Goserelin (Zoladex®)

Scope (Staff): All WNHS Staff
Scope (Area): Obstetrics and Gynaecology

This document should be read in conjunction with the Disclaimer.

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Restrictions

**Formulary: Restricted**

Medication Class

Gonadotrophin releasing hormone (GnRH) agonist

**Presentation**

Subcutaneous Implant (prefilled syringe): 3.6mg, 10.8mg

**Storage**

Store at room temperature, below 25°C

**Dose**

Indications applicable at WNHS

**Endometriosis**

**Route:** Subcutaneous Implant

Dose: Refer to [Endometriosis quick reference guide (QRG): Goserelin prescribing protocol](#).

Note: PBS approved for initiation. Must be visually proven and treatment can only be short-term (only 1 course of a maximum of 6 months duration will be authorised)
Other Gynaecological Indications:

Treatment of proven endometriosis following laparoscopy under direction of a gynaecologist

Treatment of heavy uncontrolled bleeding from fibroids under direction of a gynaecologist

Reduction in uterine fibroid size prior to surgical management under direction of a specialist obstetrician

Route: Subcutaneous Implant

Dose: Refer to KEMH Clinical Practice Guideline “Gynaecology (Non-oncological): Goserelin prescribing protocol”

Other gynaecological conditions not listed above require Individualised Patient Approval

Administration

**SUBCUT injection, ready to use:**

Administer goserelin as a subcutaneous injection into the anterior abdominal wall (below the umbilicus).

Patient’s may be offered, but not necessarily recommended the choice of a local anaesthetic (e.g. EMLA Patch, Lidocaine 1%) to the injection site prior to inserting goserelin (Zoladex) implant.

- Apply local anaesthetic (e.g. EMLA®, lidocaine 1%) to the injection site (if indicated) and wait for it to take effect. If a local anaesthetic is indicated, it may be prescribed as “Goserelin with local anaesthetic Emla® patch”, or “Goserelin with local anaesthetic lidocaine 1%”
  - Emla® patch: Apply to injection site an hour before procedure.
  - Lidocaine 1%: 1-2mL lidocaine 1% subcut prior to inserting goserelin implant
- An ice pack with no local anaesthetic may also be used.
- Wipe residual topical anaesthetic cream from chosen injection site (if used).

Correct technique:

- Put patient in a comfortable position with upper body slightly raised.
- Swab abdominal injection site below the navel line.
- Open pouch at the arrows and remove syringe.
- Hold the syringe at a slight angle to the light.
- Check that at least part of the goserelin implant is visible.
- Grasp the plastic safety tab and pull away from the syringe and discard.
- Remove the needle cover. Unlike liquid injections, there is no need to remove air bubble
and attempts to do so may displace the implant.

- Pinch the patient’s skin and insert the needle at a slight angle 30 to 45 degree to the skin, with the opening of the needle facing up, until the protective sleeve touches the patient’s skin.
- Do not penetrate into muscle or peritoneum.
- To discharge goserelin implant and to active the protective sleeve, depress the plunger until you cannot depress it any further. If the plunger is not depressed fully the protective sleeve will NOT activate. You may hear a click and will feel the protective sleeve automatically begin to slide to cover the needle.
- Withdraw the needle and allow the protective sleeve to continue to slide and cover the needle.
- Using a piece of gauze, apply pressure over puncture site to minimise bleeding, then dress site with band-aid or gauze/adhesive tape.
- Rotate the injection site each time to avoid soreness at any one site.

Click here for step-by-step administration guide and video

Injection may be painful for patient. Other pharmaceutical strategies for managing injection pain include:

- Oral paracetamol before injection and at appropriate time intervals afterwards as required;
- Nitrous oxide (Etonox) during the injection procedure.
**Monitoring**

**Adverse effects:**

Injection site injury & vascular injury including pain, hypersensitivity (including acute anaphylactic reactions), haematoma and haemorrhagic shock (see comments section below).

