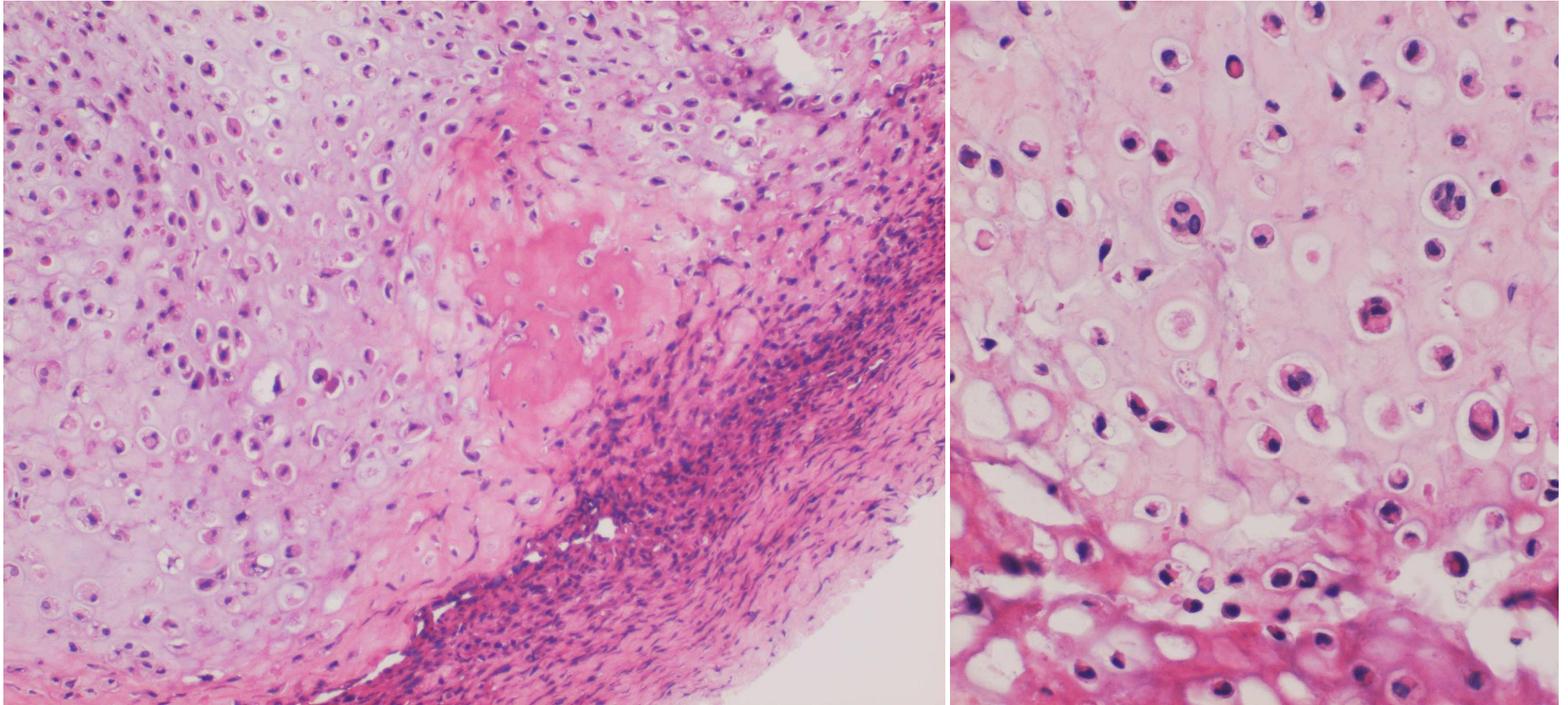


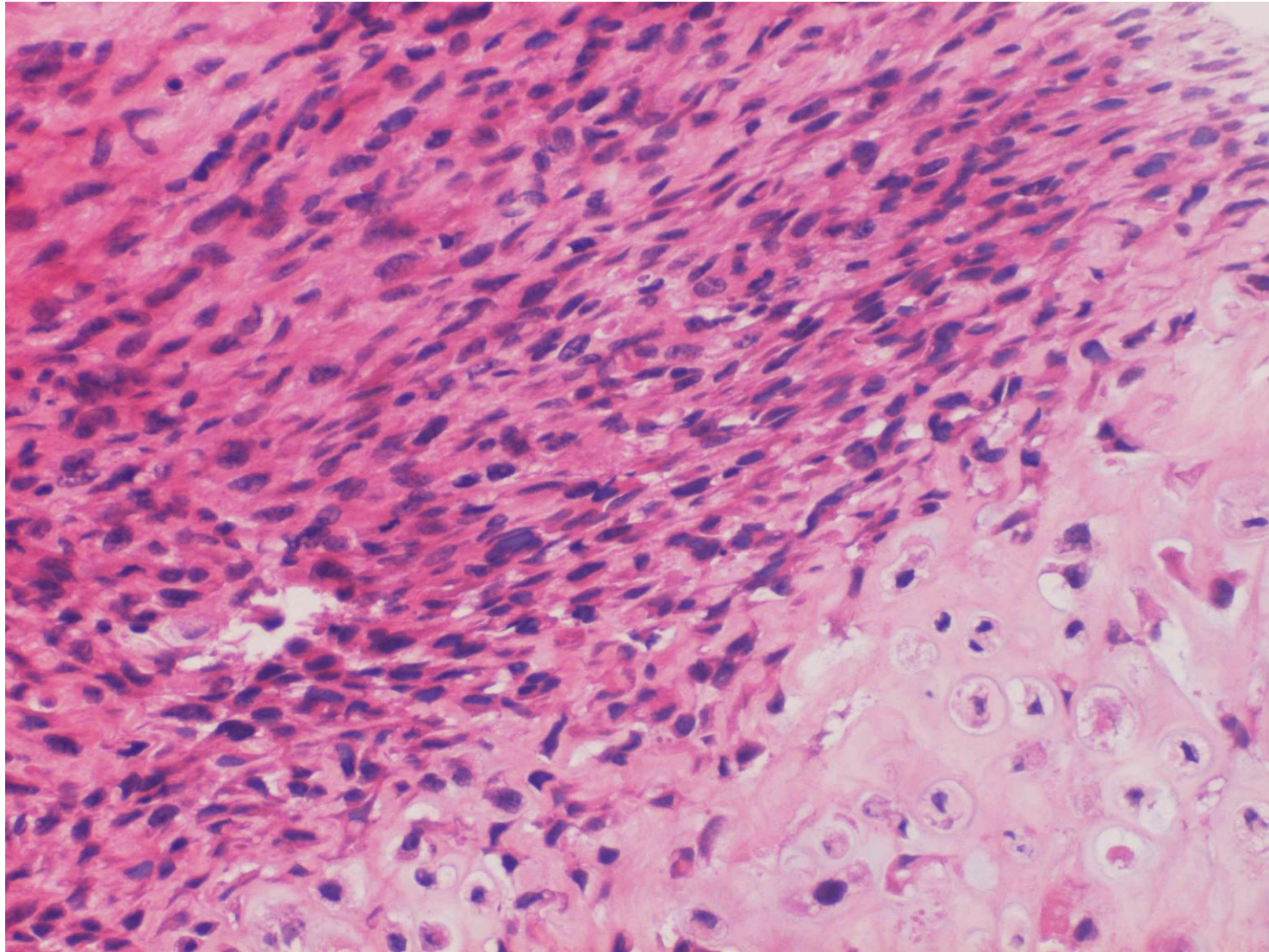
Osteosarcoma with chondrosarcomatous differentiation (chondroblastic osteosarcoma)

Chondroblastic osteosarcoma, a variant of osteosarcoma predominantly seen in the pediatric population, can be histopathologically distinguished from classical osteosarcoma and from chondrosarcoma. The recognition of this variant is important, since it shows a high recurrence rate and metastatic potential.

