

Dostarlimab-new ray of hope in cancer therapy

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When 12 stage II and III rectal cancer patients were treated with Dostarlimab showed complete remission even after 6 months of follow up, people were effervescent. Never happened before in any cancer trial. Obviously, it raised optimism, a bit cautiously because the number of patients was small and the follow up period was short. Fingers crossed. Further studies are in progress.

What is Dostarlimab?

It is a monoclonal antibody (hence mab) of IgG 4 isotope against PD-1 (Programmed Cell Death Protein 1). Earlier PD -1 Blockade in preclinical models increased survivability in cancer.

Immune Check Point Inhibitors

Traditional Chemotherapy, radiation and surgery modestly increased survivability in advanced cancer patients. Recently, immunotherapeutic agents showed promise in substantially enhancing life span in few tumors, however, the efficacy and toxicity profile were not favorable, reason being redundancy in signaling pathways and toxicity. Of late a bunch of molecules known as checkpoint inhibitors showed promise to aid long term survival with reduced toxicity. Cancer cells develop mechanisms to evade host immune response and also block several effector and regulatory Cellular network of immune cells that can target and destroy cancer cell types. Checkpoint inhibitors block inegative regulatory influence of cancer cells on Immune response, release the brake. The potential targets of immune checkpoint inhibitors include PD-1, CTLA-4, LAG-3. All these potential anti cancer targets showed proof-of-concept in pre-clinical models. Few check point inhibitors entered Clinical trial with demonstrable encouraging results. Hope stays alive.

How does it act?

Dostarlimab binds to PD 1 Receptor and thereby prevents it's signaling cascade through an interaction with it's ligand PD- L1 and PD- L2 with consequent liberation of PD-1 to freely act and mount an immune attack on cancer cells. This is bolstering body's own immune response, liberating it from evil design thrown upon by cancer cells.¹

Adverse Effects

No life-threatening side effect has been reported. Few tolerable side effects include fatigue, diarrhea, bladder pain, feeling cold, sore throat, loss of hair. Progress in drug development in this area will come out with better efficacious and safer therapy.

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Conflicts of interest

Author declares that there is no conflict of interest.

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