7.11 BUDESONIDE,
Tablet (orally disintegrating) 0.5 mg,
Tablet (orally disintegrating) 1 mg,
Jorveza®,
Dr Falk Pharma Australia Pty Ltd.

1. Purpose
	1. The early re-entry resubmission sought to list budesonide orally disintegrating tablets (BOT) for the treatment of eosinophilic oesophagitis (EoE). The resubmission sought listing in both the induction and maintenance treatment settings and included both the BOT 0.5 mg and BOT 1 mg dosing strengths.
	2. The resubmission was based on the PBAC recommendation from March 2021. This resubmission partially addressed the issues raised by the PBAC (see Table 1), further discussion is provided in the financial sections and in the PBAC Outcome section.

Table 1 Summary of key matters to be addressed

| Matter of concern | Response |
| --- | --- |
| TGA approval of BOT for maintenance therapy of EoE (para 7.11, March 2021 PBAC Meeting).  | A Delegates Overview dated 30 August 2021 approving changes to the Product Information to support maintenance therapy was provided post submission.  |
| Inclusion of BOT 0.5 mg for maintenance therapy of EoE in the resubmission (para 7.11, March 2021 PBAC Meeting). | A Delegates overview dated 30 August 2021 and an ARTG summary dated 6 September 2021 approving the registration of BOT 0.5 mg was provided post submission.  |
| A price reduction to achieve an ICER of approximately $30,000/QALY to $50,000/QALY based on a scenario in which respecified utility model inputs from Goodwin 2020 were used in the March 2021 model (para 7.11, March 2021 PBAC Meeting). | The resubmission provided a cost utility analysis which utilised alternative utility values from Goodwin 2020 and proposed reduced drug costs, whilst retaining all other clinical and cost inputs as per the previous evaluation. To achieve an ICER below $50K, the resubmission proposed an approximate 30% price reduction, from $'''' to $'''''''''' per tablet at the approved ex-manufacturer price. |
| Recalculation of the financial implications using the revised BOT price (para 7.11, March 2021 PBAC Meeting). | The revised financial estimates incorporate the revised price and new uptake rates. In March 2021, the PBAC agreed with DUSC that the uptake rate was likely underestimated as it is the first TGA registered treatment for EoE (para 7.10, March 2021 PBAC Meeting). However, a revision of the uptake rates was not one of the early re-entry pathway amendments recommended by the PBAC in March 2021.  |
| A risk sharing arrangement (RSA) based on submission predicated use to reduce any residual uncertainty regarding the number of patients treated (para 7.11, March 2021 PBAC Meeting). | The resubmission proposed that ''''''% of any expenditure over the financial estimates presented be rebated. In March 2021, the PBAC noted that any underestimation of the number of treated patients would be conservative in the context of a RSA with a ''''''''''% rebate above the caps (para 7.10, March 2021 PBAC Meeting). |

Source: Paragraphs 7.10 and 7.11 of the March 2021 PBAC PSD

1. Background
	1. BOT 1 mg strength was TGA registered on 15 September 2020 for treatment of EoE in adults at a dose of 1 mg BID for 6 weeks, with extension for an additional 6 weeks in patients who are not appropriately responding.
	2. In March 2021, the PBAC considered that a key issue was that the use of BOT in the maintenance setting (beyond the 12 weeks of induction phase) was not consistent with the current TGA approved product information (PI) dose recommendation. At that time the PBAC noted that TGA evaluation of the use of BOT in the maintenance setting was underway with the initial decision by the Delegate expected in January 2022 (paragraph 7.6, budesonide Public Summary Document (PSD), March 2021 PBAC meeting).
	3. In March 2021, the PBAC also noted the TGA application under evaluation included a BOT 0.5 mg strength. At that time, the PBAC considered that a clinical claim of superior efficacy and inferior safety compared to placebo was reasonable for BOT 0.5 mg based on the EOS-2 trial. The PBAC considered that, if registered by the TGA, it would be appropriate for patients to have access to BOT 0.5 mg for maintenance therapy in addition to BOT 1 mg (paragraph 7.6, budesonide PSD, March 2021 PBAC meeting).
	4. The resubmission advised that TGA approval of BOT for maintenance of remission and the BOT 0.5 mg strength was initially expected in January 2022, based on the published TGA timelines. However, following interactions with the TGA, it was anticipated that approval will be received earlier. A Delegates Overview dated 30 August 2021 approving changes to the PI to support maintenance therapy and the registration of BOT 0.5 mg was provided post submission.
	5. The PICO from the previous submission, updated to include BOT 0.5 mg, is presented below.

Table 2: Key components of the clinical issue addressed by the submission

|  |  |
| --- | --- |
| Component | Description |
| Population | Adults diagnosed with eosinophilic oesophagitis (EoE) |
| Intervention | Budesonide 1 mg and 0.5 mg orally disintegrating tablets (topical corticosteroid)  |
| Comparator | Placebo |
| Outcomes | Induction of remission (EOS-1/BUL-1 trial)Primary: clinicohistologic remission (composite)Secondary: histologic remission; change in peak eosinophil count; resolution of symptoms based on NRS scores for dysphagia and odynodysphagia; EEsAI-PRO score/ VDQ score/ AMS score; modSHS; EoE QoL-A; SafetyMaintenance of remission (EOS-2/BUL-2 trial)Primary: maintenance of clinicohistologic remission (free of treatment failure [composite]) Secondary: clinical relapse; histologic relapse; change in peak eosinophil count; EEsAI-PRO relapse; deep disease remission; modified EREFS (grading of major features); endoscopist’s overall assessment of EoE activity; safety |
| Clinical claim | In adults diagnosed with EoE:* Budesonide is superior in terms of effectiveness compared to placebo
* Budesonide is inferior in terms of safety compared to placebo
 |

Source: Table 1, p1 of the March 2021 PBAC PSD

Abbreviations: AMS = avoidance, modification and slow eating; BOT/BUL = budesonide orally disintegrating tablet; EEsAI-PRO = Eosinophilic Oesophagitis Activity Index-Patient Reported Outcome; EoE = eosinophilic oesophagitis; EoE-QoL-A = Eosinophilic Oesophagitis Quality of Life Scale for Adults; EOS = eosinophilic oesophagitis study; EREFS = Endoscopic Reference Score; NRS = numerical rating scale; PPI = proton pump inhibitor; PRO = patient reported outcome; modSHS = modified Short Health Scale; STC = swallowed topical corticosteroids; VDQ = Visual Dysphagia Questionnaire.

