635P Association of sarcopenia with dose-limiting toxicities and survival in oesophageal adenocarcinoma treated with neoadjuvant chemotherapy

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Background: Despite several recent studies the association of sarcopenia with outcomes in oesophageal adenocarcinoma (OAC); in particular overall survival and dose limiting toxicity (DLT), remains unclear likely due to the heterogeneity of the populations included. There is therefore a need for studies of sarcopenia utilising large homogenously treated cohorts.

Methods: We retrospectively collected data on DLT from 197 OAC patients treated with neoadjuvant chemotherapy at a single institution between August 2009 and September 2016. CT scans were visualised using the Worldmatch software package skeletal muscle at the L3 level was manually segmented. Published sex-specific cut-offs for skeletal muscle index (SMI) were used to classify patients as sarcopenic. Patients were further classified as sarcopenically obese if they had both sarcopenia and a BMI ≥ 30. Statistical analysis was completed using RStudio. Kaplan-Meier curves were plotted and differences in survival between sarcopenic and non-sarcopenic patients was analysed using a cox proportional hazards model. The Chi-squared test was used to analyse differences in toxicity between groups.

Results: Sarcopenia was observed in 81% of patients. There was no correlation with age and SMI (r = -0.1). Average SMI was greater in men than women (44.2 cm²/m² versus 33.7 cm²/m², male versus female). Sarcopenic patients had a worse overall survival than non-sarcopenic patients (median OS, 28.0 months versus 19.3 months, p = 0.0225). In contrast patients with sarcopenic obesity showed no difference in OS, in keeping with...
previous data. There was no significant difference between rates of DLT in patients with sarcopenia and those without (16.4% and 13.2% respectively, p > 0.05). There was a non-significant trend towards increasing rates of completion of 6 cycles of perioperative chemotherapy in non-sarcopenic patients (47% vs 37%).

Conclusions: In our large homogenously treated cohort of patients undergoing neoadjuvant chemotherapy for OAC sarcopenia was associated with poorer OS confirming recent studies of smaller mixed populations.

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