**Title:** The Psycho-Emotional Concerns of the Patients with Extremity Soft Tissue Sarcoma, the Health Related Quality of Life, and the Current Outcome Measures' Flaws: A Systematic Mixed Studies Review

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This study has been designed and accomplished at McGill University Health Center, Montreal, Quebec, Canada.

**Background**: Soft tissue sarcomas (STS) are a rare group of heterogeneous, malignant neoplasms arising from the connective tissue and make up approximately 1% of all cancers. Treatment of an STS includes radiation, surgical resection, and infrequently chemotherapy which can be profoundly disabling and disfiguring and have a serious impact on the patient's health-related quality of life (HRQL). The biologic and anatomic heterogeneity of sarcomas, treatment options,

and outcomes make use of one generic outcome-measure difficult to capture the full impact of the disease.

**Purposes**: This study aimed to identify shortcomings in current patient-reported-outcome (PRO) measures and to explore psycho-emotional impacts of the extremity STS on a patient's quality of life (QoL).

Patients and Methods: This review was conducted in seven search engines and identified 2431 studies. We conducted the selection process using the PRISMA flow diagram, and nine original articles were included in this systematic mixed studies review. The quality of the studies was independently appraised by Mixed Method Appraisal Tool.

Results: In total, 677 patients with extremity STS were included in these studies. The sample size ranged from 13 to 235 patients. Throughout the entire sample, patients' mean age was 57 years without significant gender predilection. Nine PRO measures were used across the included studies, and none of them was STS-specific. The use of different PROs in extremity STS patients hinders comparing interventions across various studies. Most of the STS patients experienced emotional burden and disease-related distress that impacted their functional abilities and QoL. STS patients also suffered from a variety of physical and psychological symptoms. Given that psychological restoration was more challenging than physical restoration, an early psychologic intervention was imperative for these patients.

**Conclusion**: Functional impairment, multiple sources of distress, emotional restoration, and coping with vast symptoms are of crucial importance in approaching a patient with extremity STS. This review revealed that a disease-specific PRO is required to address these concerns and to improve reporting and analyzing HRQL in extremity STS patients.

Level of evidence: III