

14.11 GOSERELIN

3.6 mg implant Zoladex Implant®, Astra Zeneca Pty Ltd

1 Purpose of Application

- 1.1 The minor submission requested an amendment to the restriction for goserelin 3.6 mg implant for the prevention of premature ovarian failure (POF) in patients undergoing treatment with alkylating agents.

2 Requested listing

- 2.1 The submission proposed two options for the restriction; an unrestricted benefit, or a new restricted benefit listing, as outlined below.

Name, Restriction, Manner of administration and form	Max. Qty	No. of Rpts	Dispensed Price for Max. Qty	Proprietary Manufacturer	Name and
GOSERELIN 3.6 mg, implant	1	5	\$307.67	Zoladex Implant	Astra Zeneca Pty Ltd
Category / Program	GENERAL – General Schedule (Code GE)				
Prescriber type:	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives				
Condition:	Cancer				
PBS Indication:	Cancer				
Restriction Level / Method:	<input checked="" type="checkbox"/> Restricted benefit				

3 Background

- 3.1 Goserelin 3.6 mg implant is TGA registered for prostate cancer, endometriosis, uterine fibroids, endometrial thinning, assisted reproduction, and treatment of advanced breast cancer (T3b, T4 or any T with N2, 3 or M+) in premenopausal women suitable for hormonal manipulation (PI, p11).
- 3.2 At the December 2014 special meeting, the PBAC recommended that goserelin be listed as a restricted benefit. At the March 2015 PBAC meeting, the PBAC

recommended that the restriction for goserelin implant 3.6 mg be amended to allow access to hormone receptor positive breast cancer patients at all cancer stages for chemotherapy treatment.

- 3.3 At the November 2016 PBAC meeting, the PBAC decided to defer a submission from the Medical Oncology Group of Australia (MOGA) on the basis that additional patient populations over the one proposed in the submission may benefit from this treatment, and therefore that the utilisation estimates may be underestimated.
- 3.4 At the March 2017 meeting, the PBAC considered a second submission from MOGA and reiterated its position that, for the prevention of POF, goserelin should not only be restricted to use in women with breast cancer. However, the PBAC noted that, while there was unlikely to be use outside the restriction for prevention of POF due to the undesirable side effects of goserelin, an unrestricted listing may also result in increased use for other indications, such as endometriosis and uterine fibroids. Therefore, the PBAC deferred the application and requested the Department to work with the sponsor of goserelin to develop an appropriate restriction.
- 3.5 The current submission is the first from the sponsor of goserelin.

4 Current submission

- 4.1 The current submission to the PBAC proposes two options for the listing of goserelin 3.6 mg implant: an unrestricted listing, or a restricted listing for ‘cancer’.
- 4.2 The submission did not propose a risk sharing arrangement (RSA). The submission argued that it would be too difficult to implement and administer an RSA because there is insufficient data capture at the restricted benefit level to differentiate use, and increasing the restriction level of the listing (to authority required) to collect this data would add unnecessary administrative burden.

For more detail on PBAC’s view, see section 6 “PBAC outcome”

5 Consideration of the evidence

Sponsor hearing

- 5.1 There was no hearing for this item as it was a minor submission.

Consumer comments

5.2 The PBAC noted that no consumer comments were received for this item.

Estimated PBS usage & financial implications

5.3 The sponsor did not provide any estimates of utilisation in this submission.

5.4 Previous estimates from MOGA for goserelin utilisation to prevent POF in breast cancer were also supported by estimates prepared by the Department, assuming low and gradual uptake, and that 30% of patients would only use goserelin for 3 months. This resulted in an estimated net cost to the PBS of less than \$10 million over five years, as shown below.

Table 1: Estimated PBS usage and financial implications

Year	1	2	3	4	5	6
Total number of eligible patients	██████	██████	██████	██████	██████	██████
Patients electing treatment (%)	20%	25%	30%	40%	40%	40%
Patients electing treatment (#)	██████	██████	██████	██████	██████	██████
Net cost to PBS	\$██████	\$██████	\$██████	\$██████	\$██████	\$██████

Source: Prepared by HTA.

Note: Based on the price of the current listing for goserelin (DPMQ \$307.67), up to 6 scripts per patient was assumed based on the advice from MOGA in its November 2016 minor submission.

The redacted table above shows that at year 5, the estimated number of patients was less than 10,000 and the net cost to the PBS would be less than \$10 million.

5.5 As the current listing for goserelin is a restricted benefit, there may already be some use outside the restriction for the prevention of POF which may mean the uptake and therefore the cost to the PBS is lower. However, the extent of this is unknown.