*For more detail on PBAC’s view, see section 5 PBAC outcome.*

1. Requested listing
	1. The resubmission requested a special pricing arrangement, with an effective approved ex-manufacturer price (AEMP) of $'''''''''''''' for BOT 1.0 mg (90 tablets) for induction of remission, and the same effective AEMP of $'''''''''''' for BOT 0.5 mg (60 tablets) and BOT 1.0 mg (60 tablets) for maintenance of remission. This represents a 29% reduction in the effective AEMP proposed in the previous submission for BOT 1.0 mg. BOT
	0.5 mg was not included in the previous submission.
	2. The resubmission proposed amendments to the previously considered PBS restriction. Suggestions and additions proposed by the resubmission to the March 2021 submission restriction are added in italics and suggested deletions are crossed out with strikethrough. Secretariat suggestions and additions to the grandfathering restriction are added in grey highlighted italics and strikethrough.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MEDICINAL PRODUCT****medicinal product pack** | **PBS item code** | **Max. qty packs** | **Max. qty units** | **№.of****Rpts** | **Dispensed price for maximum quantity** | **Available brands** |
| BUDESONIDE |
| budesonide 1 mg orally disintegrating tablet, 90 | NEW | 1 | 90 | 1 | Published: $'''''''''''''''Effective:$'''''''''''''''''' | Jorveza |
|  |
| **Restriction Summary [new] / Treatment of Concept: [new]** |
|  | **Category / Program:** GENERAL – General Schedule (Code GE)  |
| **Prescriber type:** [x] Medical Practitioners |
| **Restriction type:** [x] Authority Required – immediate/real time assessment by Services Australia (telephone/online) |
|  | **Condition:** Eosinophilic oesophagitis |
| **Indication:** Eosinophilic oesophagitis |
|  | **Treatment Phase:** Initial treatment – Induction of remission |
|  | **Clinical criteria:** |
|  | Patient must have a history of symptoms of oesophageal dysfunction.  |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must have eosinophilic infiltration of the oesophagus, demonstrated by oesophageal biopsy specimens obtained by endoscopy confirming the presence of at least 15 eosinophils in at least one high powered field *(hpf);* corresponding to approximately 60 eosinophils per mm2 hpf. |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must not receive more than 90 days of treatment under this restriction |
|  | **Treatment criteria:** |
|  | Must be treated by a gastroenterologist. |
|  | **Prescribing criteria:** |
|  | Applications for treatment of this condition must be received within ~~XX~~ *12* weeks of biopsy. |
|  | **Administrative** **Advice**: Symptoms of oesophageal dysfunction include at least one of the following: *dysphasia, odynophagia*, transient or self-cleared food impaction, chest pain, epigastric discomfort, vomiting/regurgitation. |
|  | **Administrative Advice:** Diagnostic sensitivity increases with the number of biopsies and is ~~maximised~~ *optimised* after taking at least ~~six~~ *eight* biopsies (minimum of ~~2~~ *four* collected from each of the *mid and* distal~~, mid and proximal~~ segments, *with the distal segment biopsies taken at least 5 cm above the gastroesophageal junction)*. ~~from both normal and abnormal appearing areas of the oesophagus.~~  |
|  | **Administrative Advice:** A histologic assessment ~~on~~ *of the* oesophageal biopsy ~~of the patient~~ should be planned *for approximately 8 weeks after the initiation* ~~to take place within 90 days~~ of the first PBS-subsidised treatment with this drug under this restriction, *and no later than 2 weeks prior to the patient completing the PBS subsidised initial treatment course,* to determine the patient’s eligibility for “continuing therapy” *and to avoid an interruption to supply*. |
|  | **Administrative Advice:** |
|  | No increase in the maximum number of repeats may be authorised. |
|  | **Administrative Advice:** |
|  | No increase in the maximum quantity or number of units may be authorised. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MEDICINAL PRODUCT****medicinal product pack** | **PBS item code** | **Max. qty packs** | **Max. qty units** | **№.of Rpts** | **Dispensed price for maximum quantity** | **Available brands** |
| BUDESONIDE |
| budesonide 0.5 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Published:$'''''''''''''''Effective:$''''''''''''''' | Jorveza |
| budesonide 1 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Published:$'''''''''''''''Effective:$'''''''''''''''''' | Jorveza |
|  |
| **Restriction Summary [new] / Treatment of Concept: [new]** |
|  | **Category / Program:** GENERAL – General Schedule (Code GE)  |
| **Prescriber type:** [x] Medical Practitioners |
| **Restriction type:** [x] Authority Required – immediate/real time assessment by Services Australia (telephone/online) |
|  | **Condition:** Eosinophilic oesophagitis |
| **Indication:** Eosinophilic oesophagitis |
|  | **Treatment Phase:** First continuing treatment – confirmation of remission |
|  | **Clinical criteria:** |
|  | Patient must have previously received PBS-subsidised initial treatment with this drug for this condition in this treatment cycle. |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must have documented evidence of having achieved histologic remission while receiving initial PBS-subsidised treatment with this drug for this condition, defined as a peak eosinophil count of less than 5 eosinophils per high power field *(hpf),* corresponding to less than 16 eosinophils per mm2 *hpf* ~~high power field~~ on oesophageal biopsy; |
|  | **AND** |
|  | **Treatment criteria:** |
|  | Must be treated by a gastroenterologist. |
|  | **Administrative Advice:** Histologic assessment should be based on the peak eosinophils count derived from the evaluation *of at least eight* ~~six~~ oesophageal biopsies (*minimum of four* t~~wo~~ collected from each of the *mid and* distal ~~mid and proximal~~ segments, *with the distal segment biopsies taken at least 5 cm above the gastroesophageal junction).*The histologic assessment should, where possible, be performed by the same physician who confirmed the diagnosis of EoE in the patient. This assessment, which will be used to determine eligibility for continuing treatment, should be *conducted and* submitted *after the patient has completed 8 weeks of their initial treatment course* ~~within 4 weeks of the date of assessment~~ and no later than 2 weeks prior to the patient completing their *PBS subsidised initial* ~~current~~ treatment course, to avoid an interruption to supply. Where a histologic assessment is not undertaken and the results submitted, the patient will ~~deemed to have failed to respond to treatment with this drug~~ *not be eligible for ongoing treatment*. |
|  | **Administrative Advice:** |
|  | No increase in the maximum number of repeats may be authorised. |
|  | **Administrative Advice:** |
|  | No increase in the maximum quantity or number of units may be authorised. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MEDICINAL PRODUCT****medicinal product pack** | **PBS item code** | **Max. qty packs** | **Max. qty units** | **№.of Rpts** | **Dispensed price for maximum quantity** | **Available brands** |
| BUDESONIDE |
| budesonide 0.5 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Published:$'''''''''''''''''Effective:$''''''''''''''' | Jorveza |
| budesonide 1 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Published:$'''''''''''''''Effective:$''''''''''''''''' | Jorveza |
|  |
| **Restriction Summary [new] / Treatment of Concept: [new]** |
|  | **Category / Program:** GENERAL – General Schedule (Code GE)  |
| **Prescriber type:** [x] Medical Practitioners |
| **Restriction type:** [x] Authority Required – immediate/real time assessment by Services Australia (telephone/online) |
|  | **Condition:** Eosinophilic oesophagitis |
| **Indication:** Eosinophilic oesophagitis |
|  | **Treatment Phase:** Subsequent continuing treatment – maintenance of remission |
|  | **Clinical criteria:** |
|  | Patient must have previously received PBS-subsidised treatment with this drug for this condition under the First continuing treatment restriction. |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must have demonstrated an adequate response to treatment with this drug for this condition in this treatment cycle. |
|  | **Treatment criteria:** |
|  | Must be treated by a gastroenterologist or in consultation with a gastroenterologist. |
|  | **Administrative Advice:** |
|  | No increase in the maximum number of repeats may be authorised. |
|  | **Administrative Advice:** |
|  | No increase in the maximum quantity or number of units may be authorised. |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **MEDICINAL PRODUCT****medicinal product pack** | **PBS item code** | **Max. qty packs** | **Max. qty units** | **№.of Rpts** | **Dispensed price for maximum quantity** | **Available brands** |
| BUDESONIDE |
| budesonide 0.5 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Published:$''''''''''''''''Effective:$''''''''''''''' | Jorveza |
| budesonide 1 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Published:$''''''''''''''''''Effective:$'''''''''''''''''' | Jorveza |
|  |
| **Restriction Summary [new] / Treatment of Concept: [new]** |
|  | **Category / Program:** GENERAL – General Schedule (Code GE)  |
| **Prescriber type:** [x] Medical Practitioners |
| **Restriction type:** [x] Authority Required – immediate/real time assessment by Services Australia (telephone/online) |
|  | **Condition:** Eosinophilic oesophagitis |
| **Indication:** Eosinophilic oesophagitis |
|  | Treatment Phase: Transitioning from non-PBS to PBS subsided treatment - Grandfather treatment |
|  | **Clinical criteria:** |
|  | Patient must have previously received non-PBS-subsidised ~~initial~~ treatment with this drug for this condition *prior to [X date].* |
|  | **AND** |
|  | ***Clinical criteria:*** |
|  | *Patient must be receiving treatment with this drug for this condition at the time of application* |
|  | ***AND*** |
|  | ***Clinical criteria:*** |
|  | *Patient must have had, prior to commencement of this drug, a history of symptoms of oesophageal dysfunction.*  |
|  | ***AND*** |
|  | ***Clinical criteria:*** |
|  | *Patient must have had, prior to commencement of this drug, eosinophilic infiltration of the oesophagus, demonstrated by oesophageal biopsy specimens obtained by endoscopy confirming the presence of at least 15 eosinophils in at least one high powered field (hpf); corresponding to approximately 60 eosinophils per mm2 hpf.* |
|  | ***AND*** |
|  | **Clinical criteria:** |
|  | Patient must have documented evidence that they are currently in histologic remission, where remission is defined as a peak eosinophil count of less than 5 eosinophils per high power field (hpf); corresponding to less than 16 eosinophils per mm2 hpf on oesophageal biopsy. |
|  | **AND** |
|  | **Treatment criteria:** |
|  | Must be treated by a gastroenterologist. |
|  | **AND** |
|  | **Prescribing criteria:**  |
|  | Applications for PBS-subsidised treatment with this drug for this condition under this listing must be received within 12 weeks of the biopsy. |
|  | **AND** |
|  | ***Prescribing criteria:*** |
|  | *A Grandfathered patient may qualify for PBS-subsidised treatment under this restriction once only. For continuing PBS-subsidised treatment, a Grandfathered patient must qualify under the continuing treatment criteria.* |
|  | ***Administrative******Advice****: Symptoms of oesophageal dysfunction include at least one of the following: dysphasia, odynophagia, transient or self-cleared food impaction, chest pain, epigastric discomfort, vomiting/regurgitation.* |
|  | **Administrative Advice:** Histologic assessment should be based on the peak eosinophils count derived from the evaluation *of at least eight* oesophageal biopsies (minimum of four collected from each of the mid and distal segments, with the distal segment biopsies taken at least 5 cm above the gastroesophageal junction).The histologic assessment should, where possible, be performed by the same physician who confirmed the diagnosis of EoE in the patient. Where a histologic assessment is not undertaken and the results submitted, the patient will not be eligible for ongoing treatment. |
|  | **Administrative Advice:** |
|  | No increase in the maximum number of repeats may be authorised. |
|  | **Administrative Advice:** |
|  | No increase in the maximum quantity or number of units may be authorised. |
|  | ***Administrative Advice:*** |
|  | *This grandfather restriction will cease to operate from 12 months after the date specified in the clinical criteria.* |

