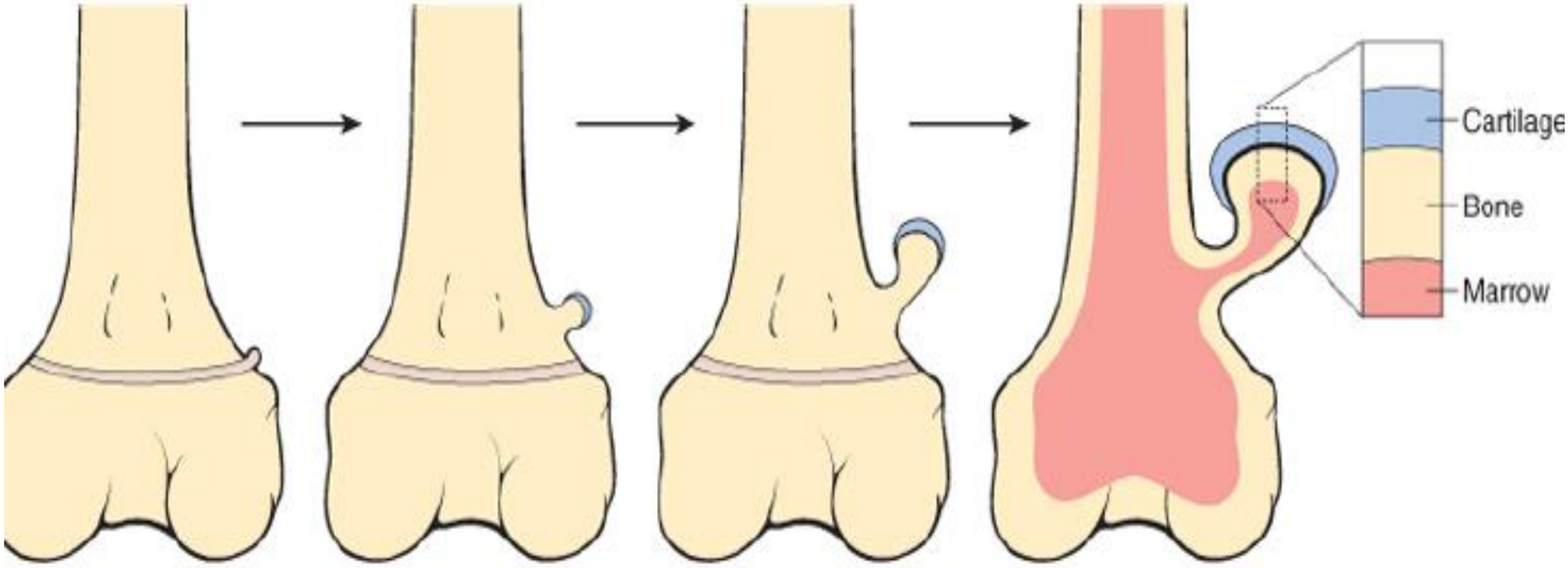
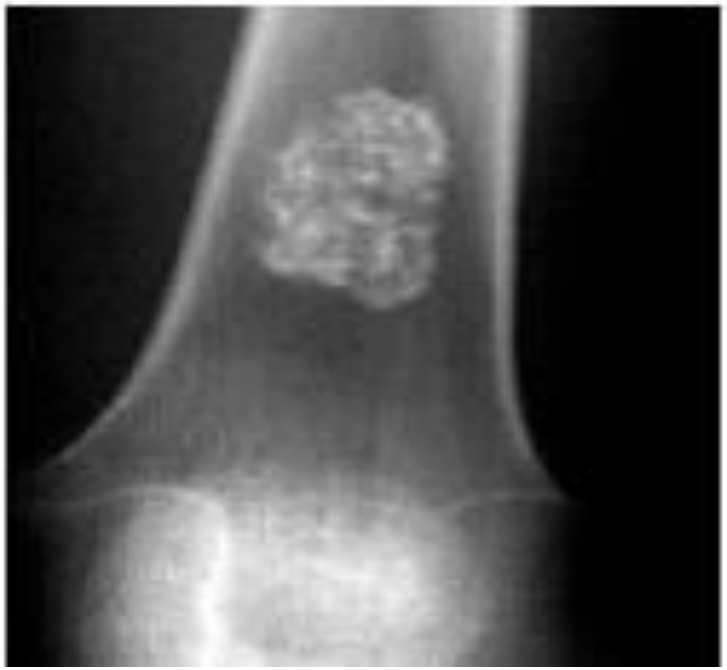
Pathology Lab MSS (Lecture 3)



