Zoladex 1-Month

(goserelin acetate)

THERAPEUTIC CLASS
Synthetic gonadotropin-releasing hormone analogue

DEA CLASS
RX

INDICATIONS
Palliative treatment of advanced prostatic carcinoma. Palliative treatment of advanced breast cancer in pre- and perimenopausal women. In combination with flutamide for management of locally confined Stage T2b-T4 (Stage B2-C) prostatic carcinoma. Management of endometriosis, including pain relief and reduction of endometriotic lesions for the duration of therapy. Endometrial-thinning agent prior to endometrial ablation for dysfunctional uterine bleeding.

ADULT DOSAGE
Adults: Administer into anterior abdominal wall below the navel line. Advanced Prostatic Carcinoma/Breast Cancer: One 3.6mg implant SQ every 28 days. Stage B2-C Prostatic Carcinoma: One 3.6mg implant SQ, followed in 28 days by one 10.8mg implant SQ. Start 8 weeks prior to initiating radiotherapy and continue during radiation therapy. Alternatively, 4 SQ inj of 3.6mg implant at 28-day intervals (2 implants preceding and 2 during radiotherapy). Endometriosis: One 3.6mg implant SQ every 28 days for 6 months. Endometrial Thinning: One or two 3.6mg implants SQ (given 4 weeks apart). Perform surgery after 4 weeks (one implant) or within 2-4 weeks after administration of 2nd implant.

ADMINISTRATION
SQ route. Administer using an aseptic technique under the supervision of a physician. Refer to PI for further administration instructions.

HOW SUPPLIED
Implant: 3.6mg

CONTRAINDICATIONS
Pregnancy (unless used for palliative treatment of advanced breast cancer).

WARNINGS/PRECAUTIONS
May cause fetal harm. Premenopausal women should use effective nonhormonal contraception during therapy and for 12 weeks following discontinuation of therapy. Initially, may cause transient increase in serum testosterone levels in men and estrogen in women; worsening of symptoms or onset of additional signs/symptoms may occur during the 1st few weeks of treatment. May experience temporary increase in bone pain; manage symptomatically. Ureteral obstruction and spinal cord compression reported with prostate cancer; institute standard treatment if spinal cord compression or renal impairment secondary to ureteral obstruction develops, and in extreme cases in prostate cancer patients, consider an immediate orchiectomy. Hyperglycemia and increased risk of developing diabetes reported in men. Increased risk of developing myocardial infarction (MI), sudden cardiac death, and stroke reported in men. Hypercalcemia reported in patients with bone metastases. Hypersensitivity, antibody formation, and acute anaphylactic reactions reported. May cause an increase in cervical resistance; caution when dilating the cervix for endometrial ablation. Androgen deprivation therapy may prolong QT/QTc interval; consider whether benefits outweigh the potential risks in patients with congenital long QT syndrome, congestive heart failure (CHF), frequent electrolyte abnormalities, and in patients taking drugs known to prolong the QT interval. Correct electrolyte abnormalities. Retreatment is not recommended for management of endometriosis; consider monitoring bone mineral density (BMD) if further treatment is contemplated. Addition of hormone replacement therapy is effective in reducing bone mineral loss and occurrence of vasomotor symptoms and vaginal dryness associated with hypoestrogenism. Lab test interactions may occur. Intended for long-term administration for the management of advanced prostate/breast cancer unless clinically inappropriate.

ADVERSE REACTIONS
Hot flushes, sexual dysfunction, decreased erections, seborrhea, vasodilatation, breast atrophy, tumor flare, vaginitis, emotional lability, decreased libido, sweating, depression, headache, acne, peripheral edema.

PREGNANCY AND LACTATION
Category X (with endometriosis and endometrial thinning) or Category D (with advanced breast cancer), not for use in nursing.

MECHANISM OF ACTION
Synthetic gonadotropin-releasing hormone analogue; acts as an inhibitor of pituitary gonadotropin secretion. In males, causes initial increase in serum luteinizing hormone and follicle-stimulating hormone levels, with subsequent increases in serum testosterone levels; chronic administration suppresses pituitary gonadotropins, causing a fall in testosterone levels to post-castration levels. In females, chronic exposure causes decrease in serum estradiol to levels consistent with postmenopausal state, leading to reduction of ovarian size and function, reduction in size of uterus and mammary gland, and regression of sex hormone-responsive tumors.

PHARMACOKINETICS

Absorption: Rapid. (Males) C_{max}=2.84ng/mL, T_{max}=12-15 days, AUC=27.8ng•day/mL; (Females) C_{max}=1.46ng/mL, T_{max}=8-22 days, AUC=18.5ng•day/mL. **Distribution:** (Sol) (250mcg SQ dose) V_d=44.1L (males), 20.3L (females); plasma protein binding (27.3%). **Metabolism:** Hydrolysis of C-terminal amino acids. **Elimination:** Urine (>90%, 20% unchanged); (Sol) $T_{1/2}$=4.2 hrs, 12.1 hrs (with renal impairment [CrCl <20mL/min]).

ASSESSMENT

Assess for hypersensitivity to the drug, cardiovascular (CV) risk factors, diabetes, congenital long QT syndrome, CHF, electrolyte abnormalities, and pregnancy/nursing status. Obtain baseline serum testosterone, estrogen, blood glucose, and/or HbA1c levels.

MONITORING

Monitor for occurrence or worsening of signs/symptoms of prostate/breast cancer, ureteral obstruction, spinal cord compression, renal impairment, hypersensitivity/acute anaphylactic reactions, antibody formation, bone pain, CV disease, hypercalcemia, and other adverse reactions. Periodically monitor BMD, serum testosterone, estrogen, blood glucose, and/or HbA1c levels. Consider periodic monitoring of ECGs and electrolytes.

PATIENT COUNSELING

Inform of risks and benefits of therapy. Inform men of the risk of developing ureteral obstruction, spinal cord compression, reduction in BMD, diabetes or loss of glycemic control in patients with preexisting diabetes, MI, sudden cardiac death, and stroke. Advise to contact physician if any adverse events develop. Inform women that menstruation should stop with effective doses; instruct to notify physician if regular menstruation persists. Inform that patient may experience persistent amenorrhea. Inform that drug may cause fetal harm and increase risk for pregnancy loss. Advise against pregnancy and/or breastfeeding except for palliative treatment of advanced breast cancer. Advise premenopausal women to use nonhormonal contraception during and for 12 weeks after treatment ends. Instruct to avoid initiating treatment if the patient has undiagnosed abnormal vaginal bleeding or is allergic to the drug. Inform of the most frequent side effects associated with hypoestrogenism and that the addition of hormone replacement therapy may decrease vasomotor symptoms and vaginal dryness associated with hypoestrogenism. Inform that drug may cause a reduction in BMD in women.

STORAGE

Room temperature; do not exceed 25°C (77°F).