* 1. The resubmission proposed an Authority Required (Telephone/Electronic) listing for budesonide for eosinophilic oesophagitis which was consistent with the restriction level recommended by the PBAC in March 2021 (paragraph 3.2, budesonide PSD, March 2021 PBAC meeting).
	2. The number of repeats, clinical criteria, treatment criteria and administrative advice were consistent with the Initial treatment – induction of remission, First continuing treatment – confirmation of remission and Subsequent continuing treatment – maintenance of remission restrictions suggested by the Secretariat in March 2021.
	3. The resubmission noted that changes to the prescribing criteria and administrative advice suggested by the Secretariat in March 2021 have been proposed. The resubmission stated these additional changes have been made to better reflect current clinical practice in Australia and clarify the timing of biopsies for initial and first continuing treatment. More specifically, for initial treatment, in March 2021 the secretariat included a prescribing criterion that stated ‘Applications for treatment of this condition must be received within XX weeks of biopsy’, with the number of weeks left unspecified. The resubmission stated that based on local expert advice, a period of up to 12 weeks is proposed to schedule the endoscopy within the Australian Public Health System and follow-up appointment with the treating gastroenterologist to review the biopsy report.
	4. The resubmission confirmed that a patient access program for BOT for EoE commenced in June 2021 and as of 20 August there were 123 patients enrolled. As such, the resubmission requested the PBAC consider a grandfathering provision for patients who have received treatment with BOT as part of the patient access program. The resubmission stated the eligibility criteria for the patient access program are largely consistent with the initial treatment criteria proposed in the PBS restriction. However, unlike the proposed PBS restriction, there was no specific guidance in terms of when the histologic assessment needed to be conducted prior to initiation of BOT treatment in the program. The proposed grandfathering provision requires that the patient is in histologic remission due to BOT treatment through the patient access program and thus qualifies for first continuing therapy on the PBS. Clinical criteria to ensure that a grandfathering patient would have met the initial symptomatic and endoscopic criteria prior to commencement of non-PBS subsidised therapy have been added. In addition, administrative advice limiting the life of the grandfathering restriction to 12 months post listing have been added. The pre-PBAC response agreed with the changes to the grandfathering restriction made by the Secretariat. The PBAC considered a grandfathering restriction was appropriate.

*For more detail on PBAC’s view, see section 5 PBAC outcome.*

1. Consideration of the evidence

Sponsor hearing

* 1. There was no hearing for this item.

Consumer comments

* 1. The PBAC noted and welcomed the input from individuals (7), health care professionals (2) and organisations (3) via the Consumer Comments facility on the PBS website. The comments described a range of benefits of treatment with BOT including a reduction in problems with swallowing and episodes of food impaction in the oesophagus leading to improvements in quality of life. The comments also described the potential for confusion and the difficulty in administering the off-label treatment options currently available for EoE.
	2. The PBAC noted the advice received from the EoE Working Party of the Australasian Society of Clinical Immunology and Allergy (ASCIA) clarifying the likely use of BOT in clinical practice. The PBAC specifically noted the advice that the listing of BOT for EoE would improve access to effective therapeutic options for people with this condition, which is usually a lifelong disease that impacts quality of life. The PBAC noted that this advice was supportive of the evidence provided in the submission.

Comparative effectiveness

* 1. In March 2021, the PBAC noted the claim of superior comparative effectiveness compared to placebo was based on the EOS-1 and EOS-2 trials for induction of remission and maintenance therapy respectively. At that time, the PBAC agreed with the ESC that the claim of superiority at both 6 weeks and 48 weeks was well supported by the evidence (paragraph 7.4, budesonide PSD, March 2021 PBAC meeting).
	2. In March 2021, the PBAC considered the claim of inferior safety compared to placebo was reasonable (paragraph 7.5, budesonide PSD, March 2021 PBAC meeting).