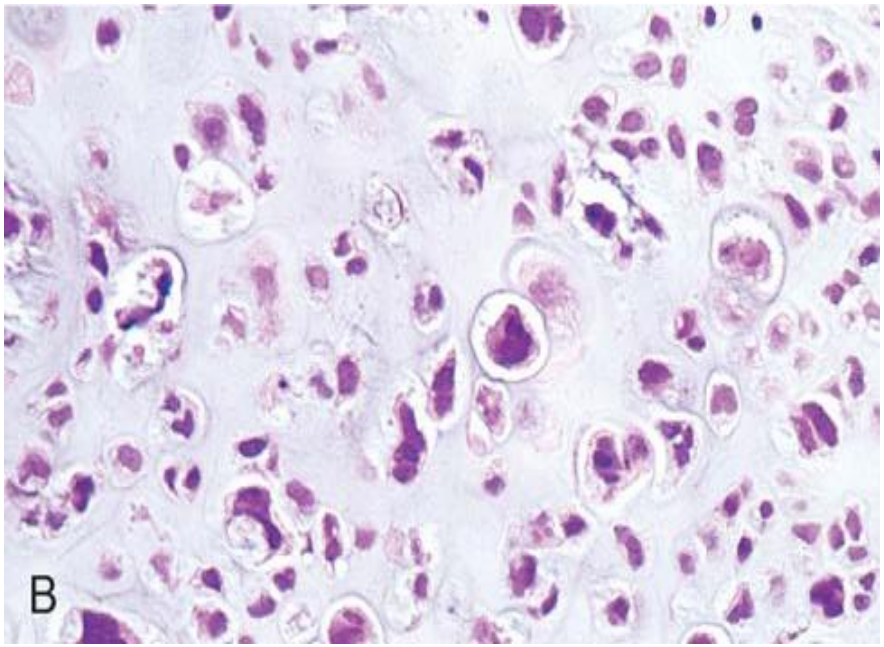
Osteochondroma is characterized by a cartilage-cap and a stalk connecting the outgrowth to the underlying bone.

Chondroma



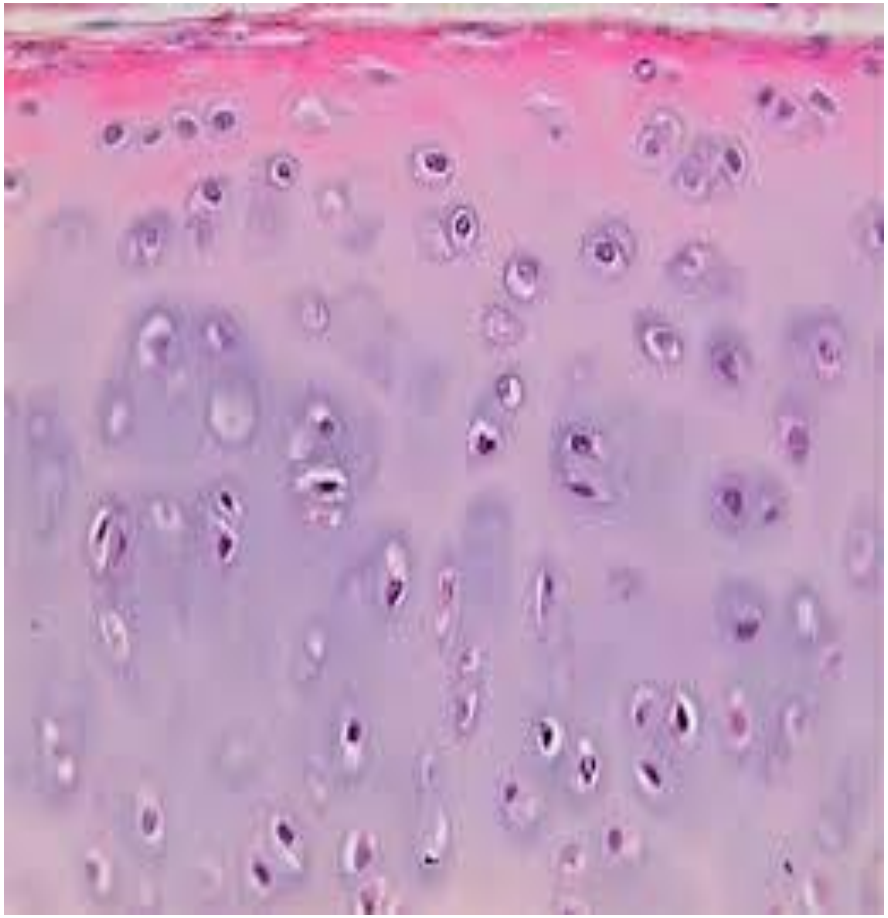
This O-ring sign is characteristic for enchondromas

