NSCLC, metastatic

SERUM MASS-SPECTROMETRY TEST IN FIRST LINE ADVANCED NSCLC PATIENTS TREATED WITH STANDARD CHEMOTHERAPY REGIMENS

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Aim: The mass-spectrometry based serum test VeriStrat (VS) was shown to be prognostic in various therapies and predictive of differential overall survival (OS) benefit for erlotinib vs. chemotherapy (CT) in second line NSCLC setting. Performance of the test in CT is of clinical interest. We investigated the role of VS in 1st line advanced NSCLC patients (pts) treated with Cisplatin (Cis) or Carboplatin (Carbo) plus Pemetrexed (P).

Methods: VS classification was available for 55 eligible stage IV pts with non-squamous histology; pts were classified as VS Good (VSG) or VS Poor (VSP), VS testing of pretreatment serum samples was done blinded to clinical data. OS and progression-free survival (PFS) were analyzed by Kaplan-Meier method and compared using log-rank p-values; Cox models were used in multivariate analysis. Association with categorical variables was analyzed by Fisher’s exact test.

Results: 36 (65%) pts were classified as VSG and 19 (35%) as VSP. In the overall population, median PFS was 5.7 months (mo) for VSG vs. 1.4 mo for VSP (hazard ratio (HR) 0.37 [0.19-0.72], p = 0.002); adjusted HR (AHR) 0.38 [0.17-0.86], p = 0.021). Median OS was 10.8 mo for VSG vs. 3.4 mo for VSP (HR 0.23 [0.11-0.51], p < 0.001); AHR 0.12 [0.04-0.37], p < 0.001). A similar relationship was found in both treatments: In CarboP median PFS in VSG and VSP was 3.8 mo and 2.0 mo respectively (HR 0.38 [0.15-0.94], p = 0.030); median OS was 10.8 mo in VSG and 3.4 mo in VSP (HR 0.26 [0.09-0.72], p = 0.006). In CisP median PFS was 6.1 mo in VSG and 1.2 mo in VSP (HR 0.40 [0.14-1.12], p = 0.070); median OS was 12.3 mo in VSG, 3.8 mo in VSP (HR 0.17 [0.04-0.69], p = 0.005). When compared within VS groups, no statistically significant differences between CarboP and CisP was found either for PFS (VSG: p = 0.508, VSP: p = 0.718) or OS (VSG: p = 0.666, VSP: p = 0.322). VS was significantly associated with disease control rate (p = 0.003) and trended towards significance for objective response (p = 0.085).

Conclusions: In Platinum-based doublet CT, VSP pts had much shorter PFS and OS than VSG. The behavior was similar in CisP and CarboP arms. Further research is needed to find alternative treatments to improve outcomes for VSP pts. ClinicalTrials.gov Identifier: NCT02055144.

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