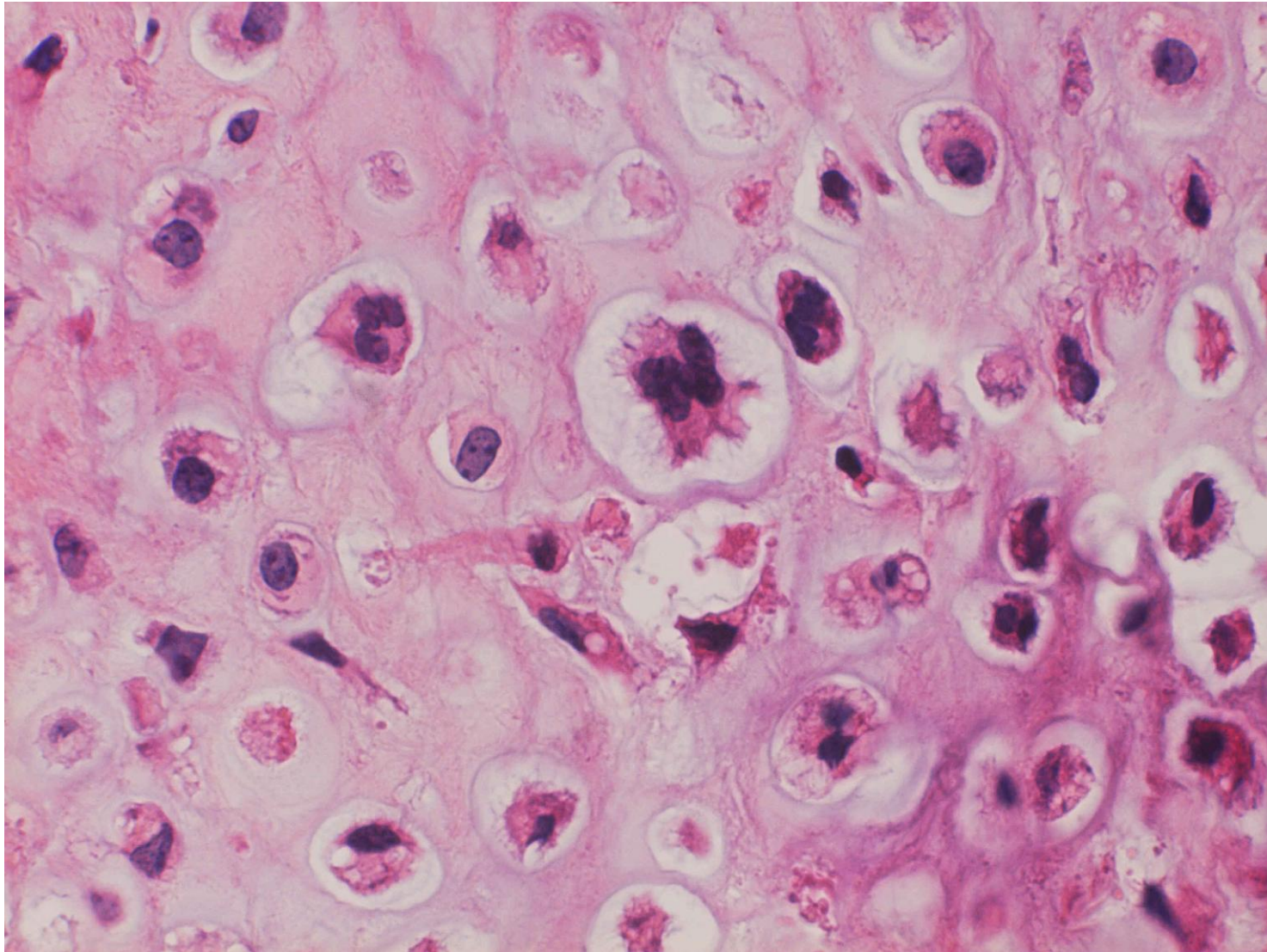
Ref.: Satvik N. et al. Chondroblastic osteosarcoma. Does this rare histological variant warrant a change in management?: a case report. J Orthopaedic Rep 2022; 1(4): 100090. doi: 10.1016/j.jorep.2022.100090



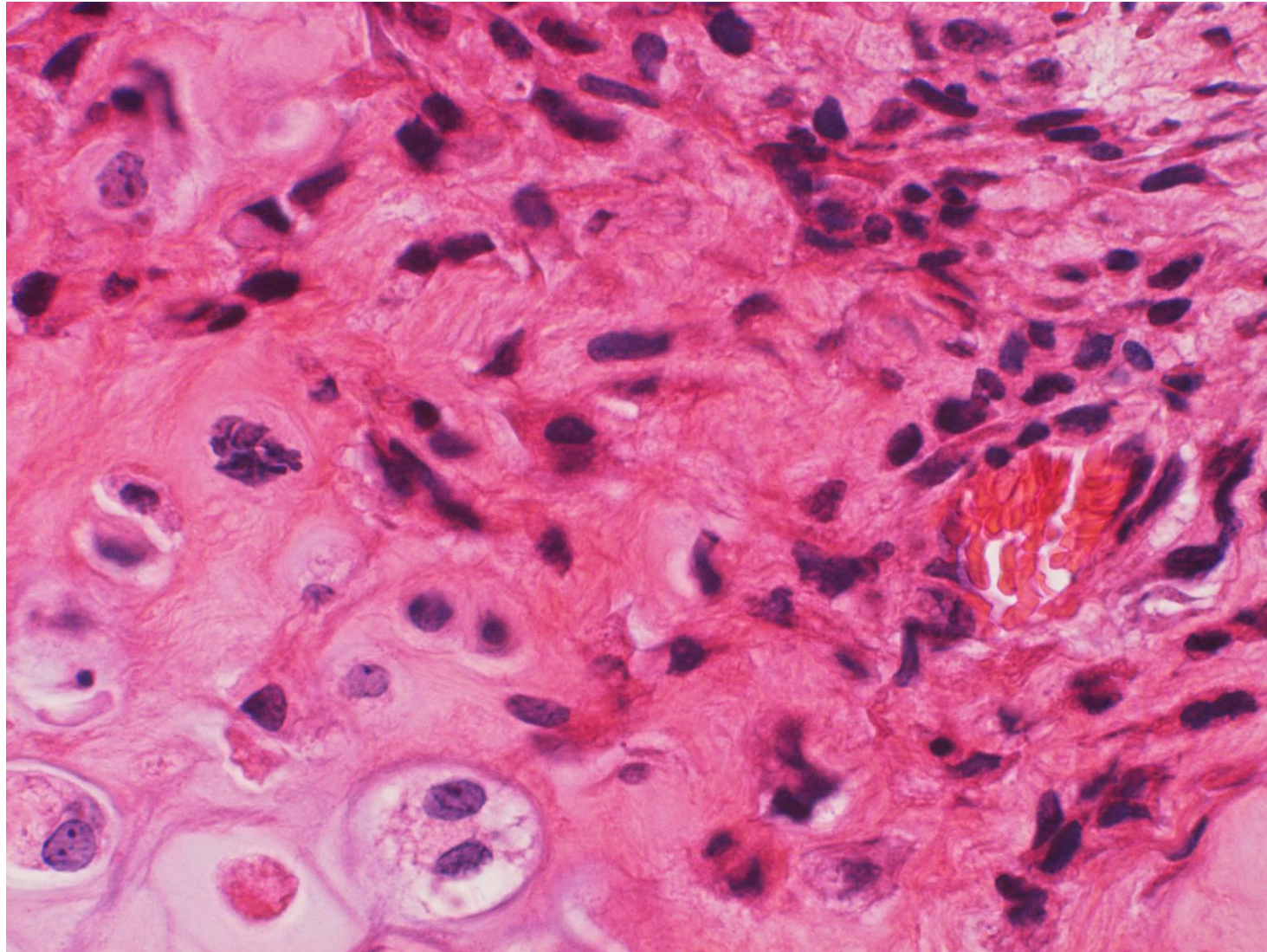
Osteosarcoma with chondrosarcomatous differentiation (chondroblastic osteosarcoma) of the proximal metaphysis of the humerus in an 18 y-o female patient (H&E-1). Osteoblastic cells form chondrosarcomatous differentiation, in addition to osteoid formation (left). The chondroblastic cells show distinct nuclear atypia (right).



