7.10 Sacituzumab govitecan,
Powder for injection 180 mg,
Trodelvy®,
Gilead Sciences PTY LIMITED

1. Purpose
	1. The early re-entry resubmission requested a Section 100 (efficient funding of chemotherapy) listing for sacituzumab govitecan (SG) for the treatment of adult patients with unresectable locally advanced or metastatic hormone receptor positive (HR+), human epidermal growth factor receptor 2 (HER2) negative (HR+/HER2-) breast cancer, who have previously received at least two prior chemotherapeutic regimens.
	2. The resubmission was based on the PBAC decision to not recommend SG for patients with unresectable locally advanced or metastatic HR+/HER2- breast cancer, who have previously received at least two systemic therapies, one of which may have been in the neoadjuvant/adjuvant setting at its July 2023 meeting. Table 1 outlines the issues raised by the PBAC in July 2023 and how these issues were addressed in the resubmission.

**Table 1: Summary of key matters to be addressed**

| Matter of concern | Response | Addressed? |
| --- | --- | --- |
| **Revision to the proposed restriction** |
| The PBAC considered that the restriction for SG should reflect the inclusion criteria for TROPiCS-02 of at least two prior chemotherapy regimens in the metastatic setting (para 7.4, SG PSD, July 2023 PBAC meeting). | The revised restriction includes a criterion restricting treatment to patients with progressed diseased after receiving treatment with at least two prior chemotherapeutic regimens in the unresectable, locally advanced, or metastatic setting. | Yes |
| The PBAC considered that the submission’s proposed place in therapy as the second- or third-line systemic treatment for mBC was not appropriate as it was not consistent with the pivotal trial (TROPiCS-02). The PBAC considered that the listing of SG should reflect use as the fourth or later line systemic treatment (including endocrine therapy), consistent with the eligibility criteria of the TROPiCS-02 trial (para 7.3, SG PSD, July 2023 PBAC meeting). | The revised restriction remains somewhat broader than the TROPiCS-02 trial inclusion criteria. | Not fully |
| **Revision of inputs to the economic evaluation** |
| The model used a 10-year time horizon, however the PBAC considered if the proposed PBS population is aligned to the TROPiCS-02 trial a time horizon of 5 years would be more appropriate for the heavily pre-treated population (para 7.9, SG PSD, July 2023 PBAC meeting). | The resubmission reduced the time horizon applied in the previous economic evaluation from 10 years to 7 years. | Not fully |
| KM data was only used up to 13.1 months, however KM estimates up to 30 months still contain a sufficient number of patients at risk to give reliable estimates. The PBAC considered that use of KM data up to 30 months was consistent with the preferred approach as outlined in the PBAC guidelines (para 7.9, SG PSD, July 2023 PBAC meeting). | The data truncation point for overall survival KM data was increased from 13.1 months to 30 months.  | Yes |
| The economic model used KM TTD data from TROPiCS-02 up to the mean follow-up time (13.1 months). The PBAC considered that as TTD data were mature TTD data without extrapolation should have been used (para 7.9, SG PSD, July 2023 PBAC meeting). | The data truncation point for TTD in the resubmission remains unchanged (13.1 months). | No |
| QoL data were captured in the TROPiCS-02 trial, however the base case of the July 2023 economic model included health state utilities that were sourced from the economic evaluation of SG vs TPC for mTNBC. The PBAC considered that the economic model should apply utility values from the TROPiCS-02 trial and considered that utilities in TNBC not applicable to the HR+ setting (para 7.9, SG PSD, July 2023 PBAC meeting). | The resubmission sourced health state utility values from the TROPiCS-02 trial. | Yes |
| The PBAC considered that the use of treatment specific utilities was poorly justified in the July 2023 submission (para 7.9, SG PSD, July 2023 PBAC meeting). | The resubmission applied treatment specific utility values for the PF health state and pooled utility values for the PD health state. Additionally, adverse event (AE) disutilities, based on published literature, were applied. | Not fully |
| The submission assumed vial sharing would occur in the base case analysis for SG and the comparator drugs. The PBAC considered that the economic model should include wastage as this would be expected to occur in practice (para 7.9, SG PSD, July 2023 PBAC meeting). | The assumption of vial sharing remained unchanged in the resubmission. | No |
| The model included subsequent treatment with SG for 8% of patients in the TPC arm. The PBAC considered this was not reasonable as SG is not currently available in the proposed setting for this indication (para 7.9, SG PSD, July 2023 PBAC meeting).  | The resubmission removed SG from the subsequent treatment mix for the TPC arm and proportionally re-distributed it to other subsequent treatments. | Yes |
| The economic model assumed all patients receive subsequent therapies despite only 66% and 60% of patients in the SG and TPC arms, respectively, receiving subsequent treatment in the key trial. The PBAC considered that the proportions observed in the trial should be applied to the economic model (para 7.9, SG PSD, July 2023 PBAC meeting). | The resubmission applies the cost of subsequent treatment to 66% and 60% of patients in the SG and TPC arms, respectively. | Yes |
| The PBAC noted that when reasonable changes were applied to the model the ICER increased to ||||1 per QALY gained. The PBAC considered that at an ICER of $75,000 per QALY would be acceptably cost-effective and noted that this would require a substantial price reduction (para 7.10, SG PSD, July 2023 PBAC meeting). | The revised base case ICER is ||||2 per QALY gained. A price reduction was not proposed in the resubmission.The base case does not address all matters of concern previously raised by the PBAC (above). It is therefore likely that the ICER remains underestimated. When inputs are varied in multivariate analysis to be in line with previous PBAC advice, the ICER increases by 45%, from ||||2 to ||||1 per QALY gained. Based on this analysis, a reduction in the dispensed price per dose from $|||| to $|||| (- ||||%) is required to be in line with the ICER the PBAC considered would be acceptably cost-effective ($75,000 per QALY). The Pre-PBAC response maintained that the inputs applied in the resubmission’s economic model were appropriate. | No |
| **Revision to the financial estimates** |
| The PBAC considered that estimating the proportion of patients with Stage III/IV disease (incident or progressed) is complex and uncertain as it involved a number of steps with limited and dated data. The PBAC considered that a more robust approach would be to use the number of incident patients treated with CDK4/6 inhibitors for HR+/HER2- mBC. The PBAC considered that around 60% would be in the 4th line or later of therapy and therefore eligible for SG (paras 6.59, 7.11, SG PSD, July 2023 PBAC meeting).  | The resubmission revised the incident population of the financial estimates to reflect patients initiating CDK4/6 inhibitors (palbociclib, ribociclib and abemaciclib) based on PBS data. It was assumed that 60% of patients were in the 4th line or later line of therapy and therefore eligible for SG. | Yes |
| The updated financial estimates provided in the PSCR applied the cost of the mean dose per patient with no drug wastage (as applied in the economic model i.e., $|||| at effective SG price). The PBAC previously considered that, as for the economic model, wastage should be accounted for in the financial estimates (7.11 SG PSD, July 2023 PBAC meeting). | The assumption of vial sharing/no drug wastage remained unchanged in the resubmission.  | No |
| The PBAC considered the PSCR revised uptake rates (73% in Year 1, increasing to 78% in Year 2 and 85% in Year 3 and thereafter) were too high given the toxicity of SG and considered the submission’s uptake rates were more reasonable (65% in Year 1, increasing to 75% by Year 3) (para 7.11, SG PSD, July 2023 PBAC meeting). | The uptake rates for SG in the resubmission were those used in the July 2023 submission. | Yes |

