

# Gefitinib

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Brand name: Iressa®

IUPAC: N-(3-chloro-4-fluorophenyl)-7-methoxy-6-(3-morpholin-4-ylpropoxy)quinazolin-4-amine

FDA approval: Yes

[Manufacturer Link](#)

Usage:

Gefitinib was approved by the FDA in 2003 as a third line therapy for non-small cell lung cancer that is unresponsive to certain chemotherapy drugs, as it primarily binds to plasma proteins to take effect. Iressa® is administered as an oral tablet<sup>1</sup>.

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

Mechanism:

Gefitinib (Iressa®) is a tyrosine kinase inhibitor. It works to inhibit the epidermal growth factor receptor (EGFR) pathway and any negative signaling found there. EGFR is a receptor found on the cell surface that binds EGF protein, and phosphorylates (adds a phosphate group) tyrosine residues of proteins in a signal pathway. Gefitinib binds the EGFR within the cell and blocks the tyrosine kinase, switching off the EGFR signal, which disallows the cancer cell to grow.<sup>1</sup>

The diagram below shows the 3D molecular structure of Gefitinib.



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

Side effects:

Common side effects include: elevations in blood pressure (especially in those with previous cardiac issues), Pruritus (dry skin issues), mild nausea.<sup>1</sup>

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