593P The SENECA study: Prognostic role of serum biomarkers in elderly metastatic colorectal cancer patients

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Background: Aging induces meaningful changes in immune system and inflammation response with increase in monocyte-lymphocyte ratio (MLR) and serum lactate dehydrogenase (LDH) levels. Notably, high levels of these serum biomarkers are associated with poor prognosis in many tumors. We aim to explore the prognostic role of baseline (i.e. before first line chemotherapy) MLR and LDH levels in elderly patients (pts) with metastatic colorectal cancer (MCRC).

Methods: A retrospective analysis of a consecutive cohort of 120 elderly (>70 years) pts treated for MCRC between 2004 and 2017 at the Oncology Department of Aviano National Cancer Institute and University Hospital of Udine (Italy), was conducted. The prognostic role of MLR and LDH levels on overall survival (OS) was investigated through uni- and multivariate Cox regression analyses.

Results: At a median follow-up of 50.83 months, median OS was 19.96 months. Overall, 46 pts (38%) presented a right cancer, 43 pts (36%) a left cancer and 30 pts (25%) a rectal one. In 8 (8%) and 47 (50%) pts a mutation of BRAF or KRAS was detected, respectively. Liver (36%), lymph-nodes (22%), peritoneum (22%) and lung (17%) were the most frequent sites of metastasis. Noteworthy, 22 pts (18%) had undergone a metastasectomy. High levels of LDH (>480 U/L) and MLR (>0.45, obtained with ROC curve) were discovered in 23 (32%) and 51 (42%) patients respectively. By univariate analysis, high levels of LDH (HR 2.81, p = 0.001), MLR (HR 2.26, p < 0.001) or both (HR 6.42, p < 0.001) and node involvement at diagnosis (pN2 vs. pN0 HR 2.15, p = 0.019; pN3 vs. pN0 HR 2.69, p = 0.052) were associated with worse OS. Metastasectomy (HR 0.47, p = 0.009), tumor resection (HR 0.50, p = 0.010) and left sidedness (HR 0.53, p = 0.01) were associated with better OS. By multivariate analysis, high levels of LDH (HR 2.64, p = 0.004), MLR (HR 2.21, p = 0.009) or both (HR 4.19, p = 0.019) were independently associated with worse OS.

Conclusions: High baseline levels of LDH, MLR or both are unfavorable independent prognostic factors in elderly pts treated with first line chemotherapy for MCRC. These preliminary results emphasize the need of prospective studies to validate these cost-effectiveness biomarkers in this subgroup of pts.