Source: 7.09 sacituzumab govitecan PBAC Public Summary Document (PSD), July 2023 PBAC meeting.

HR+, hormone receptor positive; ICER, incremental cost-effectiveness ratio; KM, Kaplan-Meier; mBC, metastatic breast cancer; mTNBC, metastatic triple negative breast cancer; PD, progressed disease; PF, progression free; PFS, progression free survival; PSCR, pre-sub committee response; QoL, quality of life; SG, sacituzumab govitecan; TNBC, triple negative breast cancer; TPC, treatment of physician’s choice; TTD, time to treatment discontinuation

*The redacted values correspond to the following ranges:*

*1 $155,000 to < $255,000*

*2 $95,000 to < $115,000*

1. Background
	1. SG was TGA registered on 10 July 2023 for the following indication:

‘TRODELVY is indicated for the treatment of adult patients with unresectable locally advanced or metastatic hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)- negative (IHC 0, IHC 1+ or IHC 2+/ISH–) breast cancer who have received endocrine-based therapy (including a CDK4/6 inhibitor) and at least two additional systemic therapies in the locally advanced or metastatic setting.’

* 1. SG is also TGA-approved for the treatment of adult patients with unresectable locally advanced or metastatic triple-negative breast cancer (mTNBC) who have received at least two prior systemic therapies, including at least one prior therapy for locally advanced or metastatic disease.
	2. The PICO from the July 2023 submission is presented in Table 2.

Table 2:Key components of the clinical issue addressed by the submission (as stated in the July 2023 submission)

| Component | Description |
| --- | --- |
| Population | Treatment of patients with unresectable locally advanced or metastatic hormone receptive positive (HR+), human epidermal growth factor receptor 2 negative (HER2-) breast cancer, who have previously received at least 2 systemic therapies, one of which may have been in the neoadjuvant/adjuvant setting |
| Intervention | Sacituzumab govitecan (SG; TRODELVY®) |
| Comparator | Single-agent treatment of physician’s choice (TPC), consisting of eribulin, capecitabine, gemcitabine or vinorelbine. |
| Outcomes | * Overall survival
* Progression-free survival
* Objective response rate
* Duration of response
* Time to progression
* Quality of life
* Safety
 |
| Clinical claim | Sacituzumab govitecan is superior in terms of efficacy with a known and manageable safety profile compared to TPC. |

Source: Table 1.1-1, p11 of the July 2023 submission.