Economic analysis

* 1. In March 2021, the PBAC noted that when considering BOT for induction and maintenance therapy, the ICER was highly sensitive to the choice of utility values. The utility estimates applied in the base case were derived from an Australian EoE patient survey, which the PBAC considered would be subject to a high risk of confounding from recall bias given that patients used a hypothetical recalled health state instead of their own current health state. Acknowledging the limitations of Goodwin 2020, the PBAC considered it provided appropriate utility values for the model inputs and noted this increased the base case ICER from $25,000 to < $35,000/QALY to $55,000 to < $75,000 /QALY. At that time, the PBAC advised that with the respecified utility value model inputs, a price reduction would be required to achieve a cost-effective ICER. In March 2021, the PBAC considered a cost-effective ICER in this instance would be approximately $30,000/QALY to $50,000/QALY (paragraph 7.9, budesonide PSD, March 2021 PBAC meeting).
	2. The resubmission presented a revised cost-utility analysis which utilised the alternative utility values from Goodwin 2020 and proposed reduced drug costs, whilst retaining all other clinical and cost inputs as per the previous evaluation (Table 3). To achieve an ICER below $50K, the current resubmission proposed a 29% price reduction (see paragraph 3.1). The revised base case ICER was $45,000 to < $55,000/QALY.

Table 3. Base-case results of the previous and revised economic evaluations

| **Model outcome** | **BOT** | **SOC** | **Incremental** |
| --- | --- | --- | --- |
| **March 2021 submission** |  |  |  |
| Costs ($) | ''''''''''''''''''''''''' | $8,574.84 | ''''''''''''''''''''''''''' |
| QALYs | 3.1716 | 2.6945 | 0.4770 |
| Incremental cost per QALY gained |  |  | **'''''''''''''''**1 |
| **March 2021 submission (at the revised price)** |  |  |  |
| Costs ($) | '''''''''''''''''''''''''''' | $8,574.84 | '''''''''''''''''''''' |
| QALYs | 3.1716 | 2.6945 | 0.4770 |
| Incremental cost per QALY gained | **''''''''''''''**2 |
| **Resubmission revised CUA at the revised price and with Goodwin utility values** |
| Costs ($) | '''''''''''''''''''''''' | $8,574.84 | ''''''''''''''''''''''' |
| QALYs | 4.1916 | 4.0131 | 0.1785 |
| **Incremental cost per QALY gained** | **'''''''''''''''**3 |

Source: Table 4-3, p27 of the resubmission

Abbreviations: BOT, budesonide orally disintegrating tablet; QALY, quality adjusted life year; SOC, standard of care

*The redacted values correspond to the following ranges:*

*1 $25,000 to < $35,000*

*2 $15,000 to < $25,000*

*3 $45,000 to < $55,000*

* 1. The resubmission argued the economic model did not require any changes to the costs or outcomes of maintenance treatment to include the BOT 0.5 mg dose. The resubmission stated this was because the cost per day of treatment was identical, regardless of dose, with the annual risk of relapse included in the economic model based on the EOS-2 trial effectively the same. Specifically, the resubmission stated that the annual relapse rate applied in the economic model was 0.147 (10/68) based on the 1 mg BID regimen of the EOS-2 trial. The same relapse rate for the 0.5 mg BID regimen was 0.162 (11/68). A sensitivity analysis applying a relapse rate of 0.162 based on the result of EOS-2 for 0.5 mg BID regimen was provided in the resubmission with a resulting ICER of $45,000 to < $55,000/QALY (Table 4).

Table 4. Selected univariate sensitivity analysis

| **Variable**  | **Base-case**  | **Sensitivity analysis** | **Incremental costs ($)** | **Incremental QALYs**  | **ICER**  |
| --- | --- | --- | --- | --- | --- |
| Base-Case (revised November 2021 CUA) | - | -  | '''''''''''''''''''''''''' | 0.1785 | ''''''''''''''''''1 |
| Probability of losing histologic remission from clinicohistologic remission or histologic remission during maintenance treatment with BOT | 0.147 (0.042 per cycle) [derived from evidence for 1 mg BID BOT] | 0.162 (0.046 per cycle) [derived from evidence for 0.5 mg BID BOT] | '''''''''''''''''''''' | 0.1723 | ''''''''''''''''''1 |
| Probability of achieving clinicohistologic remission from histologic remission during maintenance treatment with BOT | 0.762 | 0.381 (halved)  | '''''''''''''''''''''' | 0.1770 | '''''''''''''''''''1 |

Source: Table 4-3, p27 of the resubmission

Abbreviations: BOT, budesonide orally disintegrating tablet; QALY, quality adjusted life year; CUA, cost utility analysis.

*The redacted values correspond to the following ranges:*

*1 $45,000 to < $55,000*

***Estimated PBS usage & financial implications***

* 1. In March 2021, DUSC noted the submission expected the uptake rate of BOT to be gradual and modest (10% of newly initiating patients each year over the six-year forward estimates). At that time, DUSC considered that this may be underestimated initially as BOT would be the first TGA-registered treatment for EoE listing on the PBS, if recommended. However, DUSC considered the cumulative uptake would be 50% in the prevalent population by Year 6 (budesonide DUSC Advice, March 2021 PBAC meeting).
	2. In March 2021, the PBAC agreed with DUSC that the uptake rate was likely underestimated as it is the first TGA registered treatment for EoE. The PBAC noted that the sensitivity analyses undertaken indicated the estimates were most sensitive to changes in the assumed uptake rate. At that time, the PBAC agreed with DUSC the financial estimates were likely underestimated. The PBAC noted that any underestimation of the number of treated patients would be conservative in the context of a Risk Sharing Arrangement (RSA) with a '''''''% rebate above the caps (paragraph 7.10, budesonide PSD, March 2021 PBAC meeting).
	3. In March 2021, the PBAC considered the outstanding issues related to the financial implications may be addressed by (paragraph 7.11, budesonide PSD, March 2021 PBAC meeting):
* Recalculation of the financial implications using the revised BOT price;
* A RSA based on submission predicated use to reduce any residual uncertainty regarding the number of patients treated.
	1. The resubmission stated the following two changes were made to the estimated use and financial implications:
* The price has been reduced by 29% to meet PBAC’s desired utility inputs and level of cost-effectiveness (see paragraph 3.1).
* The uptake rates have been revised upwards (Table 5).

The resubmission stated the revised assumptions around uptake reflected the DUSC’s view that ‘[t]he uptake is likely to be underestimated as it is the first TGA registered treatment for EoE. The financial estimates are most sensitive to the uptake rates as patients are compounded year on year as patients continue treatment in subsequent years’ (paragraph 6.63, budesonide PSD, March 2021 PBAC meeting).

