PATOIENTS WITH METASTATIC TRIPLE-NEGATIVE BREAST CANCER WHO RECEIVE TRILACICLIB PRIOR TO CYTOTOXIC CHEMOTHERAPY EXHIBIT IMPROVED SURVIVAL AFTER RECEIVING SUBSEQUENT ANTICANCER THERAPY

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OBJECTIVE: To determine if trilaciclib improved outcomes in patients who received additional therapy after GCb, a post hoc analysis of the phase 2 study of trilaciclib prior to gemcitabine plus carboplatin (GCb) for metastatic triple-negative breast cancer (mTNBC).

MATERIALS AND METHODS: Eligible patients with mTNBC who received ≥1 line of chemotherapy prior to GCb were randomized 1:1:1 to receive GCb on days 1 and 8 (n = 34), trilaciclib prior to GCb on days 1 and 8 (n = 33), or GCb only (n = 18). Median time to progression (mTTP) and overall survival (OS) were the primary endpoints. The survival analysis was performed with a log-rank test and Cox proportional hazards models, with a 2-sided α = 0.05.

RESULTS: Median TTP and OS were higher in the prior trilaciclib plus GCb group compared with the prior GCb-only group (mTTP: 9.0 vs 5.7 months; hazard ratio 0.62; P = 0.001; OS: 19.8 vs 12.6 months; P = 0.002). Median TTP and OS were similar between the prior trilaciclib plus GCb and prior trilaciclib-only groups (mTTP: 9.0 vs 8.0 months; P = 0.25; OS: 19.8 vs 13.9 months; P = 0.001). Median TTP was higher in the patients who received trilaciclib compared with those who did not (9.0 vs 5.7 months; P = 0.001). Among patients who received SACT, median (95% CI) OS relative to time since start of first SACT was 14.0 (8.3–NE) months in the prior trilaciclib plus GCb group versus 5.4 (2.7–NE) months in the prior GCb-only group (P = 0.001; Figure 2).

CONCLUSIONS: Trilaciclib prior to GCb improved outcomes in patients who received additional therapy after GCb. Further studies are needed to confirm these findings and to better characterize the optimal sequencing of trilaciclib in this patient population.

INTRODUCTION

• Administering trilaciclib (COSELA®; Oxi Therapeutics, Inc.) on an intravenous intensively therapy, prior to chemotherapy results in traffic through a rapidly speeded translocation of the CD45 receptor on the surface of immune cells. Data from preclinical models suggest that trilaciclib-induced inhibition of CD45 may result in a loss of the function of hematopoietic stem cells and progenitor cells (HSPCs) and immune cells in the G0 phase of the cell cycle, thus protecting these cells from chemotherapy-induced damage to maintain immune integrity.

• Here, we report results from a post hoc analysis that aimed to examine survival outcomes in patients with mTNBC who received subsequent anticancer therapy (SACT) after receiving GCb with or without trilaciclib in the phase 2 trial.

• We also evaluate memory T-cell responses in preclinical models.