TPC, treatment of physician’s choice

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

1. Requested listing
	1. The resubmission’s revised restriction is outlined below. Suggestions and additions proposed by the Secretariat are added in italics and suggested deletions are crossed out with strikethrough.

|  |  |  |  |
| --- | --- | --- | --- |
| **MEDICINAL PRODUCT****Form** | **Dispensed Price Max Amount** | **Max. Amount** | **№.of Rpts** |
| SACITUZUMAB GOVITECANInjection  | Published price$10,480.75 (public)$10,669.53 (private)Effective price$|(public)$|(private) | 1,200 mg | 7 initial13 continuing |
| **Available brands**  |
| Trodelvy(sacituzumab govitecan 180 mg injection, 1 vial) |
|  |
| **Restriction Summary [new] / Treatment of Concept: [new]**  |
| **Category / Program:** Section 100 – Efficient Funding of Chemotherapy Public/Private hospitals  |
| **Prescriber type:** Medical Practitioners  |
| **Restriction type:** Authority Required (STREAMLINED)  |
| Prescribing rule level | **Administrative Advice:** Special Pricing Arrangements apply. |
| **Administrative Advice:** No increase in the maximum number of repeats may be authorised. |
| **Caution:** This medicine contains a cytotoxic component and causes chemotherapy-like toxicity, in particular, it can cause severe or life-threatening neutropenia and severe diarrhoea. For further information, refer to the Product Information. |
| **Severity:** Unresectable locally advanced or metastatic |
| **Condition:** Breast cancer |
| **Indication:** Unresectable locally advanced or metastatic breast cancer |
|  |
| **Treatment phase: Initial treatment** |
| **Clinical criteria:** |
| Patient must have developed progressive disease after receiving treatment with at least two prior chemotherapeutic regimens in *either of the following settings:* ~~the~~ *(i)* unresectable locally advanced, ~~or~~ *(ii)* metastatic setting |
| **AND** |
| **Clinical criteria:** |
| The condition must be hormone receptor positive |
| **AND** |
| **Clinical criteria:** |
| The condition must be human epidermal growth factor receptor 2 (HER2) negative(defined as immunohistochemical (IHC) test score of 0, 1+, or 2+ and negative on in situ hybridization (ISH) test) |
| **AND** |
| **Clinical criteria:** |
| The condition must be inoperable |
| **AND** |
| **Clinical criteria:** |
| The treatment must be the sole PBS-subsidised therapy for this PBS indication |
| **AND** |
| **Clinical criteria:** |
| Patient must have a World Health Organisation (WHO) Eastern Cooperative Oncology Group (ECOG) performance status score of no higher than 1 prior to treatment initiation |
|  |
| **Treatment Phase: Continuing treatment** |
| **Clinical criteria:** |
| Patient must have previously received PBS-subsidised treatment with this drug for this condition, |
| **AND** |
| **Clinical criteria:** |
| Patient must not have developed disease progression while being treated with this drug for this condition |
| **AND** |
| **Clinical criteria:** |
| The treatment must be the sole PBS-subsidised therapy for this PBS indication |

* 1. The maximum amount proposed in the resubmission has been reduced from 1,620 mg to 1,200 mg. This is consistent with the PBS listing of SG in the mTNBC setting.
	2. The submission requested a published ex-manufacturer price (EMP) per 180 mg vial of $1,484.59 and an effective EMP of $| |. This is unchanged from the original submission. The published and effective dispensed prices for maximum amount (DPMA) have been recalculated to account for the change in maximum amount (1,620 mg to 1,200 mg) and the updated PBS mark-ups and dispensing fees (1 July 2023).
	3. The resubmission made amendments to the previously considered PBS restriction in response to the following PBAC recommendations:
* The PBAC considered that the restriction for SG should reflect the inclusion criteria for TROPiCS-02 of at least two prior chemotherapy regimens in the metastatic setting (para 7.4, SG Public Summary Document (PSD), July 2023 PBAC meeting).
* The PBAC noted that there was little evidence for treatment of patients with locally advanced disease, however considered that it may be appropriate for the small number of patients in this category to be included in the restriction, consistent with the TNBC restriction (para 7.4, SG PSD, July 2023 PBAC meeting).
* The PBS listing for SG in the mTNBC setting includes a caution regarding toxicity and the PBAC considered this information should also be included as a caution in the HR+/HER2- restriction (para 7.4, SG PSD, July 2023 PBAC meeting).
* The PBAC considered the proposed initial treatment restrictions could be amended to allow patients who have been treated with non-PBS subsidised supply to qualify for treatment, such that a separate grandfather listing is not required (para 3.9, SG PSD, July 2023 PBAC meeting).
	1. The PBAC noted that the resubmission’s revised listing of SG restricts treatment to patients who develop progressive disease after receiving treatment with at least two prior chemotherapeutic regimens in the unresectable, locally advanced, or metastatic setting. The PBAC considered that this amendment to the restriction accurately reflects the population of the TROPiCS-02 trial and therefore addresses the Committee’s previous concerns.
	2. The revised restriction remains somewhat broader than the TROPiCS-02 trial inclusion criteria, which states:
* Patient should have been previously treated with at least 1 taxane, 1 prior anticancer hormonal treatment, and at least 1 CDK 4/6 inhibitor, in any setting;
* Refractory to or relapsed after at least 2 but no more than 4 prior systemic chemotherapy regimens for metastatic disease; and
* Adjuvant or neoadjuvant therapy for early-stage disease qualified as 1 of the required prior chemotherapy regimens if the development of unresectable, locally advanced, or metastatic disease occurred within a 12-month period of time of the therapy.

The PBAC considered that it would be unlikely for a patient to receive SG prior to endocrine therapy (ET), as it is an effective and less toxic treatment option compared to SG in the HR+ MBC setting. Furthermore, the PBAC considered that it was unlikely that a patient who had not received a CDK 4/6 inhibitor would be considered fit for SG. For these reasons, the PBAC considered the omission of the above TROPiCS-02 trial inclusion criteria was likely reasonable.

