

Admission and treatment patterns of patients with pathological fractures in South Africa as compared to Sweden

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Background: Referral patterns and treatment strategies for pathological fractures due to bone metastases may differ across countries with varying income levels. We hypothesised that patients in South Africa (SA) are more frequently referred to specialised orthopaedic centres without prior cancer diagnosis or treatment, compared to Sweden.

Methods: Patients from Groote Schuur Hospital (SA) and Karolinska University Hospital (Sweden) registered in the International Skeletal Metastasis Registry who underwent primary surgery after 2018 and had a minimum of 2 months' follow-up were included. The primary outcome was the proportion of patients treated for unknown malignancy. Secondary outcomes included overall survival and baseline demographic and treatment characteristics.

Results: A total of 362 patients were included (255 from Sweden). The proportion of patients with unknown or newly diagnosed malignancy was significantly higher in SA ($p=0.004$ and $p<0.001$, respectively). SA patients had significantly lower ASA and ECOG scores ($p<0.001$) and were less likely to present with generalised disease ($p<0.001$). Breast cancer was more prevalent in SA. Despite these differences, overall survival and treatment approaches were similar between the two centres.

Conclusion: Patients with pathological fractures in SA were more often referred with undiagnosed or recently diagnosed malignancy compared to those in Sweden. SA patients generally presented with better physical condition and less disseminated disease. However, surgical treatment strategies and postoperative survival outcomes were comparable, highlighting potential for equitable care despite systemic differences.