

Trastuzumab

Trastuzumab, or Herceptin, is an anticancer medication that is a monoclonal antibody against HER-2. HER-2 is a tyrosine kinase receptor that is overexpressed by breast cancer cells. This medication can also be used against HER-2 positive gastric cancers. It can lead to congestive heart failure and cardiotoxicity in patients.



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Indications

HER-2+ Breast Cancer

[HER \(2\) Tutu \(+\) Positive Breast with Tumor-guy](#)

This cancer medication is used to treat HER-2+ breast cancers. HER-2 stands for human epidermal growth factor receptor-2 and is overexpressed in roughly 1 out of 5 breast cancers.

Stomach Cancer

[Stomach Tumor-guy](#)

Trastuzumab can also be used to treat HER-2+ gastric cancers. Gastric cancer that is HER-2+ positive overexpresses the HER-2+ tyrosine kinase receptor and is more responsive to trastuzumab.

Mechanism

Monoclonal Antibody Against HER-2

[Monocle-wearing Ant-tie-bodies Against Tumor-guy](#)

Trastuzumab is a monoclonal antibody against HER-2. This drug binds to cancer cells, and this binding leads to antibody-mediated (complement-mediated) killing of the HER-2-positive cancer cells.

Inhibition of Cellular Signaling

[Breaking Cellular-phone Signal with Inhibiting-chains](#)

One of the mechanisms of Trastuzumab's effects on cancer is that it inhibits HER-2-initiated cellular signaling. It is proposed that tumor cells arise from unchecked signaling and proliferation, and this drug works to decrease signaling amongst tumor cells.

Cytotoxicity

[Side-toe with Toxic-green-glow](#)

Trastuzumab binding to cancer cells leads to antibody-mediated (complement-mediated) killing of the HER-2-positive cells.

Side effects

Cardiotoxicity

Heart with Toxic-green-glow

One of the more serious complications of this medication is cardiotoxicity. Patients may develop congestive heart failure and other possible cardiomyopathies.