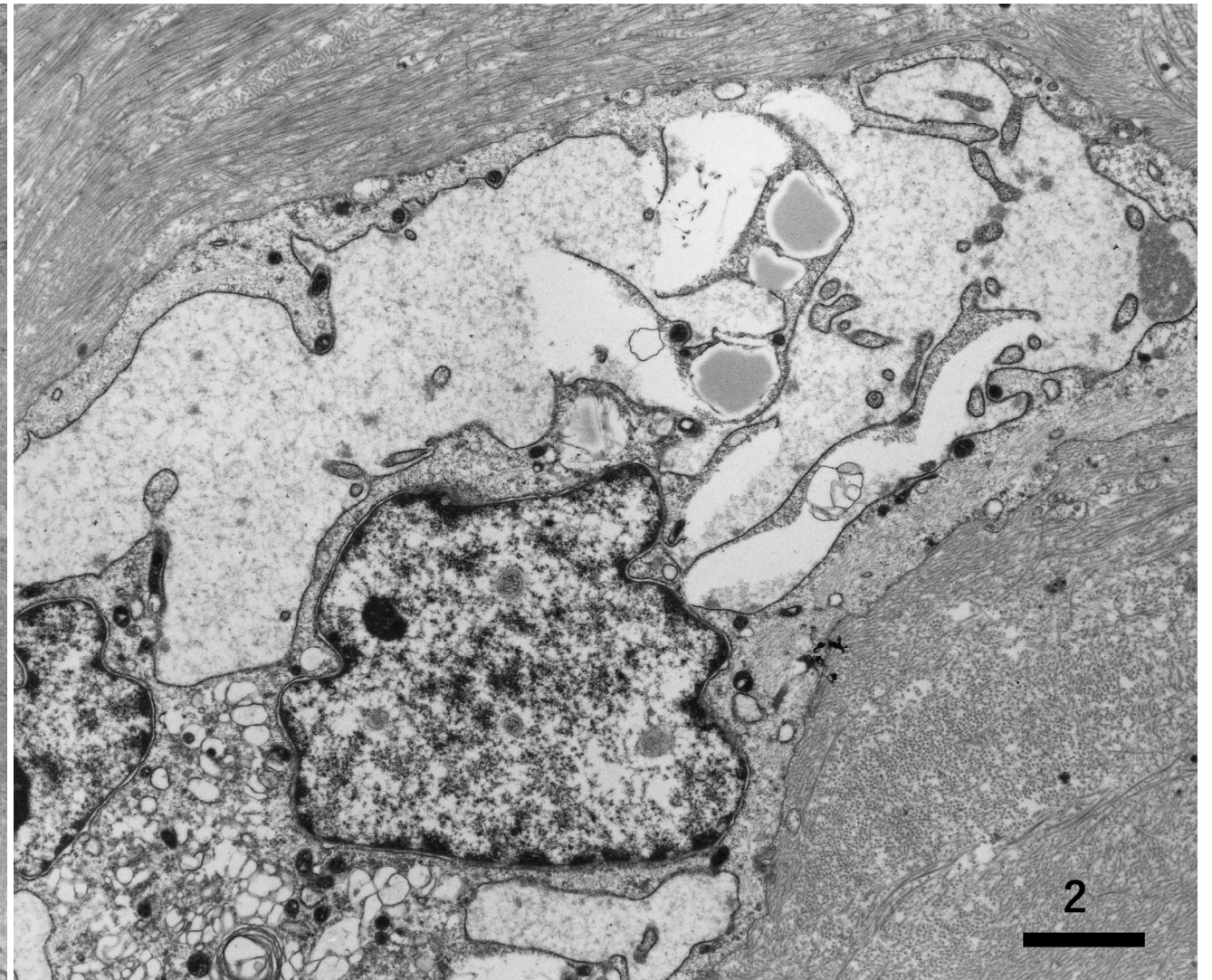
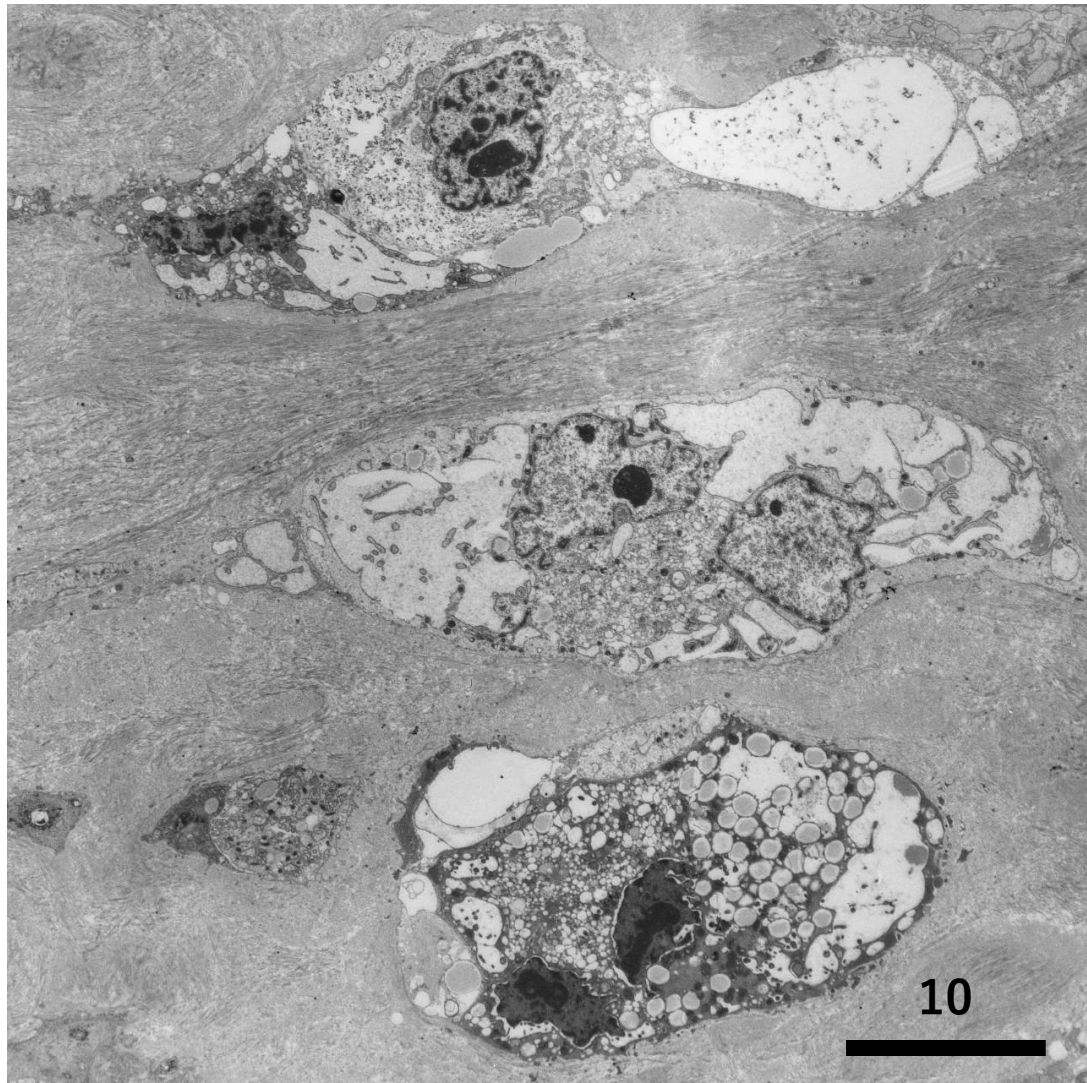
Osteosarcoma with chondrosarcomatous differentiation (chondroblastic osteosarcoma) of the proximal metaphysis of the humerus in an 18 y-o female patient (H&E-2). Osteoblastic cells show chondrosarcomatous differentiation. Both osteoblastic and chondroblastic cells show distinct nuclear atypia.



