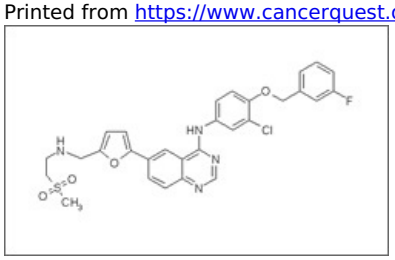
Lapatinib

Printed from https://www.cancerquest.org/patients/drug-reference/lapatinib on 11/19/2026



Brand name: Tykerb®
FDA approval: Yes
Manufacturer Link
Usage:

Lapatanib was approved by the FDA in 2007 for use in combination with capecitabine for treatment of patients with advanced or metastatic breast cancer if a) their tumors overexpress HER2 and b) they have received prior therapy including anthracycline, a taxane, and trastuzumab. Lapatinib has the ability to penetrate the blood-brain barrier, so its use in treating brain metastasis is currently under investigation. Lapatinib is administered as an oral tablet.1

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Mechanism:

Lapatinib (Tykerb®) is a small molecule that functions as tyrosine kinase inhibitor. It inhibits both EGFR (ErbB1) and HER2 (ErbB2). EGFR (epidermal growth factor receptor) and HER2 (human epidermal growth factor receptor 2) are receptor proteins found on the surface of cells. They bind growth factors, triggering a sequence of events that lead to cell division and apoptosis.1

Stick | Sphere | Cross | Rotate

The diagram above shows the 3D molecular structure of Lapatinib.

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Side effects:

The most common side effect is diarrhea, as it occurs in 65% of patients. Along with this, other side effects can potentially include mouth sores, loss of appetite, indigestion, rash, nausea and vomiting, fatigue, hand-foot syndrome (redness, swelling, and pain on the palms of the hands and/or the soles of the feet.)1

1 Chu, E., & DeVita, V. T. (2015). Physicians' cancer chemotherapy drug manual 2015. Burlington, MA: Jones & Bartlett Learning.

Contraindications:

Inform your doctor about any heart conditions prior to treatment with lapatinib. It has been shown to decrease left ventricle ejection fraction (LVEF) in some patients, therefore LVEF should be evaluated in all patients. Lapatinib may also cause toxic effects on the hepatic (liver) system, so inform your doctor about any pre-existing liver conditions. Lapatinib may have harmful effects on a developing fetus, women who are pregnant should not take lapatinib and any woman who becomes pregnant while on lapatinib should inform their doctor immediately. Also, women who are breast feeding should speak with their doctor; it is not known if lapatinib passes into breast milk or what effects it can have on a developing child. Some drugs may interact with lapatinib. Your doctor needs to know what prescription or nonprescription (supplements) drugs you are on to decide the correct dose of lapatinib.1

1 TYKERB Package Insert. GlaxoSmithKline. Research Triangle Park, NC 27709. 2007. [http://www.tykerb.com/about_tykerb.html]