

Histological tumour grade (Core)

In bone sarcomas, the histotype mostly determines grade, as indicated in the list below (based on the 2020 World Health Organization Classification¹), with only a very few exceptions.

Bone sarcomas in which grade is determined by histotype:

Grade 1 (low grade):

- Low grade intramedullary osteosarcoma
- Parosteal osteosarcoma
- Clear cell chondrosarcoma

Grade 2 (intermediate grade):

- Periosteal osteosarcoma

Grade 3 (high grade):

- Osteosarcoma (conventional, telangiectatic, small cell, secondary, high grade surface)
- Undifferentiated high grade pleomorphic sarcoma
- Ewing sarcoma and BCOR-rearranged sarcoma
- Dedifferentiated chondrosarcoma
- Mesenchymal chondrosarcoma
- Dedifferentiated chordoma
- Poorly differentiated chordoma
- Angiosarcoma

Variable:

- Conventional chondrosarcoma (Grade 1-3 according to Evans)^{1,2}
- Leiomyosarcoma of bone (Grade 1-3 no established grading system)
- Low and high grade malignancy may occur in giant cell tumour of bone

Not applicable:

- Adamantinoma and conventional chordoma.

References

- 1 WHO Classification of Tumours Editorial Board (2020). *Soft Tissue and Bone Tumours. WHO Classification of Tumours, 5th Edition, Volume 3*. IARC Publications, Lyon.
- 2 Evans HL, Ayala AG and Romsdahl MM (1977). Prognostic factors in chondrosarcoma of bone: a clinicopathologic analysis with emphasis on histologic grading. *Cancer* 40(2):818-831.