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BODY COMPOSITION: ASSOCIATION WITH OPERATIVE AND ONCOLOGIC OUTCOMES IN THE MODERN MANAGEMENT OF RETROPERITONEAL SARCOMA – RESULTS OF A FEASIBILITY STUDY

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Introduction: Sarcopenia and obesity in cancer may confer negative outcomes, but their prevalence and impact on modern regimens for retroperitoneal sarcoma (RPS) have not been systematically studied. Sarcopenia and obesity measurements by computed tomography (CT) measurements at L3 may be confounded by the disease process itself. The aim of this study is to determine feasibility in providing the prevalence of sarcopenia and visceral obesity in the management of RPS to assess their potential impact on operative and oncologic outcomes.

Method: Consecutive sample patients undergoing treatment for RPS from our database were retrospectively studied. Total, subcutaneous and visceral fat areas (VFA), myosteosis, skeletal muscle index (SMI) lean body mass and fat mass were determined at diagnosis by CT. Sarcopenia will be defined by CT at L3 as SMI $<52.4 \text{ cm}^2/\text{m}^2$ for males and SMI $<38.5 \text{ cm}^2/\text{m}^2$ for females, and visceral obesity as VFA $>163.8 \text{ cm}^2$ for men and $>80.1 \text{ cm}^2$ for women.

Result: 40 consecutive patients, 21 [52.5%] female, 56.7 ± 15.1 years, were studied. The most common histologic types were leiomyosarcoma (8 [20.0%]), dedifferentiated liposarcoma (7 [17.5%]), well differentiated liposarcoma (7 [17.5%]), myxoid liposarcoma (4 [10.0%]). Mean \pm SD body composition measures were: lean body mass, 50.4 ± 12.0 kg; total fat mass, 27.2 ± 8.6 kg; visceral fat area, $148.5 \pm 120.2 \text{ cm}^2$; subcutaneous fat area, $222.2 \pm 20.4 \text{ cm}^2$; myosteosis, $8.9 \pm 7.3 \text{ cm}^2$.

Conclusion: Assessment of body composition among patients with RPS is feasible. Analysis to identify the prevalence and significance of sarcopenia and visceral obesity and its relationship to operative and oncologic outcomes is ongoing.

Take-home message: Assessment of body composition in RPS is feasible and its effect on outcomes is under investigation