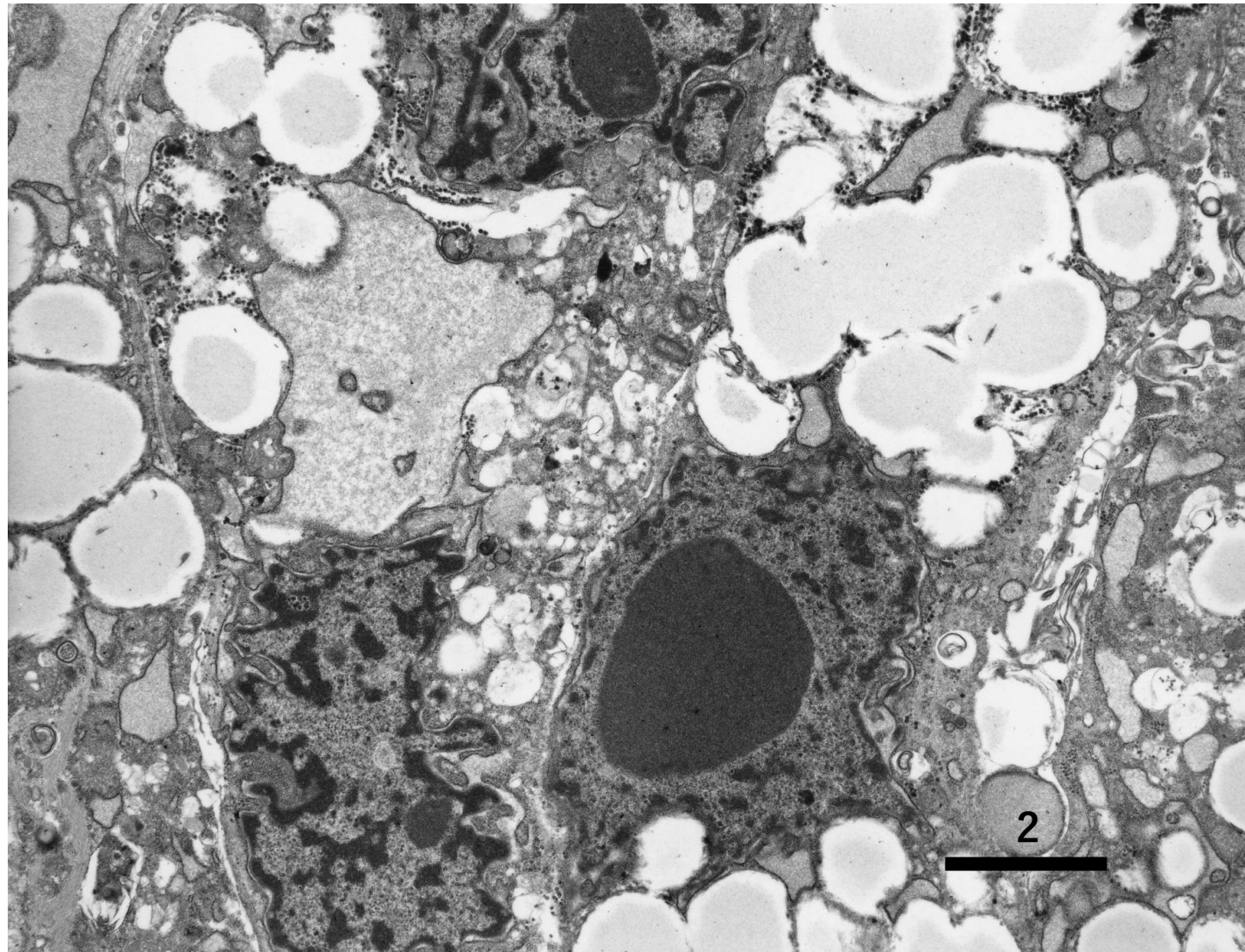
Osteosarcoma with chondrosarcomatous differentiation (chondroblastic osteosarcoma) of the proximal metaphysis of the humerus in an 18 y-o female patient (H&E-3). The tumor cells with chondrosarcomatous differentiation show distinct nuclear atypia.