Table 5. Uptake assumptions for budesonide in the resubmission, the pre-PBAC response and the March 2021 submission

|  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| --- | --- | --- | --- | --- | --- | --- |
| **Resubmission** |
|  Cumulative (%) | ''''''''''' | '''''''''' | ''''''''''' | ''''''''''' | '''''''''' | '''''''''' |
|  Annualised (%) | ''''''''''' | '''''''''' | '''''''''' | '''''''''' | '''''''''' | '''''''''' |
| **Pre-PBAC response**  |  |  |  |  |  |  |
| Cumulative (%) | '''''''''' | '''''''''' | '''''''''' | '''''''''''' | '''''''''' | ''''''''''' |
| Annualised (%) | '''''''''' | ''''''' | '''''''' | '''''''' | ''''''' | ''''''' |
| **March 2021 submission** |
|  Cumulative (%) | '''''''''''' | ''''''''''' | ''''''''''' | '''''''''' | '''''''''''' | '''''''''' |
|  Annualised (%) | ''''''''''' | '''''''''' | '''''''''' | '''''''''' | '''''''''' | '''''''''' |

* 1. In addition, the resubmission noted the inclusion of the 0.5 mg tablet pack in the maintenance phase of the estimates. Given the request for flat pricing, the resubmission stated the split of use between the 0.5 mg BID and 1.0 mg BID regimens would have no financial implications to the PBS. However, the resubmission stated that for completeness, the analysis assumed 25% use of the 0.5 mg BID regimen and 75% use of the 1.0 mg BID regimen in the maintenance phase.
	2. The estimated use and financial implications of BOT are presented in Table 6. The total cost to the PBS/RPBS of listing BOT was estimated to be $0 to < $10 million in Year 1 increasing to $10 million to < $20 million in Year 6 with a total cost over the first 6 years of listing of $60 million to < $70 million (compared to $0 to < $10 million in Year 1, $10 million to < $20 million in Year 6 and $60 million to < $70 million over the first 6 years of listing reported in March 2021). Despite the 29% reduction in price from the March 2021 submission the estimated cost to the PBS/RPBS over the first 6 years of listing has increased due to the assumption of higher uptake rates in the resubmission. The pre-PBAC response proposed that the Year 1 uptake rate be increased to ''''''% (instead of '''''%), whilst keeping the longer term (Year 6) uptake rate at '''''% as per the estimates from March 2021 (see Table 5). The pre-PBAC response argued that the revised short term uptake rate recognised that uptake would likely be relatively strong in the short term as it is the first TGA registered treatment for EoE. The PBAC recalled that in March 2021 the DUSC had considered the impact of an uptake rate of 15% in Year 1 and noted their advice that the cumulative uptake would likely be 50% in the prevalent population by Year 6 (budesonide DUSC Advice, March 2021 PBAC meeting). The PBAC noted data provided by the DUSC Secretariat regarding the impact of an uptake rate of 15% to 50% on the estimated use and financial implications (Table 6).

Table 6. Estimated use and financial implications for resubmission and March 2021 submission

|  | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
| --- | --- | --- | --- | --- | --- | --- |
| Estimated extent of use (number of patients treated) - resubmission |
| Initiators | ''''''''''''''1 | '''''''''1 | ''''''''''1 | '''''''''1 | ''''''''''1 | '''''''''1 |
| Continuers | ''''''''''''''1 | ''''''''''''1 | '''''''''''''''1 | ''''''''''''''1 | ''''''''''''''1 | '''''''''''''1 |
| **Estimated extent of use (number of patients treated) – uptake rate of 15% to 50%a** |
| Initiators  | '''''''''''''1 | ''''''''1 | '''''''''1 | ''''''''''1 | ''''''''''1 | ''''''''''1 |
| Continuers  | ''''''''''''1 | ''''''''''''''1 | '''''''''''''''1 | ''''''''''''''1 | ''''''''''''1 | ''''''''''''''1 |
| Estimated extent of use (number of patients treated) – March 2021 submission |
| Initiators | '''''''''1 | '''''''''1 | '''''''''1 | '''''''''1 | '''''''''1 | ''''''''1 |
| Continuers | ''''''''''1 | '''''''''''''''1 | '''''''''''''1 | '''''''''''''''1 | ''''''''''''''1 | '''''''''''''1 |
| **Estimated extent of use (number of scripts dispensed) - resubmission** |
| BOT initiation scripts | '''''''''''''2 | '''''''''''''''1 | '''''''''''''1 | ''''''''''''''1 | ''''''''''''''1 | '''''''''''''1 |
| BOT continuation scripts, first | ''''''''''''''''3 | ''''''''''''1 | ''''''''''''''1 | ''''''''''''''2 | '''''''''''''2 | ''''''''''''''2 |
|  - 0.5 mg tablet pack | ''''''''''''''1 | ''''''''''''''1 | '''''''''''''''1 | ''''''''''''''1 | ''''''''''''1 | '''''''''''''''1 |
|  - 1.0 mg tablet pack | '''''''''''''''3 | ''''''''''''1 | ''''''''''''''1 | ''''''''''''1 | ''''''''''''''1 | ''''''''''''1 |
| BOT continuation scripts, subsequent | '''''''''''''2 | '''''''''''''''''4 | ''''''''''''''''5 | ''''''''''''''''5 | '''''''''''''''6 | '''''''''''''''''6 |
|  - 0.5 mg tablet pack | '''''''''''''''1 | '''''''''''''2 | '''''''''''''2 | '''''''''''''2 | '''''''''''''''3 | '''''''''''''''''3 |
|  - 1.0 mg tablet pack | '''''''''''''''2 | ''''''''''''''''4 | ''''''''''''''''''4 | '''''''''''''''''4 | '''''''''''''''5 | ''''''''''''''''5 |
| Total BOT scripts | '''''''''''''''4 | '''''''''''''''''5 | ''''''''''''''''5 | ''''''''''''''''6 | ''''''''''''''''''6 | '''''''''''''''''7 |
| **Estimated extent of use (number of scripts dispensed) – uptake rate of 15% to 50%a** |
| BOT initiation scripts | ''''''''''''''1 | '''''''''''''1 | '''''''''''''1 | '''''''''''''1 | '''''''''''''1 | '''''''''''''''1 |
| BOT continuation scripts, first | ''''''''''''2 | ''''''''''''''1 | ''''''''''''''1 | '''''''''''''1 | ''''''''''''1 | ''''''''''''''1 |
|  - 0.5 mg tablet pack | ''''''''''''1 | ''''''''''1 | ''''''''1 | ''''''''''1 | '''''''''1 | '''''''''1 |
|  - 1.0 mg tablet pack | ''''''''''''''2 | '''''''''''''1 | ''''''''''''1 | ''''''''''''''1 | '''''''''''''1 | ''''''''''''''1 |
| BOT continuation scripts, subsequent | '''''''''''''1 | ''''''''''''''''3 | '''''''''''''''3 | ''''''''''''''''4 | '''''''''''''''4 | ''''''''''''''''''4 |
|  - 0.5 mg tablet pack | ''''''''''1 | ''''''''''''''1 | '''''''''''''1 | ''''''''''''''2 | ''''''''''''2 | '''''''''''''''2 |
|  - 1.0 mg tablet pack | '''''''''''''1 | ''''''''''''''''3 | ''''''''''''''''3 | '''''''''''''''''3 | '''''''''''''''3 | '''''''''''''''''4 |
| Total BOT scripts | '''''''''''''''''3 | ''''''''''''''''3 | '''''''''''''''4 | '''''''''''''''''4 | '''''''''''''''''5 | ''''''''''''''''5 |
| **Estimated extent of use (number of scripts dispensed) – March 2021 submission** |
| BOTinitiation scripts | '''''''''''''1 | ''''''''''''1 | '''''''''''''''1 | ''''''''''''''1 | '''''''''''''1 | '''''''''''''''1 |
| BOTcontinuation scripts, first | '''''''''''''1 | ''''''''''''1 | '''''''''''''''1 | ''''''''''''''2 | '''''''''''''2 | '''''''''''''''2 |
| BOTcontinuation scripts, subsequent | '''''''''''''''1 | ''''''''''''''''3 | ''''''''''''''''3 | '''''''''''''''4 | '''''''''''''''''5 | ''''''''''''''''5 |
| Total BOT scripts | '''''''''''''2 | '''''''''''''''3 | '''''''''''''''''4 | ''''''''''''''''5 | '''''''''''''''5 | '''''''''''''''6 |
| **Estimated financial implications of BOT – resubmission (includes 29% price reduction from March 2021 submission)a** |
| Cost to PBS/RPBS less co-payments ($) | ''''''''''''''''''''''''8 | ''''''''''''''''''''''''''8 | ''''''''''''''''''''''''''''9 | '''''''''''''''''''''''''''''9 | ''''''''''''''''''''''''''''9 | '''''''''''''''''''''''''''''9 |
| **Estimated extent of use (number of patients treated) – uptake rate of 15% to 50%b (includes 29% price reduction from March 2021 submission)a**  |
| Cost to PBS/RPBS less co-payments ($) | '''''''''''''''''''''''''''''8 | '''''''''''''''''''''''''''8 | '''''''''''''''''''''''''8 | '''''''''''''''''''''''''''''8 | ''''''''''''''''''''''''''''8 | ''''''''''''''''''''''''8 |
| Estimated financial implications of BOT – March 2021 submission  |
| Cost to PBS/RPBS less copayments ($) | '''''''''''''''''''''''''8 | '''''''''''''''''''''''8 | '''''''''''''''''''''''''''9 | '''''''''''''''''''''''''''''9 | ''''''''''''''''''''''''''''9 | '''''''''''''''''''''''''''''9 |