Chondrosarcoma

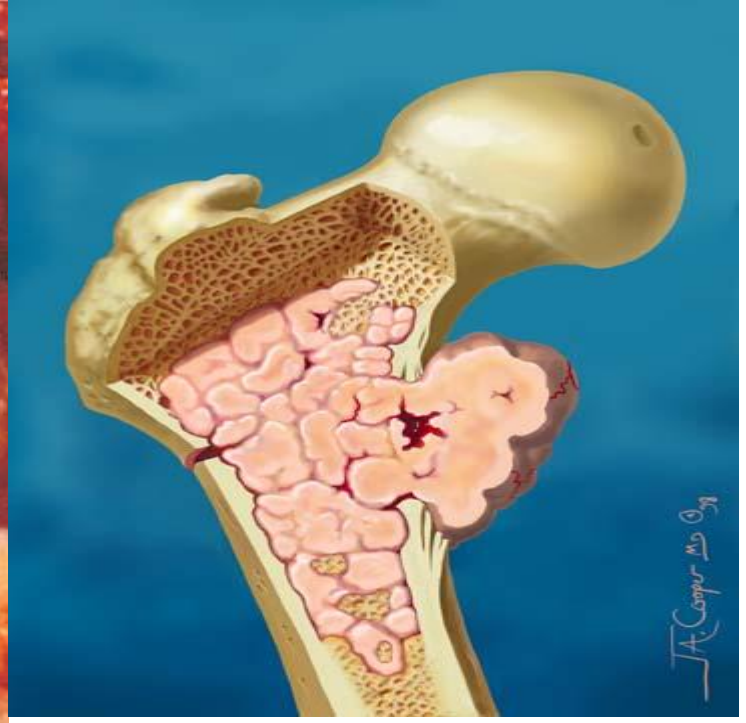


Abnormal hyaline cartilage:
Cells are larger than normal, having abnormal shapes. This indicates the presence of anaplasia.

