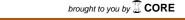
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The SLICE study: The prognostic role of visceral fat in metastatic colorectal cancer

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Background: Body composition, more specially the excess of body weight, was established as a risk factor of the colorectal cancer initiation and progression. Aim of this study was to investigate the prognostic role of adiposity, especially visceral fat (VAT), in metastatic colorectal cancer (MCRC).

Methods: This retrospective study analyzed a consecutive cohort of 71 patients (pts) with MCRC treated between 2013 and 2017 at the Oncology Department of Aviano National Cancer Institute (Italy). VAT area was measured as cross-sectional (cm 2) area at the L3 level divided by the square of the height (m 2). A ROC analysis was performed to define a threshold capable to identify distinct prognostic categories of patients according to VAT. Subsequently, the value of VAT in predicting overall survival (OS) and progression free survival (PFS) was evaluated with uni- and multivariate Cox regression analyses. Survival outcomes were estimated with Kaplan-Meier curves.

Results: Before first line therapy, 19 pts (27%) were aged>70, 14 pts (20%) had a right tumor, 21 pts (30%) a left tumor and 35 pts (50%) a rectal one. Of note, 59 pts (83%) underwent primitive tumor resection and 24 pts (33%) received metastasectomy. Interestingly, 40 pts (56%) had a body mass index (BMI)>25 and 42 (59%) had median VAT of 51.94. LDH level> =480 UJ/L was recorded in 12 pts (27%) reflecting the inflammatory response. The obtained cut-off for VAT was 44. Median OS was 30.97 months. At univariate analysis, older age (HR 2.46, p = 0.013), primary tumor resection (HR 0.40, p = 0.029), VAT>44 (HR 2.85, p = 0.011), metastasectomy (HR 0.22, p = 0.005), were significantly associated with OS. By multivariate analysis, only VAT>44 (HR2.64; p = 0.030) was significantly associated with OS. Conversely, VAT showed no prognostic impact in terms of PFS.

Conclusions: This exploratory study supported the prognostic role of adiposity evaluation in patients with MCRC. In particular, high values of VAT were predictors of worse outcome. These encouraging preliminary data merit to be validated through prospective investigations.

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