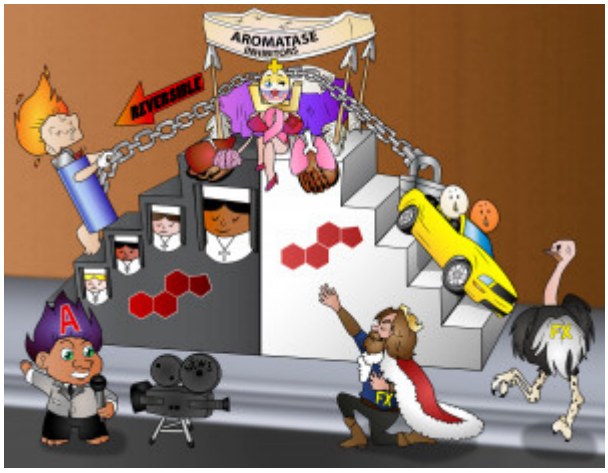
Aromatase Inhibitors

Aromatase inhibitors are drugs used in women who are post-menopausal with breast cancer. These medications are taken to either block the production of estrogen or block the action of estrogen on receptors.



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Indications

Estrogen Receptor-positive (ER+) Breast Tumors
(+) Positive Easter-egg Receptor with Breast Cancer ribbon
These drugs treat estrogen receptor-positive (ER+) breast tumors, as they require estrogen to grow. By blocking estrogen production or its action on receptors, these tumors can be treated. These drugs also have action on ovarian tumors in postmenopausal women.

Systemic Metastases
Systemic Metastasis-mitts
These drugs are often used to treat systemic metastases of ER-positive breast tumors, which preferentially spread to the liver, lungs, brain and bones. Other uses include treating ovarian cancers and preventing gynecomastia in men.

Drugs

Reversible, non-steroid
Reversing on Nun-steroid-stairs
Non-steroidal inhibitors, such as anastrozole and letrozole, inhibit the synthesis of estrogen via reversible competition for the aromatase enzyme.

Letrozole
Lighter-troll
Letrozole is a non-steroidal aromatase inhibitor for the treatment of hormonally-responsive breast cancer after surgery. It works via reversible inhibition.

Anastrozole
A-News-troll
Anastrozole is an aromatase-inhibiting drug indicated for treatment of breast cancer after surgery, as well as for metastasis in both pre and post menopausal women. It is non-steroidal and works via reversible inhibition.

Irreversible, steroid
Locked on Steroid-stairs
Irreversible steroidal inhibitors, such as exemestane, forms a permanent and deactivating bond with the aromatase enzyme.

Exemestane
Eggs-in-mustang
Exemestane is an oral steroidal aromatase inhibitor that is used in ER-positive breast cancer in addition to surgery and/or radiation in postmenopausal women.

Side Effects

Osteoporosis

Ostrich-with-porous-bones

Estrogens have a positive effect on bone metabolism by stimulating bone growth and inhibiting bone resorption, so their depletion in patients with endocrine-responsive breast cancer leads to increased bone demineralization and finally osteoporosis occurs.

Arthritis

King-Arthur

The use of aromatase inhibitors is also linked with the development of arthritis, while also causing arthralgias and arthrosis.