TRANSMITTED INHIBITION OF CYCLIN-DEPENDENT KINASE 4/6 WITH TRILACICLIB ENHANCES INHIBITORY RECEPTOR IMMUNOTHERAPY TO IMPROVE ANTITUMOR EFFICACY

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INTRODUCTION

• Trilaciclib (COSELIA) is a clinically tested inhibitor of CDK4/6. Inhibitors of CDK4/6 have shown benefit in patients with hormone receptor-positive metastatic breast cancer, improved tumor shrinkage in patients with solid tumors, and prolonged cancer-free intervals in the phase 1 trial of the cycle of cell cycle, impacting tumor cell proliferation and tumorigenesis. This effect is then furthered by chemotherapy.

• The effects of trilaciclib on the cancer immunosurveillance system and the immune response in cancer patients, when administered to improve the cancer immunosurveillance system and the immune response in cancer patients, remains unknown.

METHODS

• Student’s t-test or analysis of variance was used to compare means with Tukey’s post hoc test. All statistical analyses were performed using a p-value of 0.05.

RESULTS

• In both MMTV-PyMT and PyMT-VECT26 models, adding trilaciclib to the inhibitory receptor immunotherapy delayed tumor growth and improved survival compared with treatment with inhibitory receptor immunotherapy alone (Figures 3–5).

• In the MMTV-PyMT-PD1 model, which was treated with treatment on day 7 post immunotherapy, tumor growth was significantly delayed (P = 0.0039) (Figure 5A).

CONCLUSIONS

• Adding trilaciclib to inhibitory receptor immunotherapy combinations enhanced antitumor activity.

• Combining trilaciclib with PD-1/PD-L1 checkpoint inhibitors showed beneficial effects of antitumor activity was related to the local tumor model.

• The data suggest that trilaciclib provides complementary immune modulatory benefits that support the mechanisms of inhibitory receptor immunotherapy.

1. Lai A, et al. 2020 OFF TIGIT, Tα

2. Tan AR, et al. 2020 OFF α

3. CT26, day 10

4. 8) days post treatment

5. Inhibitor immunotherapy combinations enhanced antitumor activity.

6. Combining trilaciclib with inhibitory receptor immunotherapy in breast cancer clinical trials.

7. Adding trilaciclib to anti-PD-1/PD-L1 checkpoint inhibitors was beneficial in patients with metastatic triple negative breast cancer (NCT02978716), administering trilaciclib to inhibitory receptor immunotherapy in breast cancer patients.