Source: Table 5-1, p 30 and Table 5-3, p32 of the resubmission

Abbreviations: BOT = budesonide orally disintegrating tablet

a BOT price in resubmission and estimates with an uptake rate of 15% to 50%: BOT 1 mg 90 tablets AEMP - $''''''''''''''', BOT 1mg 60 tablets AEMP - $''''''''''''''''', BOT 0.5 mg 60 tablets AEMP - $''''''''''''''''''. This was a 29% price reduction from the March 2021 submission BOT prices of: BOT 1 mg 90 tablets AEMP - $'''''''''''''''''', BOT 1 mg 60 tablets AEMP - $''''''''''.

b Cumulative (Year 1 – ''''''%, Year 2 – '''''''%, Year 3 – '''''''%, Year 4 – ''''''%, Year 5 – '''''''%, Year 6 – '''''''%), Annualised (Year 1 – ''''''%,
Year 2 – '''%, Year 3 – ''''%, Year 4 – '''%, Year 5 – ''''%, Year 6 – '''%).

*The redacted values correspond to the following ranges:*

*1 500 to < 5,000*

*2 5,000 to < 10,000*

*3 10,000 to < 20,000*

*4 20,000 to < 30,000*

*5 30,000 to < 40,000*

*6 40,000 to < 50,000*

*7 50,000 to < 60,000*

*8 $0 to < $10 million*

*9 $10 million to < $20 million*

* 1. In March 2021, the extent of other resource costs (i.e. endoscopy + biopsy procedures for response assessment and efficacy monitoring, oesophageal dilation for symptomatic relief and endoscopic removal of food impaction) were included in the financial implications with errors identified during the March 2021 evaluation corrected (see Table 19, budesonide PSD, March 2021 PBAC meeting). The PBAC noted the resubmission did not provide these costs but that they were subsequently provided in the pre-PBAC response. The PBAC noted that the errors identified during the March 2021 evaluation were not corrected in the calculation of the other resource costs provided in the pre-PBAC response.
	2. As per paragraph 3.6, the resubmission confirmed that a patient access program for BOT for EoE commenced in June 2021 and as of 20 August there were 123 patients enrolled. The resubmission employed a prevalence based approach to the financial estimates with grandfathering patients not counted separately. This was appropriate as the prevalent pool would normally capture these patients.

Financial Management – Risk Sharing Arrangements

* 1. As outlined in paragraph 4.10, a RSA based on submission predicated use to reduce any residual uncertainty regarding the number of patients treated was one of the early re-entry pathway amendments recommended by the PBAC in March 2021 (paragraph 7.11, budesonide PSD, March 2021 PBAC meeting). The resubmission stated the PSD also allude to a 100% cap (see paragraph 4.6).
	2. The resubmission acknowledged the PBAC’s March 2021 request for a RSA. However, the resubmission argued a '''''''% rebate above a spending cap was not required as:
* Many, if not all, of the remaining uncertainties relating to the cost-effectiveness of BOT have been incorporated in the reduced price;
* There is no risk of ‘leakage’ into patient populations which are not cost-effective because all adult patients with a diagnosis of EoE are eligible for BOT and the assessment of cost-effectiveness is predicated on this total population;
* There is minimal risk of leakage into non-responding patients because response rates are close to 90% for induction of histologic remission.
	1. The resubmission instead proposed a rebate for use over the expenditure levels presented in Table 6. Specifically, an effective AEMP of $'''''''' per tablet for all expenditure above the cap which is a ''''''% reduction of the proposed effective price of $'''''''' per tablet. Therefore, it was proposed that '''''% of any expenditure over the estimates in the resubmission presented in Table 6 be rebated. The pre-PBAC response proposed that ''''''% of any expenditure over estimates based on a '''''% to '''''% uptake rate be rebated.