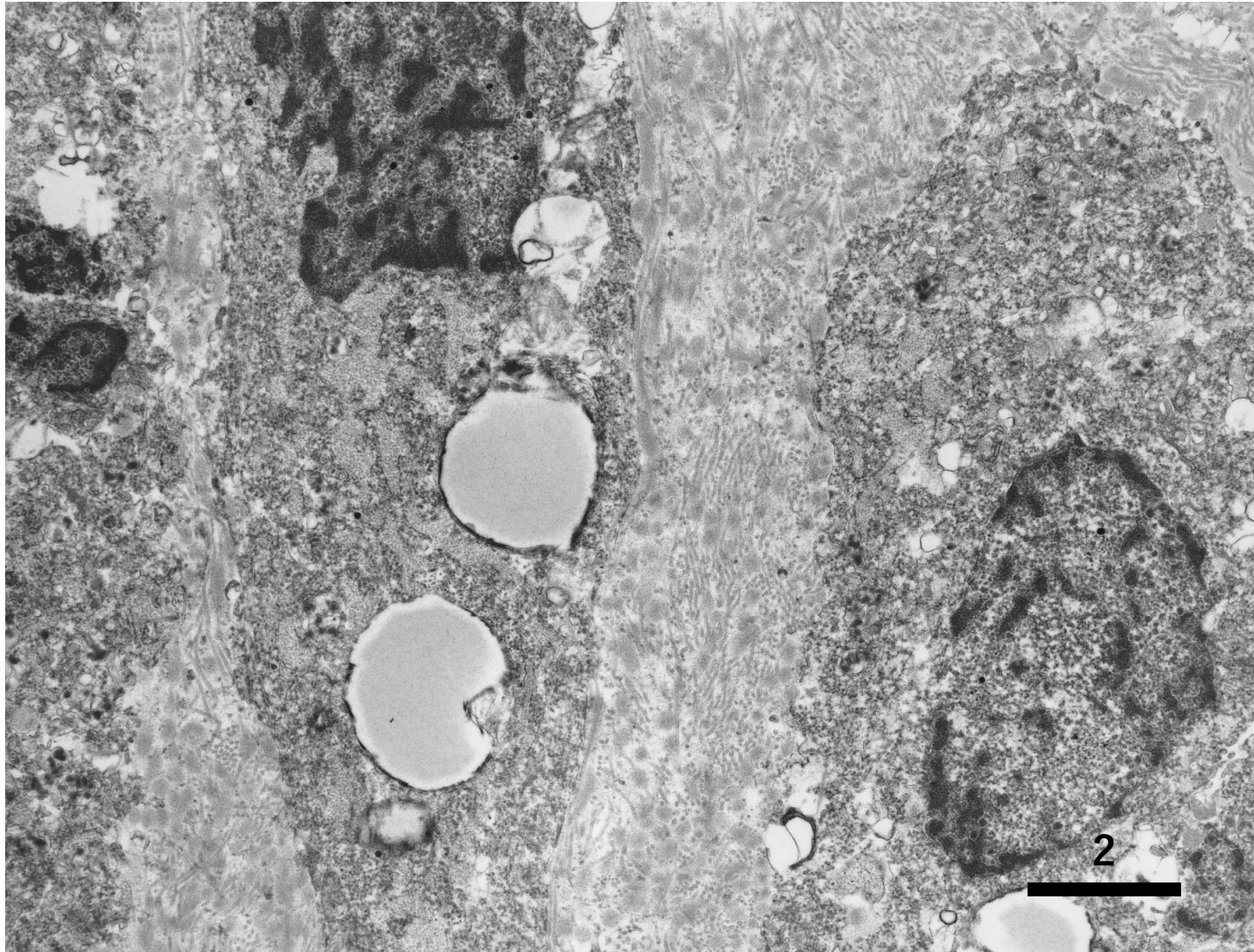
Osteosarcoma with chondrosarcomatous differentiation (chondroblastic osteosarcoma) of the proximal metaphysis of the humerus in an 18 y-o female patient (H&E-4). Osteoblastic cells show chondrosarcomatous differentiation. Both osteoblastic and chondroblastic cells show distinct nuclear atypia.



Ultrastructure of **osteosarcoma with chondrosarcomatous differentiation (chondroblastic osteosarcoma)** of the proximal metaphysis of the humerus in an 18 y-o female patient. The malignant cells with chondroblastic differentiation are embedded in fibromyxoid stroma. Marked dilatation of the cistern of rough endoplasmic reticulum is noted (left). The dilated rER lumina contain fine filamentous material, indicating active secretion of acid mucosubstances (right).



Ultrastructure of **osteosarcoma with chondrosarcomatous differentiation (chondroblastic osteosarcoma)** of the proximal metaphysis of the humerus in an 18 y-o female patient. The malignant cell with chondroblastic differentiation shows dilatation of the cistern of rough endoplasmic reticula. The dilated rER lumina contain fine amorphous or fine filamentous material, indicating active secretion of acid mucosubstances.



Ultrastructure of **osteosarcoma with chondrosarcomatous differentiation (chondroblastic osteosarcoma)** of the proximal metaphysis of the humerus in an 18 y-o female patient. The malignant cells with chondroblastic differentiation show dilatation of the cistern of rough endoplasmic reticula. The pericellular stroma reveals collagenous and myxoid (acid mucosubstances) structures.