TPS8651 Poster Session

Phase 3 trial of the therapeutic cancer vaccine OSE2101 versus docetaxel in patients with metastatic non-small cell lung cancer and secondary resistance to immunotherapy.

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Background: OSE2101 (TEDOPI) is a therapeutic cancer vaccine composed of multiple peptides restricted to HLA-A2 phenotype targeting tumor-associated antigens (CEA, HER-2, MAGE-2, MAGE-3, P53) frequently expressed in non-small cell lung cancer (NSCLC). In prior studies, OSE2101 strongly induced T cell immune responses, with higher immune responses associated with longer survival (OS). In the randomized ATALANTE-1 study, OSE2101 significantly improved OS with a better safety profile and quality of life (QoL) compared to third-line chemotherapy (CT) in patients with NSCLC with progressive disease (PD) after at least 12-weeks of second line anti-PD(L)1 monotherapy. The aim of the phase III ARTEMIA study is to confirm the benefit of OSE2101 versus CT in second-line treatment of patients with NSCLC and secondary resistance to immune checkpoint inhibitor (ICI) given in the first line setting. **Methods:** HLA-A2 positive patients with metastatic NSCLC without known EGFR, ALK, ROS1 actionable gene alterations, no brain metastases, ECOG PS 0 or 1, who had PD $\geq$ 24 weeks after first line CT-ICI including at least 12 weeks of maintenance ICI without cytotoxic therapy, will be randomized 2:1 to receive either OSE2101 or docetaxel. Randomization will be stratified by histology (squamous vs non-squamous), and ECOG PS (0 or 1). Patients will receive subcutaneous OSE2101 every 3 weeks for 6 injections, then every 8 to 12 weeks up to end of year 2. In the control group, patients will receive docetaxel at 75 mg/m2 per standard of care. Primary endpoint is OS defined as time from randomization to death of any cause. Secondary endpoints include QoL Physical, Role, and Global Health Score by EORTC QLQ-C30 questionnaire, and time to ECOG PS deterioration. Other endpoints are safety, tumor assessments by RECIST 1.1 and Net Treatment Benefit. For patients who agree, biomarkers in tumor biopsies and blood are planned. The primary estimand is OS in all randomized and treated patients using treatment policy approach for intercurrent events and the hazard ratio (HR) as population-level summary.Assuming a HR of 0.70 with a power of 80% using a 2-sided log-rank test, 363 patients will be enrolled to reach 269 events. An interim analysis is planned. The ARTEMIA phase 3 study aims to confirm the benefit on survival and quality of life of the therapeutic cancer vaccine OSE2101 compared to docetaxel in second-line treatment of HLA-A2 positive patients with NSCLC and secondary resistance to immune checkpoint inhibitor. Recruitment is ongoing in North America and Europe. Clinical trial information: NCT06472245. Research Sponsor: OSE Immunotherapeutics.