- Cells are pleomorphic



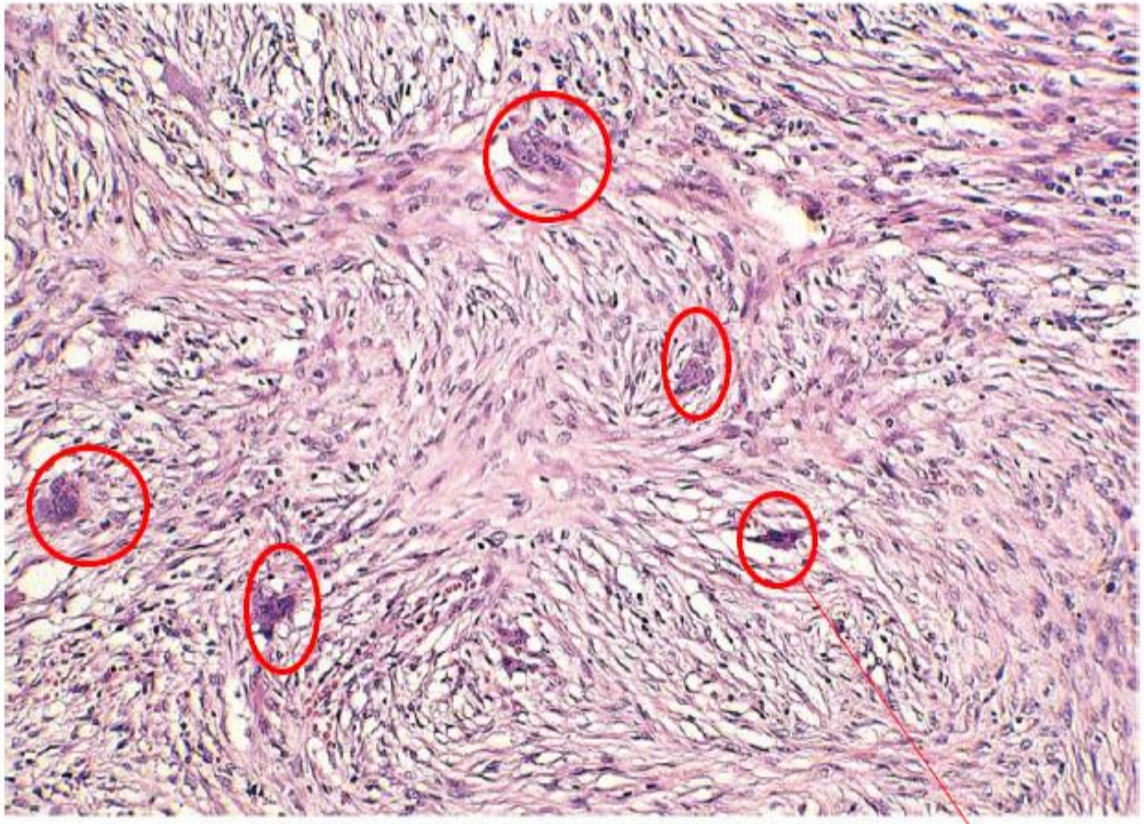
Normal hyaline cartilage



- **There’s abnormal growth of hyaline cartilage inside the medulla → This hyaline and myxoid cartilage expands the medulla and protrudes out of the cortex → this forms a sessile paracortical mass.**

عند خروج الغضروف المتكون داخل الـ medullary cavity خارج العظمة يتكون بروز غضروفي شبيه بال sessile polyps شكلا وبما أنه محيط بال cortex of the bone فإنه يسمى sessile paracortical mass

Fibrous Cortical Defect / Non-ossifying Fibroma



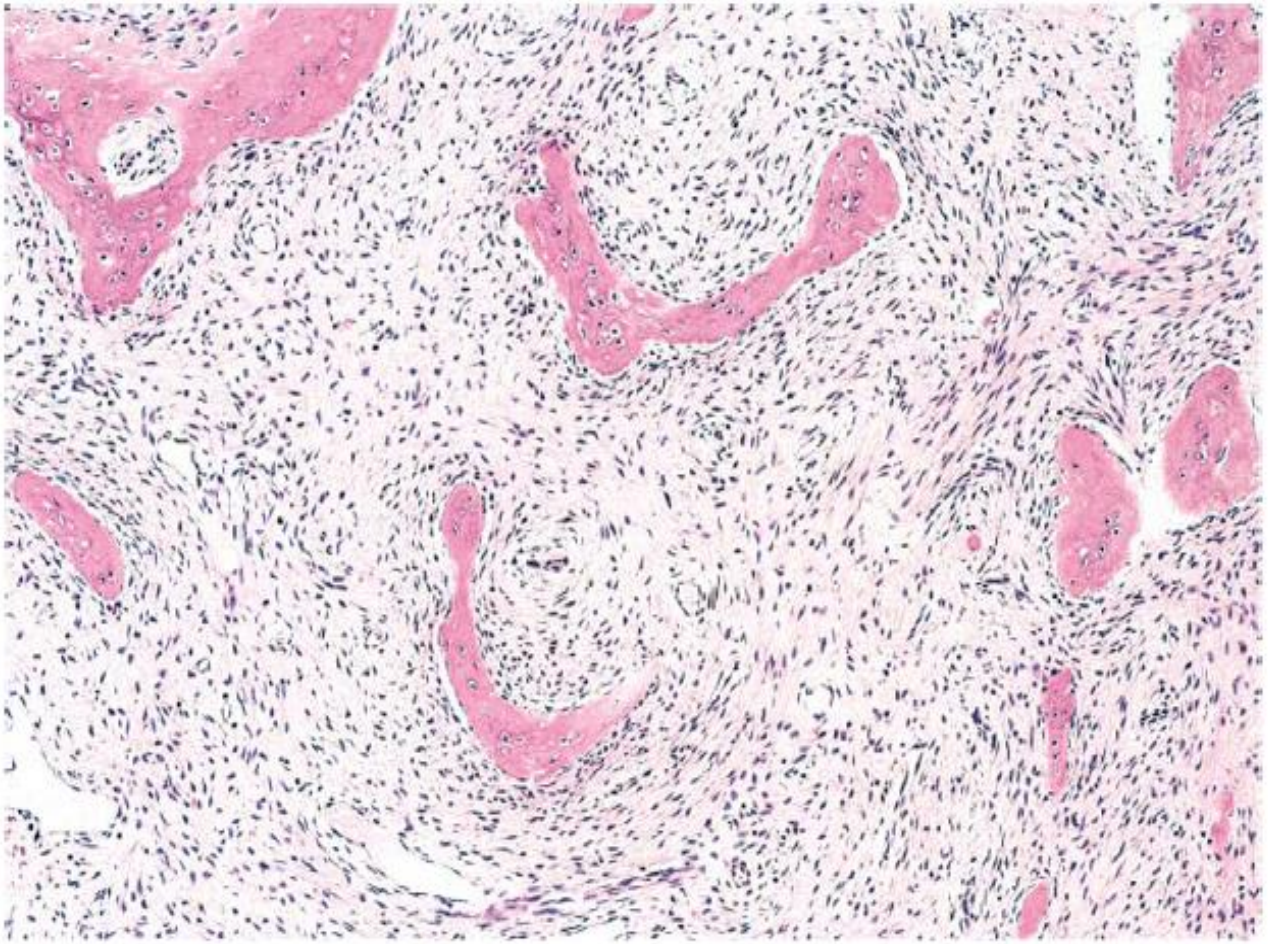
- Fibrous cortical defect or nonossifying fibroma. Characteristic storiform pattern of spindle cells interspersed with scattered osteoclast-type giant cells

