

Anastrozole

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Brand name: Arimidex®

IUPAC: 2-[3-(2-cyanopropan-2-yl)-5-(1,2,4-triazol-1-ylmethyl)phenyl]-2-methylpropanenitrile

FDA approval: Yes

[Manufacturer Link](#)

Usage:

Anastrozole is used to treat postmenopausal women with estrogen receptor positive breast cancer. This drug is often given in conjunction with other drugs such as tamoxifen in early stage cancers. Anastrozole is taken in tablet form usually just once a day.

Mechanism:

Anastrozole (Arimidex®) lowers estrogen levels in the body, particularly the form of estrogen known as estradiol. Many breast tumors display estrogen receptors on cell surfaces. When these receptors are bound to estrogen it is thought that cell growth and thus tumor growth are stimulated. Anastrozole inhibits the enzyme aromatase, which aids in the production of estrogen. By inhibiting estrogen synthesis anastrozole is able to lower estrogen levels in the body which can result in a decrease in tumor size or a delay in tumor growth.

The structure above shows the 3D conformer Anastrozole.

Side effects:

Common side effects include hot flashes, nausea, decreased energy, back and bone pain, joint pain or stiffness. Side effects may differ from those listed above if anastrozole is being taken with other medications. [1](#)

- [1](#)Arimidex.. Prescribing Information. AstraZeneca Pharmaceuticals. March, 2016. [<http://www.arimidex.com>]