Brand Name: Zoladex

Generic: goserelin acetate implant

Type: small molecule

Year Accepted/Phase: 2004

Mechanism:

Goserelin works by initially stimulating the release of certain hormones (e.g. testosterone or estrogen) and then desensitizing the pituitary gland, leading to a decrease in the production of these hormones. This hormonal reduction can help slow the growth of hormone-sensitive tumors.

Chemical Structure:

Indication:

Zoladex is indicated for the treatment of advanced prostate cancer, endometriosis, and hormone receptor-positive breast cancer in premenopausal women.

Clinical trials:

Prostate Cancer Trials

Purpose: Evaluate the efficacy and safety of goserelin in the treatment of prostate cancer, particularly in reducing tumor size and lowering prostate-specific antigen (PSA) levels.

Dates: Multiple trials conducted from the 1980s onwards.

Results: Clinical trials showed that goserelin was effective in reducing tumor size, alleviating symptoms, and lowering PSA levels in patients with prostate cancer. It also demonstrated a manageable side effect profile.

Impact: These trials supported the approval of Zoladex for the treatment of prostate cancer.

Breast Cancer Trials

Purpose: Evaluate the role of goserelin in the treatment of premenopausal women with hormone receptor-positive breast cancer, either alone or in combination with other therapies.

Dates: Various trials conducted from the 1980s onwards.

Results: Clinical trials demonstrated that goserelin, when used in combination with other therapies or as adjuvant therapy, could improve outcomes in premenopausal women with hormone receptor-positive breast cancer. It also showed a favorable safety profile.

Impact: These trials supported the use of Zoladex in the treatment of hormone receptor-positive breast cancer in premenopausal women.