Risk Sharing Arrangements

5.6 The submission argued against a risk sharing arrangement for goserelin, for the reasons outlined in paragraph 4.2.

5.7 A further analysis of PBS script data conducted by the Department showed that ██████ women aged 18-49 years received PBS-subsidised cyclophosphamide therapy in 2016. At the March 2017 meeting, the PBAC considered use of cyclophosphamide to be a reasonable surrogate for drugs causing POF, but noted that this includes a much broader population than would actually elect to use goserelin to prevent POF. For this reason, the estimates represent an upper limit on use if goserelin was made available for all women of childbearing age undergoing cyclophosphamide therapy.

5.8 The number of additional patients expected to use goserelin for the prevention of POF has been estimated to be less than 10,000 (based on MOGA estimates of

cyclophosphamide use in women aged 18-49 years on the PBS). In 2016, 23,435 patients were supplied goserelin through the PBS, with growth over the previous five years being relatively stable. Relative to the whole market, the requested population is estimated to increase the market by between ■ to ■%. If the PBAC were to recommend an unrestricted listing, a potential RSA could use a patient cap that takes into account current patient utilisation of goserelin, plus this upper estimate of utilisation for use for prevention of POF (around ■ patients per year; noting that this likely overestimates the amount of utilisation that will occur in practice).

For more detail on PBAC's view, see section 6 "PBAC outcome."

6 PBAC Outcome

- 6.1 The PBAC recommended extending the listing of goserelin 3.6 mg as a restricted benefit for the prevention of premature ovarian failure (POF) in pre-menopausal women undergoing treatment with alkylating agents for which there is a risk to fertility.
- 6.2 The PBAC recalled its previous advice that the clinical evidence indicated goserelin was effective in reducing the risk of POF in women receiving cyclophosphamide for breast cancer. By extrapolation, it was biologically plausible that goserelin would also be effective in other conditions treated with alkylating agents, such as cyclophosphamide (goserelin, March 2017 PSD). The PBAC recalled its previous advice that the ability of goserelin to protect ovarian function relates to factors such as the nature and duration of drug exposure and the age of the woman (paragraph 7.4, goserelin November 2016 PSD).
- 6.3 The PBAC expressed concern that the TGA registered indications for this medicine were narrower than the intended use identified for the proposed restriction, and noted that the sponsor's proposed restricted benefit listing for 'cancer' had attempted to address this. However, the PBAC considered that the potential benefits of goserelin in preventing POF was not restricted to women undergoing treatment for cancer, and therefore did not consider the restricted benefit proposed by the sponsor to be appropriate. Conversely, the PBAC considered that an unrestricted listing would introduce a considerable risk of leakage, which could not be sufficiently managed by a risk share arrangement. However, the PBAC was of the view that there was insufficient incentive for the sponsor to apply to the TGA to extend the TGA-approved indications for a long-established medicine for relatively small gain in any revenue, and therefore that a pragmatic approach to ensure equity of access for an area of clinical need, whilst also managing the risk of higher than expected utilisation, would be to enable PBS-subsidised treatment through a specific

restriction.

- 6.4 The PBAC noted that this submission is not eligible for an Independent Review because it was recommended.

Outcome:

Recommended

7 Recommended listing

Extend the listing for goserelin 3.6 mg to include:

Name, Restriction, Manner of administration and form	Max. Qty	No. of Rpts	Proprietary Name and Manufacturer	
GOSERELIN 3.6 mg, implant	1	5	Zoladex Implant	Astra Zeneca Pty Ltd
Category / Program	GENERAL – General Schedule (Code GE)			
Prescriber type:	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives			
Condition:	Anticipated premature ovarian failure			
PBS Indication:	Anticipated premature ovarian failure			
Restriction Level / Method:	<input checked="" type="checkbox"/> Restricted benefit			
Treatment Criteria:	<ul style="list-style-type: none"> • Patient must be receiving treatment with an alkylating agent for a malignancy or an autoimmune disorder that has a high risk of causing premature ovarian failure <p>AND</p> <ul style="list-style-type: none"> • Patient must not receive more than 6 months' of treatment under this restriction 			
Population Criteria:	<ul style="list-style-type: none"> • Patient must be pre-menopausal 			

8 Context for Decision

The PBAC helps decide whether and, if so, how medicines should be subsidised in Australia. It considers submissions in this context. A PBAC decision not to recommend listing or not to recommend changing a listing does not represent a final PBAC view about the merits of the

medicine. A company can resubmit to the PBAC or seek independent review of the PBAC decision.

9 Sponsor's Comment

The sponsor had no comment.