* 1. The resubmission stated that to further ensure the patient population is consistent with TROPiCS-02 population, a definition for HER2 status had been amended, from that previously proposed by the sponsor, ‘immunohistochemical (IHC) test score of 0 and 1+; and IHC test score of 2+ and negative on in situ hybridization (ISH) test)’, to ‘immunohistochemical (IHC) test score of 0, 1+, or 2+ and negative on in situ hybridization (ISH) test)’. The definition used for the TROPiCS-02 trial was ‘IHC ≤ 2+ or fluorescence in situ hybridization negative’. However, it was previously considered that a definition for HER2 status was unnecessarily restrictive and therefore it was previously suggested by the Secretariat that the definition be removed. The PBAC noted the Pre-PBAC response reiterated that a definition for HER2 status is required to ensure the patient population is consistent with the TROPiCS-02 population. The Response considered that a definition for HER2 status was an important aspect of the PBS restriction to retain, as HER2 expression is increasingly being recognised as a spectrum of expression rather than a dichotomous attribute between HER2-positive and HER2-negative cancer, and therefore a definition including assessment criteria would ensure patients eligible for treatment will be able to access SG now and into the future. The PBAC considered that this was reasonable.
	2. The PBAC noted the restriction type proposed for SG was Authority Required (Streamlined) and a caution was included in the restriction stating that the medicine contains a cytotoxic component and causes chemotherapy-like toxicity, in particular, it can cause severe or life-threatening neutropenia and severe diarrhoea. The PBAC noted that these components of the restriction were consistent with triple negative BC listing of SG and considered these were 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 recalled it had previously received input from 4 Consumer Group Organisations (So Brave, Breast Cancer Network Australia [BCNA], Centre for Community-Driven Research [CCDR] and Pink Hope) (para 6.2, SG PSD, July 2023 PBAC meeting) and noted and welcomed further input from these organisations via the Consumer Comments facility on the PBS website. The organisations highlighted there remains a clinical need for additional treatment options for patients with unresectable locally advanced or metastatic HR+/HER2- breast cancer and reiterated their strong and continued support for the PBS listing of SG for these patients. The Organisations emphasised that the demonstrated improved progression-free survival and overall survival rates for patients treated with SG are highly valuable to patients with metastatic breast cancer and reiterated that the private cost of SG represents a significant financial barrier that currently prevents many Australians from accessing this treatment option.
	2. The CCDR conducted a structured interview of 52 people diagnosed with HR+ breast cancer. The CCDR stated that the participants interviewed expressed the view that future treatment options should be associated with fewer or less severe side effects, a lower cost burden, be more effective, and more accessible. The CCDR noted that there was no evidence to suggest that women with metastatic disease did not value or were not seeking treatment and care options, despite often having a poor prognosis.
	3. The PBAC noted that the Medical Oncology Group of Australia (MOGA) expressed its strong support for the SG submission, categorising it as one of the therapies of “highest priority for PBS listing”. The PBAC noted that the MOGA presented a European Society for Medical Oncology Magnitude of Clinical Benefit Scale (ESMO-MCBS) for SG, which was limited to 4 (out of a maximum of 5, where 5 and 4 represent the grades with substantial improvement)[[1]](#footnote-2). The PBAC noted that the ESMO-MCBS grading had increased compared to the July 2023 submission, which had been limited to 3 (para 6.3, SG PSD, July 2023 PBAC meeting). The PBAC considered that the revised rating of 4 appeared inconsistent with a Grade 1 rating for overall survival (HR > 0.70 OR < 1.5 months).

Clinical evaluation

* 1. No additional clinical evidence was provided.
	2. The PBAC previously considered that subgroup analyses by type of chemotherapy agent indicated that the observed superiority of SG over TPC may have been driven by the relatively larger benefit of SG over vinorelbine, which is usually used as a later line of therapy than other TPCs (eribulin, capecitabine, gemcitabine) (para 7.7, SG PSD, July 2023 PBAC meeting). The resubmission stated that TPC was required to be specified prior to randomisation by the investigator and was included as a stratification factor in TROPiCS-02 to ensure that patients who were candidates for vinorelbine (and each of the other TPC agents) were balanced between the two arms and that the overall comparison of the SG and TPC arms would be valid. The resubmission claimed the analysis by matched pre-specified chemotherapy agents showed that the observed benefit of SG compared with each of eribulin, gemcitabine, and vinorelbine, is greater than that reported in the subgroup analyses and is greater than the OS gain reported in the ITT population. The submission argued that while the data is not as favourable for SG in patients pre-specified for capecitabine, this is not unexpected as capecitabine is generally used as a first-line chemotherapeutic agent in Australia for HR+/HER2- mBC patients and SG is now positioned after two prior chemotherapeutic regimens, and further argued that the patient numbers for this analysis were small (approximately 20 patients in each arm).

Clinical claim

* 1. The PBAC reaffirmed that based on the available data, the claim that SG is of superior comparative effectiveness to TPC was supported.
	2. The PBAC also reaffirmed its previously expressed view that SG was associated with inferior comparative safety.