*For more detail on PBAC’s view, see section 5 PBAC outcome.*

1. PBAC Outcome
	1. The PBAC recommended the Authority Required (immediate assessment) listing of budesonide orally disintegrating tablets (BOT) for the treatment of eosinophilic oesophagitis (EoE). The PBAC noted the recent TGA approval for maintenance therapy of EoE and registration of BOT 0.5 mg for this indication. Although uncertainty remained regarding the cost-effectiveness, the PBAC considered BOT likely cost-effective at the proposed price with residual uncertainty able to be addressed through a Risk Sharing Arrangement (RSA). The PBAC considered the uptake used to inform the financial estimates and RSA should be based on the March 2021 DUSC advice (15% in Year 1, cumulative uptake of 50% by Year 6).
	2. The PBAC is satisfied that BOT provides, for some patients, a significant improvement in efficacy over placebo. The PBAC’s recommendation for listing was based on, among other matters, its assessment, as described above, that the cost-effectiveness of BOT would be acceptable at the price proposed in the submission along with a RSA to reduce any residual uncertainties.
	3. The PBAC noted the input from individuals, health care professionals and organisations which highlighted the high clinical need for EoE specific treatment options.
	4. The PBAC recalled that in the March 2021 consideration of BOT it had previously considered the claim of superiority at both 6 weeks and 48 weeks was well supported by the evidence (paragraph 7.4, budesonide PSD, March 2021 PBAC meeting). The PBAC also recalled that it had considered the claim of inferior safety compared to placebo was reasonable (paragraph 7.5, budesonide PSD, March 2021 PBAC meeting).
	5. The PBAC recalled the incremental cost effective ratio (ICER) was sensitive to the inputs for the utility values. The PBAC noted that, consistent with its advice from the March 2021 meeting, the values from Goodwin 2020 were used in the resubmission, and the resulting ICER was $45,000 to < $55,000/QALY using the relapse rate reported for 1mg BOT and $45,000 to < $55,000/QALY using the rate reported for 0.5mg BOT. Although uncertainty remained regarding the cost-effectiveness of BOT, and the ICER was at the upper bound of range recommended by the Committee in March 2021 ($30,000-$50,000), the PBAC considered BOT likely cost-effective at the proposed price provided the remaining uncertainty was adequately addressed with the RSA.
	6. The PBAC noted that despite a reduction in price from the March 2021 submission (see paragraph 4.7) the estimated total cost to the PBS/RPBS presented in the resubmission increased due to the assumption of higher uptake rates (see paragraph 4.14). The PBAC noted the revised uptake rates provided in the pre-PBAC response ('''''% in year 1, with a cumulative uptake of ''''''% by year 6; see Table 5). However, the PBAC considered uptake rates of 15% in Year 1 increasing to 50% in Year 6 appropriate and consistent with March 2021 DUSC advice. The PBAC considered the estimates based on these uptake rates as outlined in Table 6 were an appropriate basis for financial expenditure caps for a RSA.
	7. The PBAC noted the resubmission proposed a '''''% rebate for use exceeding the financial caps based on arguments that (i) many, if not all, of the remaining uncertainties relating to the cost-effectiveness of BOT have been incorporated in the reduced price; (ii) there is no risk of use in a broader patient population because all adult patients with a diagnosis of EoE are eligible for BOT; and (iii) there is minimal risk of use in non-responding patients because response rates are close to 90% for induction of histologic remission. The PBAC considered that substantial uncertainty relating to the cost-effectiveness of BOT remained as outlined in paragraph 5.5. The PBAC accepted that there may be a limited risk of use in a broader population, but noted that there is a risk of use in non-responding patients, both following induction (with 15.3% of patients not achieving clinicohistologic remission over 12 weeks (Table 4, budesonide PSD, March 2021 PBAC meeting)) and in the longer term (15% of patients failed to maintain histological remission at 48 weeks (paragraph 6.38, budesonide PSD, March 2021 PBAC meeting)). Thus, the PBAC considered the proposed rebate of ''''''% did not adequately manage the remaining uncertainties associated with the cost-effectiveness and potential use, and reiterated that a rebate close to '''''''% was appropriate.
	8. The PBAC recommended that BOT should not be treated as interchangeable with any other drugs.
	9. The PBAC advised that BOT is not suitable for prescribing by nurse practitioners.
	10. The PBAC recommended that the Early Supply Rule should not apply.
	11. The PBAC found that the criteria prescribed by the National Health (Pharmaceuticals and Vaccines – Cost Recovery) Regulations 2009 for Pricing Pathway A were not met. Specifically, the PBAC found that in the circumstances of its recommendation for BOT:
2. The treatment is expected to provide a substantial and clinically relevant improvement in efficacy over alternative therapies on the basis of the clinical evidence considered at the March 2021 meeting (see paragraph 7.4, budesonide PSD, March 2021 PBAC meeting).
3. The treatment is not expected to address an urgent unmet clinical need, as while the PBAC considered there to be a high unmet need, other treatments are used in clinical practice in Australia currently (see paragraph 4.7, budesonide PSD, March 2021 PBAC meeting).
4. It was not necessary to make a finding in relation to whether it would be in the public interest for the subsequent pricing application to be progressed under Pricing Pathway A because one or more of the preceding tests had failed.
	1. The PBAC noted that this submission is not eligible for an Independent Review as it received a positive recommendation.

