Pelareorep (pela) is an intravenously (IV) delivered unmodified oncolytic reovirus that can replicate in tumor tissue and induce a T cell inflamed phenotype1 (Figure 1).

To test this hypothesis, we designed a window-of-opportunity study (AWARE-1) within the “Window Program” of SOTLI as a window of opportunity to study the biology of treated patients during the course of treatment.

The primary endpoint of the study is CelTIL score, a metric for quantifying the changes in tumor cellularity and tumor infiltrated lymphocytes (TILs) where an increase in CelTIL is associated with a favorable response to treatment.

Figure 2. Study design. Patients are treated with pT (on day 1, 3, 8, 15, and 22) and atezolizumab (on days 1, 15, and 22). Tumor biopsies are collected at diagnosis, day 3, on days 1, 2, 8, and 9, while atezolizumab is administered on day 1, 3, 8, and 15. Tumor responses are assessed at diagnosis, day 3 and day 21.

In patient SE957, treatment with pelareorep promoted the recruitment of B cells and CD4+ T cells and improved response to treatment outcomes. Results from this and other BC studies (IND.2132 and BRACELET-14) will inform a future registration study in metastatic BC.

REFERENCES

1) Egan et al. Science 2019; 366:eaat3550

In summary, the study has achieved an encouraging 72% CelTIL response rate from 18 patients.

To date, the study has achieved an encouraging 72% CelTIL response rate from 18 patients. Following a previous metastatic BC study with pelareorep, we hypothesized that the survival advantage of patients treated with pelareorep + PTX was due to pelareorep’s ability to create an anti-tumor or anti-tumor T cell response in breast cancer that promotes therapeutic efficacy. Preliminary data from AWARE-1 supports this hypothesis.

While ICM analysis is ongoing, preliminary results from patient SE957 demonstrate that treatment with pelareorep can promote the TME. Preliminary results from this study support further development in metastatic BC.

A window-of-opportunity Study with atezolizumab and the oncolytic virus pelareorep in early Breast Cancer (REO-027, AWARE-1)


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