Economic analysis

* 1. As an early re-entry resubmission, the economic analysis has not been independently evaluated. The updated TROPiCS-02 data provided in the Pre-Sub-Committee Response (PSCR) to the July 2023 submission (mean follow up of 14.4 months versus 13.1 months in the submission) were not incorporated into the economic model for the resubmission. There was minimal difference in the OS reported at the two data cuts (HR=0.788; 95%CI: 0.652, 0.952 for the December 2022 data cut versus HR=0.789; 95%CI: 0.646, 0.964 for the July 2022 data cut).
	2. The resubmission stated that all the unit costs of the drugs and health care resources quantified based on AR-DRG, MBS, and PBS codes were updated as of 1 July 2023.
	3. The resubmission’s model maintained the use of the maximum quantity of 1,620 mg. The resubmission stated the use of a 1,200 mg maximum quantity would underestimate the cost in the model. When wastage was not incorporated, using a maximum quantity of 1,200 mg resulted in an increase in the cost per dose from $| | to $| |. When wastage was included there was no difference in the cost per dose from changing the maximum quantity ($| |).

Time horizon

* 1. The resubmission reduced the time horizon from 10 years to 7 years. This is not consistent with previous PBAC advice. The PBAC previously considered if the proposed PBS population is aligned to the TROPiCS-02 trial a time horizon of 5 years would be more appropriate for a heavily pre-treated population (para 7.9, SG PSD, July 2023 PBAC meeting).
	2. The resubmission provided two justifications for the extended time horizon:
* The resubmission argued that the PBAC previously considered a 7-year time horizon was appropriate in its consideration of everolimus for this setting (Section 10, everolimus PSD, March 2013 PBAC meeting). The PBAC noted that the everolimus submission sought listing for post-menopausal women with HR+/HER2- advanced breast cancer after failure of an aromatase inhibitor (letrozole or anastrozole), therefore it would be considered earlier in the clinical pathway compared with SG. The PBAC also noted that the clinical claim for the everolimus submission was based on the BOLERO-2 trial, which included patients earlier in the MBC disease course compared to patients in the TROPiCS-02 trial, as only 26% of patients had received chemotherapy for metastatic disease compared to all patients in the TROPiCS-02 trial that were refractory to or relapsed after at least 2 chemotherapy regimens for metastatic disease.
* The resubmission further argued that the model predicts 5.8% of SG patients remain alive at 5 years using the log-logistic distribution and argued that this should be a sufficient basis for a longer time horizon. The PBAC noted that the pre-PBAC response reiterated this point, and also noted that updated survival data, although not included in the economic model, were more mature and consistent with the log-logistic extrapolation. However, the PBAC noted that the modelled extrapolation of OS for patients treated with SG beyond 30 months was uncertain and was not a sufficient basis for use of a time horizon beyond 5 years.

Kaplan-Meier overall survival data truncation point

* 1. The data truncation point for overall survival was increased from 13.1 months to 30 months. This is consistent with previous PBAC advice (para 7.9, SG PSD, July 2023 PBAC meeting).
	2. The KM OS data with projected extrapolation over the modelled time horizon (84 months [7 years]) is shown in Figure 1.

Figure 1: Projected overall survival and KM OS data



Source: Trodelvy HRHER2 mBC August 2023 Resubmission Economic Model.xlsm

KM: Kaplan-Meier; OS: overall survival; TPC, treatment of physician’s choice

Kaplan-Meier TTD data truncation point

* 1. The July 2023 economic model applied TTD KM data from TROPiCS-02 up to the mean follow-up time (13.1 months), then dependent exponential distributions were used for parametric extrapolation over the remaining time horizon. The PBAC previously considered that as TTD data were mature (2% and 1% of patients remaining on treatment in the SG and TPC arms at the end of the observed period), TTD data without extrapolation should be used (para 7.9, SG PSD, July 2023 PBAC meeting). The data truncation point for TTD in the resubmission remains unchanged.
	2. The PBAC noted the resubmission argued that the KM estimates become unreliable towards the tail of the curve as very few patients remained at risk. The resubmission argued that the chosen data truncation point was consistent with the PBAC guidelines that state that KM data may be extrapolated using parametric function from the point where there are a small number of patients remaining at risk and the observed data is no longer reliable. The resubmission also noted that the impact of using only KM estimates for treatment duration on the incremental cost-effectiveness ratio was small (2% increase). The PBAC reiterated that given the TTD data were mature, the economic model should include the complete KM curve without extrapolation and noted that in this case low patient numbers at risk does not indicate that the data are no longer reliable, as very few patients remain on treatment.

