

Title: **Our experience with Chondrosarcoma Affecting Hand Bones.**

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**Introduction:** The chondrosarcoma is a malignant tumour resulting from cartilaginous proliferation. It represents 10% of all malignant tumours. It is very rare in the hand, representing 0.5-3.2% of all chondrosarcomas.

Chondrosarcomas of the hand can be described as a primary lesion itself or it can appear as a result of the malignant transformation of other benign tumours as chondroma, which is also extremely rare but more frequent in the context of multiple enchondromatosis.

As it is radio and chemo-resistant, classically it was said that this tumour required aggressive surgical treatment to avoid the risk of recurrences or metastasis: Nowadays, several studies have demonstrated that low grade chondrosarcomas in other locations can be treated more conservatively.

The aim of our study is to describe our series of chondrosarcomas of the hand, regarding the epidemiological data, treatment performed and oncologic outcomes

**Methods:** We retrospectively reviewed our experience in the treatment of chondrosarcomas of the hand. We revised our database between April 1985 and April 2013. Epidemiological data, and data related to the characteristics of the tumour, to the surgery and to the subsequent evolution were analysed.

**Results:** 4 patients, 2 women and 2 men, mean age 66 (46-85) were found. Mean follow-up 40 months (6-120). The main symptom was an increase in volume over years of evolution in three cases and a pathological fracture in one case. The most common affected bone was metacarpal, followed by proximal phalanx. One patient, affected by

Ollier syndrome, had affectation in two metacarpals. The most commonly affected finger was the 4th.

3 patients were treated with curettage (2 of them required bone grafting), and 1 underwent a thumb amputation (affectation of 1st metacarpal). Nobody received adjuvant therapy. Histopathology was positive to chondrosarcoma grade I/III in 3 cases and grade II/III in 1 case.

**Conclusions:** The chondrosarcoma affecting hand bones is extremely rare. A prompt diagnosis and an aggressive surgical treatment is required in order to avoid local recurrences especially. However, in low grade chondrosarcomas, less aggressive treatment, like curettage with or without bone grafting, can be an option.