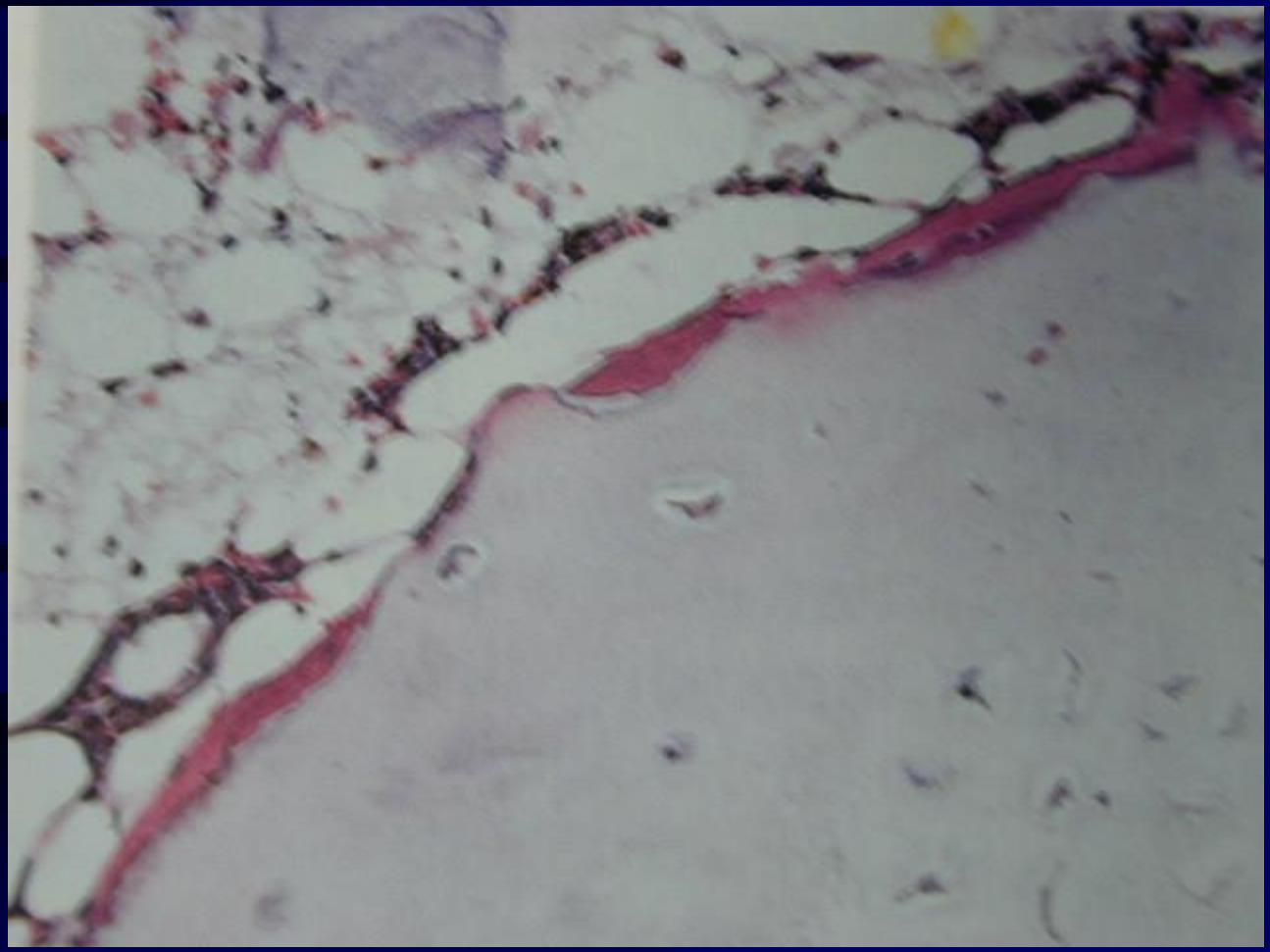
Individual chondrocytes with small dark nuclei

Hyaline matrix

At the periphery of lobule rim of Lamellar bone







Malignant Chondroid Tumours

Intramedullary chondrosarcoma

Conventional

Dedifferentiated

Clear cell

Mesenchymal

Secondary

Juxtacortical

Conditions predisposing to 2'chondrsarcoma

- Olliers and Maffucci' syndromes
- Multiple Hereditary exostoses
- Solitary osteochondroma
- Solitary enchondroma
- Paget
- Radiation

Chondrosarcoma

Majority of people > 50 yr

Pelvis ribs

Humerus femur

Presenting with Pain

Pattern of growth

Lytic with calcification

Lobulated solid growth pattern

Expanded bone contour

Thickening of cortex

Endosteal scalloping

Permeation of cortex

Soft tissue extension

Histologic features of malignancy

Nodules confluent

Permeates marrow

Hypercellularity

Myxoid matrix

Cystic change

Plump cells

Binucleate ells

Pleomorphic cells

Abundant mitoses

Grading Chondrosarcoma

Grade I mild hypercellularity
Lobular growth hyaline matrix

Grade II more cellular myxoid

Grade III Stellate spindle cells

Grade IV- dedifferentiated

Dilemmas in the diagnosis of chondrosarcoma

Enchondroma vs Chondrosarcoma

Chondroblastic osteosarcoma vs C/Sarc

Favouring malignancy

Clinical PAIN SIZE SITE

Radiologic poorly defined margin

Irregular distribution of ca++

Soft tissue extension

Scalloping

Cortical bone destruction

Periosteal reaction

Lytic islands