<table>
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<tr>
<th>Hypoestrogenic adverse effects</th>
<th>Hot flushes, vaginal dryness, decreased libido, mood swings, breast tenderness, headaches, bone mineral depletion, amenorrhea.</th>
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To minimise adverse effects, addback therapy is usually commenced. Options included tibolone or oral hormone replacement therapy (HRT) with or without vaginal estrogen. See
### Goserelin

#### Bone mineral density (BMD) depletion

- **Women at risk of low BMD**, e.g. **weight-related amenorrhoea, immobilisation, corticosteroid use, family history of osteoporosis** - additional risk of decreased BMD.

  - BMD scan recommended before and during treatment.

  - **Consider daily oral supplements of at least calcium 500 mg and vitamin D 400 International Units for the duration of the therapy.**

  - Lifestyle modification including regular exercise, particularly weight bearing exercises should be encouraged.

#### Symptom flare

- A flare may develop during the first 2 weeks of treatment, which may cause increased endometriotic symptoms and lesions in patients with endometriosis.

#### Hyperglycaemia

- Monitor blood glucose and HbA1c periodically.

#### Prolonged QT/QTc interval

- Goserelin may prolong the QT/QTc interval: consider periodic monitoring of ECH & electrolytes in patients with congenital long QT syndrome, congestive heart failure, frequent electrolyte abnormalities, and those taking drugs known to prolong the QT interval (e.g. azole antifungals, tricyclic antidepressants, antiarrhythmics).

#### Cervical resistance

- Caution recommended when dilated cervix for endometrial ablation.

#### Duration of treatment

- Maximum duration of treatment is 24 months.

### Pregnancy

#### Goserelin

- **1st Trimester**: Contraindicated
- **2nd Trimester**: Contraindicated
- **3rd Trimester**: Contraindicated

Effectivene nonhormonal contraception must be used by all premenopausal women during Goserelin therapy and for 12 weeks following discontinuation of therapy.

For more information, please contact [KEMH Obstetric Medicines Information Service](mailto:KEMH Obstetric Medicines Information Service).
Breastfeeding

**Goserelin**

Consider alternative

For more information, please contact KEMH Obstetric Medicines Information Service.

**Comments**

In very rare cases, administration error has resulted in vascular injury and haemorrhagic shock requiring blood transfusions and surgical intervention. Extra care should be taken when administering goserelin to patients with low BMI &/or receiving full dose anticoagulation.

Goserelin is contraindicated in unexplained vaginal bleeding, or known hypersensitivity to LHRH, LHRH agonist analogues or any of the components of Zoladex®.

Consider daily oral supplements of at least calcium 500 mg and vitamin D 400 International Units for the duration of the therapy

**Related Policies, Procedures & Guidelines**

**WNHS Clinical Practice Guidelines:**

“Gynaecology (Non-oncological): Goserelin prescribing protocol”

**WNHS Pharmaceutical and Medicines Management Guidelines:**

Return & Disposal of Medications

**References**


TeSera Therapeutics: Zoladex (goserelin implant). In: TeSera Therapeutics LLC [Internet]; 2021 [cited 2022 Sep 14]. Available from: https://www.zoladexhcp.com

### Keywords

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### Document Info

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### NSQHS Standards Applicable

- [ ] Std 1: Clinical Governance
- [ ] Std 2: Partnering with Consumers
- [ ] Std 3: Preventing and Controlling Healthcare Associated Infection
- [ ] Std 4: Medication Safety
- [ ] Std 5: Comprehensive Care
- [ ] Std 6: Communicating for Safety
- [ ] Std 7: Blood Management
- [ ] Std 8: Recognising and Responding to Acute Deterioration

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The health impact upon Aboriginal people has been considered, and where relevant incorporated and appropriately addressed in the development of this document (insert ISD Number). (Please refer to the Aboriginal Health Impact Statement and Declaration for Department of Health and Health Service Provider Guidelines – please delete once you have completed this).

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