Goserelin Acetate (Zoladex®) - For Women

Pronounced: GO-suh-REH-lin ASS-uh-TATE

Classification: Gonadotropin-Releasing Hormone Analog

About Goserelin Acetate (Zoladex®) - For Women

While estrogen and progesterone may not actually cause breast cancer, they are needed for the cancer to grow in some breast cancers. Estrogen and progesterone are female hormones produced by the ovaries. The production of these hormones can be stopped by surgically removing the ovaries or through medication therapy. A hormone called luteinizing hormone, which is produced by the pituitary gland, stimulates production of estrogen and progesterone by the ovaries. LHRH agonists stop the production of luteinizing hormone by the pituitary gland. This reduces the production of estrogen and progesterone. The cancer cells may then grow more slowly or stop growing altogether. Goserelin acetate is a type of LHRH agonist.

How to Take Goserelin Acetate

Goserelin acetate is given as a subcutaneous (SQ, under the skin) implant injection every 4 weeks. There is also a long acting formulation (called a depot), which is given by SQ injection, every 12 weeks at a higher dose.

Possible Side Effects of Goserelin Acetate

There are a number of things you can do to manage the side effects of goserelin acetate. Talk to your care team about these recommendations. They can help you decide what will work best for you. These are some of the most common or important side effects:

Hot Flashes

There are a few things you can do to help with hot flashes. Several medications have been shown to help with symptoms, including clonidine (a blood pressure medication), low doses of certain antidepressants (such as venlafaxine and Prozac), and gabapentin. Non-medical recommendations include:

- Keep well-hydrated with eight glasses of water daily.
- Drink ice water or apply an ice pack at the onset of a hot flash.
- Wear cotton or lightweight, breathable fabrics and dress in layers so you can adjust as needed.
- Exercise on a regular basis.
- Try practicing meditation or relaxation exercises to manage stress, which can be a trigger.
- Avoid triggers such as warm rooms, spicy foods, caffeinated beverages, and alcohol.

Injection Site Irritation

This medication can cause irritation and injury at the site of injection, including pain, bruising, or bleeding. Contact your care provider if you develop abdominal pain, abdominal distension, shortness of breath, dizziness or if you are difficult to arouse.

Weakening of the Bones (Osteoporosis)

The lack of estrogen while taking LHRH agonists can lead to a weakening of the bones (osteoporosis). This risk is highest for women with other risk factors. You may be advised to take calcium and vitamin D supplements to help prevent bone loss. Weight bearing exercise and a healthy diet rich in calcium and vitamin D can help protect your bone health. You may have a bone density scan (DEXA scan) to assess your bone health. If your physician determines that you are at high risk of developing
osteoporosis, they may recommend additional treatment with a type of medication called a bisphosphonate to help strengthen the bones.

**Muscle or Joint Pain/Aches**
This medication can be associated with joint or muscle aches and pains. If it is bothersome, it may be treated with medications. Be sure to discuss which pain relievers you can safely take with your oncology team, as these are not without their own side effects. Non-medical therapies, such as acupuncture, yoga, gentle stretching and exercise may also help reduce this side effect.

**Peripheral Edema**
This medication can cause edema, which is swelling due to an accumulation of fluid. This typically occurs in the lower extremities (feet, legs and ankles) or hands. Report any swelling you experience to your healthcare provider.

**Vaginal Dryness**
Vaginal dryness and related painful intercourse is one of the more common side effects of cancer therapy in women. Vaginal lubricants and moisturizers (longer lasting form of moisturizers) can help with these concerns. Talk to your healthcare team for more suggestions in managing this side effect.

**Other Side Effects**
Some patients taking this medication report headaches, increased mood swings and depression.

**Less common, but important side effects can include:**
- **Initial Tumor Flare:** When starting goserelin acetate, the body has a temporary increase in estrogen levels. This “flare” can lead to a temporary increase in the tumor size, causing symptoms to worsen. Your healthcare team can tell you what to look for in your particular case and what to do about it.
- **Allergic Reactions:** In some cases, patients can have an allergic reaction to this medication. Signs of a reaction can include: shortness of breath or difficulty breathing, chest pain, rash, flushing or itching or a decrease in blood pressure. If you notice any changes in how you feel during or after the injection, let your nurse know immediately.
- **High Blood Sugar:** This medication can cause elevated blood sugar levels in patients with and without diabetes. Your oncology care team will monitor your blood sugar. If you develop increased thirst, urination or hunger, blurry vision, headaches or your breath smells like fruit, notify your healthcare team. Diabetics should monitor their blood sugar closely and report elevations to the healthcare team.
- **Heart Problems:** This medication can cause slow or abnormal heartbeats or an abnormal heart rhythm called QT prolongation. Goserelin acetate can also cause or worsen pre-existing heart problems including congestive heart failure, restrictive cardiomyopathy, decreased heart function, and heart attack. Notify your healthcare provider if you have sudden weight gain or swelling in the ankles or legs. If you develop chest pain or pressure, pain in the left arm, back, or jaw, sweating, shortness of breath, clammy skin, nausea, dizziness or lightheadedness, call 911 or go to the nearest emergency room.

**Sexual and Reproductive Concerns**
This drug will affect your reproductive system, resulting in the menstrual cycle stopping. If your menstrual cycle continues or you experience spotting, you should notify your care provider. Menstruation often resumes after the therapy is stopped. Women may experience menopausal effects, including decreased libido (interest in sex), hot flashes, and vaginal dryness.

You should not use this medication if you are pregnant. You may be asked to take a pregnancy test before receiving this medication. Non-hormonal contraception is recommended for premenopausal women during therapy and for 12 weeks after therapy is discontinued. Talk with your provider about which contraception method is best for you. Although ovulation is usually inhibited and menstruation may stop, pregnancy prevention is not ensured during goserelin acetate therapy. Changes in reproductive function may occur if you receive this medication over a long period of time. You may want to consider egg harvesting if you wish to have a child in the future. Talk about these options with your oncology team. You should not breastfeed while taking this medication.
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