

**FC-024****Diagnostic delay does not have a negative effect on clinical outcome in high-grade sarcoma of bone; a tertiary oncological center report**

L. Goedhart, J. Gerbers, J. Ploegmakers, P. Jutte

University Medical Center Groningen, Groningen, The Netherlands

Goal: Delay in diagnosis and treatment of cancer may lead to unfavourable outcome, which could be partially prevented. According to Dutch guidelines the diagnosis, in cancer patients should be established within 42 days after the referral letter to an oncological center. For bone tumours, diagnosis can be difficult and in many cases extends over this 6 weeks period. The purpose of this study was to analyse diagnostic delay and examine the effect on outcome in high-grade sarcoma of the bone in a single tertiary (referral) oncological center.

Methods: A total of 102 patients were included consisting of 54 patients with osteosarcoma, 29 patients with Ewing sarcoma and 19 patients with chondrosarcoma. Diagnostic delay was defined as the period between initial clinical symptoms and histopathological diagnosis in our center. The delay period was divided in patients' delay and doctors' delay. The clinicopathological characteristics, mean delay and outcome were described. Survival was estimated and compared within the entities based on the degree of delay.

Results: Survival rates in our series were comparable to available literature. The mean total diagnostic delay was 688.0 days in patients with chondrosarcoma and thus significantly longer than 163.3 days in osteosarcoma ($p < 0.01$) and 160.2 days in Ewing sarcoma ($p < 0.01$). However, prolonged total delay (? 4 months) did not result in lower survival rates in our series. Most of the doctors' delay occurred extramurally at the general practitioner. We did not find differences in survival between patients diagnosed 42 days after referral in our oncological center compared to patients who were diagnosed later. Five-year-overall survival was significantly lower in metastatic disease for all three entities.

Conclusion: Prolonged diagnostic delay in high-sarcoma of the bone does not result in lower overall survival. Metastatic disease has proven to be disastrous for survival. Doctors' delay in the extramural setting could be decreased by a low-threshold plain radiograph ordered by the general practitioner.