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Incidence, mortality, and survival trends of soft tissue and bone sarcoma in Switzerland between 1996 and 2015

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ABSTRACT

Background: Research on soft-tissue sarcoma (STS) and bone sarcoma (BS) is increasingly in the focus of physicians and pharmaceutical companies. Expanding knowledge has improved the management of sarcoma and possibly survival. Here we provide the first population-based data on time trends of incidence, mortality, and survival of STS and BS diagnosed in Switzerland between 1996 and 2015.

Methods: We performed a retrospective registry study with data from the National Institute for Cancer Epidemiology and Registration (NICER) database in Switzerland between 1996 and 2015.

Results: We identified 5384 STS patients and 940 BS patients. The three most common STS subtypes were undifferentiated/unclassified sarcoma (22.3%), liposarcoma (20.6%) and leiomyosarcoma (20.6%). Chondrosarcoma, osteosarcoma and Ewing sarcoma represented 40.4%, 27.0% and 15.2% of the BS group, respectively. The age-standardized incidence and mortality rates in 2011–2015 were 4.43 and 1.42 per 100,000 person-years for STS, and 0.91 and 0.42 for BS. Age-standardized incidence of STS in males was significantly higher during 1996–2000 than during 2001–2015; however, mortality rates did not change significantly over time. Five-year relative survival (RS) for STS improved significantly from 56.4% (95%CI 52.9–59.7 for 1996–2001) to 61.6% (95%CI 58.6–64.4 for 2011–2015) ($p = 0.025$). No improvement in 5-year RS for BS could be observed (RS 1996–2000: 69.6%, 95%CI 61.2–76.6; RS 2011–2015: 73.1%, 95%CI 66.6–78.6; $p = 0.479$).

Conclusion: Incidence rates of STS and BS have been stable since 2001. The longer RS in STS can be attributed to advances in sarcoma patient management.