Quality-of-life data

* 1. Health-related QoL data were captured in the TROPiCS-02 trial, however the base case of the July 2023 economic model included health state utilities that were sourced from the economic evaluation of SG vs TPC for mTNBC. The PBAC previously considered that the economic model should apply utility values from the TROPiCS-02 trial and considered that utilities in TNBC were not applicable to the HR+ setting (para 7.9, SG PSD, July 2023 PBAC meeting). The resubmission applied health state utility values that were based on the TROPiCS-02 trial (progression free (PF) state utility SG = 0.793; TPC = 0.768 and PD state utility for both arms 0.738). Use of utility values from the TROPiCS-02 trial is consistent with previous PBAC advice (para 7.9, SG PSD, July 2023 PBAC meeting).
	2. The July 2023 submission applied treatment-specific utilities for the PF health state across the two treatment arms. The PBAC previously accepted treatment-specific PFS utilities in the mTNBC setting due to consumer comments outlining the value of additional survival in this patient population (para 7.14, sacituzumab govitecan PSD, March 2022 PBAC Meeting), however considered that this may not be applicable in the HR+ setting, given the differences in patient/disease characteristics and available treatment options between mTNBC and metastatic HR+/HER2- breast cancer. Overall, the PBAC previously considered that the use of treatment specific utilities was poorly justified in the July 2023 submission (paras 6.42-6.43, 7.9, SG PSD, July 2023 PBAC meeting).
	3. The resubmission maintained use of treatment-specific utility values for the PF health state. Additionally, adverse event (AE) disutilities, based on published literature, were also applied in the resubmission. The resubmission argued that applying treatment specific utilities for the PF health state is consistent with the economic model accepted by the PBAC for SG in mTNBC, where the same comparator treatment mix was used. Additionally, consistent with the ASCENT clinical trial for mTNBC, statistically significantly longer time to first deterioration in the EORTC QLQ-C30 global health status/QoL (HR: 0.751; 95% CI: 0.612, 0.922; P = 0.0059) and fatigue domains (HR: 0.732; 95% CI: 0.598, 0.894; P = 0.0021) was demonstrated in the SG group versus the TPC group in TROPiCS-02. Hence, the resubmission considered it was appropriate to apply treatment specific utilities to the PF health state of the economic model. The PBAC recalled that SG was associated with higher rates of adverse events and inferior safety compared with TPC (para 7.8, SG PSD, July 2023 PBAC meeting) and considered that the resubmission had not provided evidence to suggest that SG was associated with higher utility in the PF health state compared with TPC and advised that a pooled utility for PF was more appropriate.

Vial wastage

* 1. The July 2023 submission assumed vial sharing would occur in the base case analysis for SG and the comparator drugs. However, it is stated in the draft Product Information (PI) for SG that ‘The product is for use in one patient on one occasion only. Discard any unused portion’ (p1), suggesting wastage is likely to occur. The PBAC previously agreed with ESC and the evaluation that the economic model for SG should include wastage as this would be expected to occur in practice (paras 6.45, 7.9, SG PSD, July 2023 PBAC meeting). The assumption of vial sharing remained unchanged in the resubmission.
	2. The resubmission acknowledged that the assumption of no wastage may not be consistent with the current PBAC Guidelines, however considered that it remained consistent with the real-world utilisation of SG and particularly the real-world utilisation of products provided via compounders. The resubmission stated that a comparison of internal sales data and PBS utilisation data confirmed that vial-sharing of SG is standard practice for mTNBC and is expected to be for the HR+ population.
	3. The resubmission reiterated that the assumption of no drug wastage was accepted by the PBAC in the submission for SG for mTNBC and that the Review of the Efficient Funding of Chemotherapy (Interim Report July 2022) stated that vial-sharing is critical to minimise drug wastage and is fundamental to compounder viability (p17). Further, a publication on the Australian consensus guidelines for the safe handling of parenteral monoclonal antibodies (MAbs) for cancer treatment by healthcare personnel states that vial sharing is widely practiced[[2]](#footnote-3). It is noted that this publication also states that good practice recommendations and pharmaceutical product information sheets state that opened or used vials should not be shared. Risks pertain both to the possibility of cross-contamination between shared vials prepared for immediate use and to the storage of vials (stability, sterility and expiry) for use at a later time or date.
	4. The PBAC reaffirmed its position in July 2023 that the economic model should include wastage (paras 6.45, 7.9, SG PSD, July 2023 PBAC meeting), consistent with the PBAC Guidelines.

Subsequent treatment

* 1. The July 2023 economic model included the cost of subsequent treatments once patients experienced disease progression. The treatments received and the duration of treatment that was observed in the TROPiCS-02 trial was applied to the economic model. It was assumed that 8% of patients in the TPC arm would receive subsequent treatment with SG. The PBAC considered this was not reasonable as SG is not currently available in the proposed setting for this indication (paras 6.47, 7.9, SG PSD, July 2023 PBAC meeting). The resubmission removed SG from the subsequent treatment mix for the TPC arm and proportionally re-distributed treatment with SG to other subsequent treatments. However, the resubmission highlighted that removing the cost associated with SG as a subsequent treatment for the TPC arm without removing the contribution to the outcome would likely lead to an overestimate of the overall survival associated with the TPC arm.
	2. The PBAC previously considered it was not appropriate that all patients in the economic model were assumed to receive subsequent therapies despite only 66% and 60% of patients in the SG and TPC arms, respectively, receiving subsequent treatment in the key trial. The PBAC considered that applying the proportions observed in the trial to the economic model would be appropriate (paras 6.47, 7.9, SG PSD, July 2023 PBAC meeting). In line with this advice, the resubmission applies the cost of subsequent treatment to 66% and 60% of patients in the SG and TPC arms, respectively. However, the resubmission stated that with further follow-up additional patients would be expected to receive subsequent therapy in each arm.

Revised cost-effectiveness results

* 1. A comparison of the cost-effectiveness results of the resubmission and the July 2023 submission is presented in Table 3.