**Outcome:**

Recommended

1. Recommended listing
	1. Add new medicinal product as follows:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **MEDICINAL PRODUCTmedicinal product pack** | **PBS item code** | **Max. qty packs** | **Max. qty units** | **№.of****Rpts** | **Available brands** |
| BUDESONIDE |
| budesonide 1 mg orally disintegrating tablet, 90 | NEW | 1 | 90 | 1 | Jorveza |
|  |
| **Restriction Summary [new] / Treatment of Concept: [new]** |
|  | **Category / Program:** GENERAL – General Schedule (Code GE)  |
| **Prescriber type:** [x] Medical Practitioners |
| **Restriction type:** [x] Authority Required – immediate/real time assessment by Services Australia (telephone/online) |
|  | **Condition:** Eosinophilic oesophagitis |
| **Indication:** Eosinophilic oesophagitis |
|  | **Treatment Phase:** Initial treatment – Induction of remission |
|  | **Clinical criteria:** |
|  | Patient must have a history of symptoms of oesophageal dysfunction.  |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must have eosinophilic infiltration of the oesophagus, demonstrated by oesophageal biopsy specimens obtained by endoscopy confirming the presence of at least 15 eosinophils in at least one high powered field (hpf); corresponding to approximately 60 eosinophils per mm2 hpf. |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must not receive more than 90 days of treatment under this restriction |
|  | **Treatment criteria:** |
|  | Must be treated by a gastroenterologist. |
|  | **Prescribing criteria:** |
|  | Applications for treatment of this condition must be received within 12 weeks of biopsy. |
|  | **Prescribing Instruction**: Symptoms of oesophageal dysfunction include at least one of the following: dysphasia, odynophagia, transient or self-cleared food impaction, chest pain, epigastric discomfort, vomiting/regurgitation. |
|  | **Prescribing Instruction:** Diagnostic sensitivity increases with the number of biopsies and is optimised after taking at least eight biopsies (minimum of four collected from each of the mid and distal segments, with the distal segment biopsies taken at least 5 cm above the gastroesophageal junction).  |
|  | **Prescribing Instruction:** A histologic assessment of the oesophageal biopsy should be planned for approximately 8 weeks after the initiation of the first PBS-subsidised treatment with this drug under this restriction, and no later than 2 weeks prior to the patient completing the PBS subsidised initial treatment course, to determine the patient’s eligibility for “continuing therapy” and to avoid an interruption to supply. |
|  | **Administrative Advice:** |
|  | No increase in the maximum number of repeats may be authorised. |
|  | **Administrative Advice:** |
|  | No increase in the maximum quantity or number of units may be authorised. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **MEDICINAL PRODUCT****medicinal product pack** | **PBS item code** | **Max. qty packs** | **Max. qty units** | **№.of Rpts** | **Available brands** |
| BUDESONIDE |
| budesonide 0.5 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Jorveza |
| budesonide 1 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Jorveza |
|  |
| **Restriction Summary [new] / Treatment of Concept: [new]** |
|  | **Category / Program:** GENERAL – General Schedule (Code GE)  |
| **Prescriber type:** [x] Medical Practitioners |
| **Restriction type:** [x] Authority Required – immediate/real time assessment by Services Australia (telephone/online) |
|  | **Condition:** Eosinophilic oesophagitis |
| **Indication:** Eosinophilic oesophagitis |
|  | **Treatment Phase:** First continuing treatment – confirmation of remission |
|  | **Clinical criteria:** |
|  | Patient must have previously received PBS-subsidised initial treatment with this drug for this condition in this treatment cycle. |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must have documented evidence of having achieved histologic remission while receiving initial PBS-subsidised treatment with this drug for this condition, defined as a peak eosinophil count of less than 5 eosinophils per high power field (hpf), corresponding to less than 16 eosinophils per mm2 hpfon oesophageal biopsy; |
|  | **AND** |
|  | **Treatment criteria:** |
|  | Must be treated by a gastroenterologist. |
|  | **Prescribing instruction:** Histologic assessment should be based on the peak eosinophils count derived from the evaluation of at least eight oesophageal biopsies (minimum of four collected from each of the mid and distal segments, with the distal segment biopsies taken at least 5 cm above the gastroesophageal junction).The histologic assessment should, where possible, be performed by the same physician who confirmed the diagnosis of EoE in the patient. This assessment, which will be used to determine eligibility for continuing treatment, should be conducted and submitted after the patient has completed 8 weeks of their initial treatment course and no later than 2 weeks prior to the patient completing their PBS subsidised initial treatment course, to avoid an interruption to supply. Where a histologic assessment is not undertaken and the results submitted, the patient will be not be eligible for ongoing treatment. |
|  | **Administrative Advice:** |
|  | No increase in the maximum number of repeats may be authorised. |
|  | **Administrative Advice:** |
|  | No increase in the maximum quantity or number of units may be authorised. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **MEDICINAL PRODUCT****medicinal product pack** | **PBS item code** | **Max. qty packs** | **Max. qty units** | **№.of Rpts** | **Available brands** |
| BUDESONIDE |
| budesonide 0.5 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Jorveza |
| budesonide 1 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Jorveza |
|  |
| **Restriction Summary [new] / Treatment of Concept: [new]** |
|  | **Category / Program:** GENERAL – General Schedule (Code GE)  |
| **Prescriber type:** [x] Medical Practitioners |
| **Restriction type:** [x] Authority Required – immediate/real time assessment by Services Australia (telephone/online) |
|  | **Condition:** Eosinophilic oesophagitis |
| **Indication:** Eosinophilic oesophagitis |
|  | **Treatment Phase:** Subsequent continuing treatment – maintenance of remission |
|  | **Clinical criteria:** |
|  | Patient must have previously received PBS-subsidised treatment with this drug for this condition under the First continuing treatment restriction. |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must have demonstrated an adequate response to treatment with this drug for this condition in this treatment cycle. |
|  | **Treatment criteria:** |
|  | Must be treated by a gastroenterologist or in consultation with a gastroenterologist. |
|  | **Administrative Advice:** |
|  | No increase in the maximum number of repeats may be authorised. |
|  | **Administrative Advice:** |
|  | No increase in the maximum quantity or number of units may be authorised. |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **MEDICINAL PRODUCT****medicinal product pack** | **PBS item code** | **Max. qty packs** | **Max. qty units** | **№.of Rpts** | **Available brands** |
| BUDESONIDE |
| budesonide 0.5 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Jorveza |
| budesonide 1 mg orally disintegrating tablet, 60 | NEW | 1 | 60 | 5 | Jorveza |
|  |
| **Restriction Summary [new] / Treatment of Concept: [new]** |
|  | **Category / Program:** GENERAL – General Schedule (Code GE)  |
| **Prescriber type:** [x] Medical Practitioners |
| **Restriction type:** [x] Authority Required – immediate/real time assessment by Services Australia (telephone/online) |
|  | **Condition:** Eosinophilic oesophagitis |
| **Indication:** Eosinophilic oesophagitis |
|  | Treatment Phase: Transitioning from non-PBS to PBS subsided treatment - Grandfather treatment |
|  | **Clinical criteria:** |
|  | Patient must have previously received non-PBS-subsidised treatment with this drug for this condition prior to [X date]. |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must be receiving treatment with this drug for this condition at the time of application |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must have had, prior to commencement of this drug, a history of symptoms of oesophageal dysfunction.  |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must have had, prior to commencement of this drug, eosinophilic infiltration of the oesophagus, demonstrated by oesophageal biopsy specimens obtained by endoscopy confirming the presence of at least 15 eosinophils in at least one high powered field (hpf); corresponding to approximately 60 eosinophils per mm2 hpf. |
|  | **AND** |
|  | **Clinical criteria:** |
|  | Patient must have documented evidence that they are currently in histologic remission, where remission is defined as a peak eosinophil count of less than 5 eosinophils per high power field (hpf); corresponding to less than 16 eosinophils per mm2 hpf on oesophageal biopsy. |
|  | **AND** |
|  | **Treatment criteria:** |
|  | Must be treated by a gastroenterologist. |
|  | **AND** |
|  | **Prescribing criteria:**  |
|  | Applications for PBS-subsidised treatment with this drug for this condition under this listing must be received within 12 weeks of the biopsy. |
|  | **AND** |
|  | **Prescribing criteria:** |
|  | A Grandfathered patient may qualify for PBS-subsidised treatment under this restriction once only. For continuing PBS-subsidised treatment, a Grandfathered patient must qualify under the continuing treatment criteria. |
|  | **Prescribing instruction**: Symptoms of oesophageal dysfunction include at least one of the following: dysphasia, odynophagia, transient or self-cleared food impaction, chest pain, epigastric discomfort, vomiting/regurgitation. |
|  | **Prescribing instruction:** Histologic assessment should be based on the peak eosinophils count derived from the evaluation of at least eight oesophageal biopsies (minimum of four collected from each of the mid and distal segments, with the distal segment biopsies taken at least 5 cm above the gastroesophageal junction).The histologic assessment should, where possible, be performed by the same physician who confirmed the diagnosis of EoE in the patient. Where a histologic assessment is not undertaken and the results submitted, the patient will not be eligible for ongoing treatment. |
|  | **Administrative Advice:** |
|  | No increase in the maximum number of repeats may be authorised. |
|  | **Administrative Advice:** |
|  | No increase in the maximum quantity or number of units may be authorised. |
|  | **Administrative Advice:** |
|  | This grandfather restriction will cease to operate from 12 months after the date specified in the clinical criteria. |

***This restriction may be subject to further review. Should there be any changes made to the restriction the sponsor will be informed.***

1. Context for Decision

The PBAC helps decide whether and, if so, how medicines should be subsidised through the Pharmaceutical Benefits Scheme (PBS) in Australia. It considers applications regarding the listing of medicines on the PBS and provides advice about other matters relating to the operation of the PBS in this context. A PBAC decision in relation to PBS listings does not necessarily represent a final PBAC view about the merits of the medicine or the circumstances in which it should be made available through the PBS. The PBAC welcomes applications containing new information at any time.

1. Sponsor’s Comment

Dr Falk Pharma Australia welcomes the PBAC decision to recommend the PBS listing of budesonide orally disintegrating tablets (Jorveza®) for adult patients with eosinophilic oesophagitis (EoE). We will work with the Department to resolve any outstanding matters to ensure the listing will be finalised to allow this important treatment be made available to sufferers of this chronic condition.

1. Corrigendum

The following changes were made:

|  |  |
| --- | --- |
| **Change made** | **Date of revision** |
| Paragraph 5.10 – Changed from the PBAC recommended that the Early Supply Rule ‘should apply’ to ‘should not apply’.  | April 2022 |