TPIV 110 Breast Cancer

Therapeutic area

Oncology

Target indication

Breast cancer

Development stage

Phase 1b/2a

Description

Breast cancer is one of the most prevalent and malicious cancers a patient can face. Fortunately, many therapies have been developed to treat this devastating disease in particular monoclonal antibodies that target a receptor called Her2/neu. These antibodies such as Herceptin and Parjeta target the Her2/neu receptor and can work remarkably well in controlling the disease. However, the patient's tumor must have the Her2/neu receptor (~30%) and in addition have the receptor in high enough density to make the antibody effective (~18% of the 30%). This leaves a void where patients who have the receptor but are not eligible for antibody treatment are relegated to chemotherapy, radiation and surgery. TapImmune's investigational product TPIV 110 also targets Her2/neu by stimulating the body's own immune system to attack cancer cells with the Her2/neu target.

Mode of action

This new vaccine approach was developed by Dr. Keith Knutson at the Mayo Clinic. The product is a shelf-stable, lyophilized product containing 5 small peptides designed to activate both CD4+ and CD8+ T-cell compartments. Recent developments in immunology suggest that both CD4+ and CD8+ activation is

necessary for a robust immune response against foreign antigens. The peptides administered to the patient are presented to the immune system to activate T-cell against the target.

Trial results

The Phase 1 trial in 22 patients with breast cancer showed TPIV 100 (TPIV contains an additional peptide and has not been in humans yet) was safe and well-tolerated. The trial also showed that 19 out of 20 patients showed robust T-cell responses to two antigens; 15 out of 20 patients responded to all four antigens.

The immune responses in these patients were durable for months after their final treatment.

Development plan

The Phase 1b/2a program for TPIV 110 is designed to examine this novel T-cell vaccine both as a stand-alone therapy and as a combination therapy with other standard of care therapies and newer experimental therapies. TapImmune plans to initiate trials in breast cancer in 2017.

Overall, the strategy is obtain positive Phase 2 data and then look for a partnership or collaboration to fund the rest of the commercialization for TPIV 110.

Partnership status

Although TapImmune is collaborating with the Mayo Clinic, Astra Zeneca and Memorial Sloan Kettering Cancer Center, there is no business arrangement for the development of TPIV 200. TPIV 110 has no collaborations at this time.

TapImmune has the exclusive world-wide rights to TPIV 200, TPIV 100 and TPIV 110