Table 3: Summary of the revised cost-effectiveness

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **SG** | **TPC** | **Increment** | **ICER** |
| November 2023 resubmission |
| Total cost |  | | $50,049 |  | |  |
| LYs | 1.62 | 1.36 | 0.26 |  　|　1 |
| QALYs | 1.23 | 1.01 | 0.22 |  　|　2 |
| July 2023 economic model |
| Total cost |  | | $53,424 |  | |  |
| LYs | 1.75 | 1.39 | 0.36 |  　|　3 |
| QALYs | 1.16 | 0.87 | 0.29 |  　|　1 |

Source: SG PSD, July 2023 PBAC meeting; Trodelvy HRHER2 mBC August 2023 Resubmission Economic Model.xlsm

ICER, incremental cost-effectiveness ratio; LYs, life years; SG, sacituzumab govitecan; TPC, treatment of physician’s choice; QALYs, Quality adjusted life years

*The redacted values correspond to the following ranges:*

*1 $75,000 to < $95,000*

*2 $95,000 to < $115,000*

*3 $55,000 to < $75,000*

* 1. The PBAC previously noted that the base case ICER of the July 2023 submission ($75,000 to < $95,000 per QALY gained) was substantially underestimated and uncertain. The PBAC noted that when reasonable changes were applied to the model the ICER increased to $155,000 to < $255,000 per QALY gained. The PBAC previously considered that at an ICER of $75,000 per QALY would be acceptably cost-effective and noted that this would require a substantial price reduction (para 7.10, SG PSD, July 2023 PBAC meeting). The ICER for the base case economic model presented in the resubmission was greater than $75,000 per QALY ($95,000 to < $115,000). The base case did not address a number of matters of concern previously raised by the PBAC (para 7.9, SG PSD, July 2023 PBAC meeting). The PBAC considered that the ICER remains high and underestimated.
	2. The resubmission stated that the presented ICER should be considered as cost-effective for the proposed HR+/HER2- breast cancer patient population; a heavily pre-treated population with a high risk of disease progression and mortality who have a high clinical need for therapy.
	3. Sensitivity analyses aligned to previous PBAC advice, conducted by the Secretariat, are shown in Table 4.
	4. The PBAC previously considered that at an ICER of $75,000 per QALY would be acceptably cost-effective and noted that this would require a substantial price reduction (para 7.10, SG PSD, July 2023 PBAC meeting). When inputs are varied in multivariate analysis to be in line with previous PBAC advice, the ICER increases by 45%, from $95,000 to < $115,000 to $155,000 to < $255,000 per QALY gained. Based on this analysis, a reduction in the dispensed price per dose from $| | (including wastage) to $| | (-| |%) would be required for an ICER of $75,000 per QALY gained.
	5. The Pre-PBAC response maintained the inputs applied in the resubmission’s economic model were appropriate and considered that $95,000 to < $115,000 per QALY was an acceptably cost-effective ICER for SG in the HR+/HER2- mBC setting.

Table 4: Sensitivity analyses

| Analyses | Incremental cost | Incremental QALY | ICER | % Change |
| --- | --- | --- | --- | --- |
| Base case |  　|　 | 0.22 |  ||1 |  ||| |
| Time horizon (base case: 7 years) |
| 5 years #1 |  　|　 | 0.20 |  ||2 |  ||| |
| TTD truncation point (base case: 13.1 months) |
| 20 months |  　|　 | 0.22 |  ||2 |  ||| |
| All KM data #4 |  　|　 | 0.22 |  ||2 |  ||| |
| PFS utility values (base case: SG = 0.793; TPC = 0.768) |
| SG = 0.793; TPC = 0.793 |  　|　 | 0.21 |  ||2 |  ||| |
| SG = 0.768; TPC = 0.768 |  　|　 | 0.20 |  ||2 |  ||| |
| SG = 0.782; TPC = 0.782 (pooled) #3 |  　|　 | 0.20 |  ||2 |  ||| |
| Disutilities for grade 3/4 AEs (base case = included) |
| Disutilities removed |  　|　 | 0.22 |  ||1 | - || |
| Vial sharing/wastage for SG and TPC (base case = included) |
| No vial sharing #2 |  　|　 | 0.22 |  ||3 |  ||| |
| Multivariate Analyses |
| #1, #2 |  　|　 | 0.20 |  ||3 |  ||| |
| #1, #2, #3 |  　|　 | 0.19 |  ||4 |  ||| |
| #1, #2, #3, #4 |  　|　 | 0.19 |  ||4 |  ||| |

Source: Trodelvy HRHER2 mBC August 2023 Resubmission Economic Model.xlsm

*The redacted values correspond to the following ranges:*

*1 $95,000 to < $115,000*

*2 $115,000 to < $135,000*

*3 $135,000 to < $155,000*

*4 $155,000 to < $255,000*

Drug cost/patient/course

* 1. The resubmission’s economic model estimated the total undiscounted cost for SG of $| | per patient, per course. This assumes a cost per dose of $| | (no drug wastage), based on a weighted cost with mean weight of 68.3 (standard deviation 15.57). The total cost is similar to that estimated in the July 2023 submission ($| |).
	2. The resubmission’s financial model estimated a cost per patient, per course of $| |, based on mean treatment duration of 6.08 months (17.64 scripts) and a cost per dose of $| | (no drug wastage).