1- Storiform pattern (like a carpet).
شكلها مثل الحصيرة

2- there are osteoclast-type giant cells between these fibroblasts.

Remember: Giant cells are formed when we need macrophages to be functioning more and more and osteoclasts are bone macrophages.

Fibrous Dysplasia



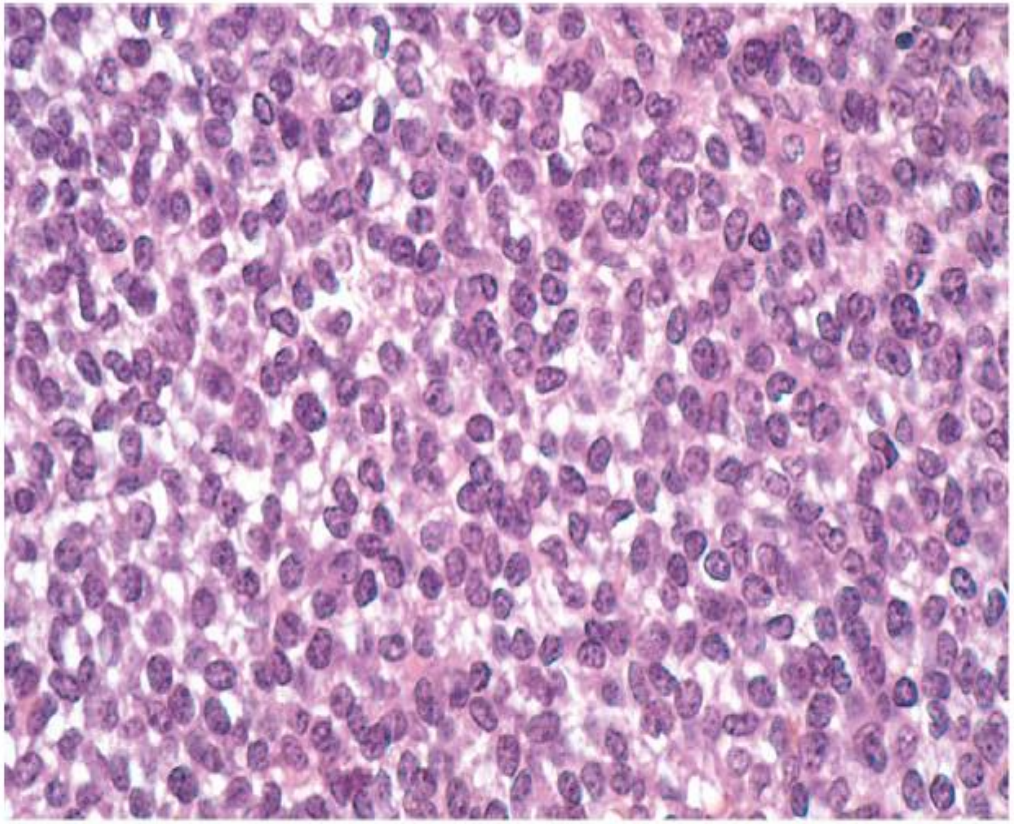
Fibrous dysplasia. Curved trabeculae of woven bone (Chinese letters) arising in a fibrous tissue. Note the absence of osteoblasts rimming the bones

1- Here, there's a bone component. This helps you distinguish between fibrous cortical defect (no bone component) and fibrous dysplasia (there's bone component).

2- The bone trabeculae are widely spaced.

3- In normal bone, there are osteoblasts rimming bone surfaces. Here, they are absent.
Remember: Osteoblasts always sit on bone surfaces and secrete collagen, forming osteoid that's then ossified by calcification.

Ewing Sarcoma



Ewing sarcoma. Sheets of small round cells with scant, cleared cytoplasm

1- Ewing sarcoma and PNETs are small round-cell tumors. So, the cells forming the tumor are:
a- small
b- the nuclei are predominant
c- very little cytoplasm
- All these features make these cells very similar to lymphocytes.

Therefore, microscopically, Ewing sarcoma and PNETs look like lymphomas.