Estimated PBS usage & financial implications

Proportion of patients eligible for SG

* 1. The resubmission revised the incident population of the financial estimates to reflect patients initiating CDK4/6 inhibitors (palbociclib, ribociclib and abemaciclib) based on PBS data. This is in line with previous PBAC advice (paras 6.59, 7.11, SG PSD, July 2023 PBAC meeting).
	2. The 10% PBS sample was used to estimate the annual (January to December) number of patients who were initiated on a CDK4/6 inhibitor between 2018 and 2022. Forecasting was linearly extrapolated to estimate patient numbers for 2024 (year 1) to 2029 (year 6). Annual growth rates for incident CDK4/6 inhibitors appear to be slowing (see “CDK4-6 10% PBS Data” worksheet, resubmission financial estimates), with only 0.5% year-on-year growth between 2022 and 2021. Linear extrapolations are likely to overestimate the patient numbers, especially in the later years of the estimates. It may be more appropriate to assume the number of patients will stabilise over the forward estimates.
	3. It was assumed that 60% of patients were in the 4th line or later line of therapy and therefore eligible for SG. This is in line with previous PBAC advice (para 6.59, 7.11, SG PSD, July 2023 PBAC meeting). The revised number of eligible HR+/HER2- unresectable locally advanced or metastatic disease patients was estimated to be 500 to < 5,000 (reduced from 500 to < 5,000) in Year 1 increasing to 500 to < 5,000 (reduced from 500 to < 5,000) in Year 6 (not including grandfathered patients = < 500 in Year 1).

Uptake rates

* 1. The PBAC previously considered the PSCR revised uptake rates (73% in Year 1, increasing to 78% in Year 2 and 85% in Year 3 and thereafter) were too high given the toxicity of SG and considered the submission’s uptake rates were more reasonable (65% in Year 1, increasing to 75% by Year 3) (para 7.11, SG PSD, July 2023 PBAC meeting). In line with this advice, the uptake rates for SG in the resubmission were changed back to those used in the July 2023 submission.

Grandfathered patients

* 1. It was noted by the previous evaluation that grandfathered patients were not explicitly included in the financial analysis of the July 2023 submission, as they were assumed to be captured in the incident population. Therefore, the evaluation considered that patients who would enrol in the patient access program in mid-2023 were unlikely to be captured in the financial estimates (para 6.66, SG PSD, July 2023 PBAC meeting). The resubmission included 60 patients in Year 2024 to account for the assumed total number of grandfathered patients in this year. The inclusion of additional Grandfather patients is likely to overestimate the year 1 patient numbers as these patients would already be captured in the estimate of patients treated with CDK4/6 inhibitors.

Drug wastage

* 1. For the calculation of SG cost per dose and for the cost of treatments impacted, no drug wastage was considered. This is not in line with previous PBAC advice. The PBAC previously considered that, as for the economic model, wastage should be accounted for in the financial estimates (7.11 SG PSD, July 2023 PBAC meeting).

Updated cost to PBS and RPBS

* 1. Amendment to the proportion of patients eligible for SG and uptake rates in the resubmission led to a reduced number of patients treated and scripts dispensed (Table 5). The total patients treated with SG was estimated to be 500 to < 5,000 in Year 1 increasing to 500 to < 5,000 in Year 6, this was reduced from 500 to < 5,000 in Year 1 and 500 to < 5,000 in Year 6, estimated in the PSCR to the July 2023 submission. The resulting net cost of SG to the PBS/RPBS was estimated to be $20 million to < $30 million in Year 1 increasing to $30 million to < $40 million in Year 6, this was reduced from an estimated $60 million to < $70 million in Year 1 and $70 million to < $80 million in Year 6 from the PSCR to the July 2023 submission. These estimates do not include drug wastage.
	2. A sensitivity analysis, conducted by the Secretariat, removing the assumption of vial sharing is shown below.

Table 5: Revised estimated use and financial implications

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **2024** | **2025** | **2026** | **2027** | **2028** | **2029** |
| Incident patients |  　|　1 |  　|　1 |  　|　1 |  　|　1 |  　|　1 |  　|　1 |
| Grandfathered patients |  　|　2 |  　|　2 |  　|　2 |  　|　2 |  　|　2 |  　|　2 |
| **Total patients** |  **|**1 |  **|**1 |  **|**1 |  **|**1 |  **|**1 |  **|**1 |
| No. scripts (17.64 per patient) |  　|　3 |  　|　3 |  　|　4 |  　|　4 |  　|　4 |  　|　4 |
| **Net costs (no wastage)** |
| Cost of SG to PBS/RPBS, less patient co-pays ($|||| per script)  |  　|　5 |  　|　5 |  　|　6 |  　|　6 |  　|　6 |  　|　6 |
| Net Reduction to RPBS/PBS less co-pays for the affected medicines |  　|　7 |  　|　7 |  　|　7 |  　|　7 |  　|　7 |  　|　7 |
| **Net cost to the PBS/RPBS** |  **|**5 |  **|**5 |  **|**5 |  **|**5 |  **|**6 |  **|**6 |
| **Net costs – including wastage** |
| Cost to the PBS/RPBS of SGa (incl. wastage) |  　|　6 |  　|　6 |  　|　 |  　|　8 |  　|　8 |  　|　8 |
| Reduction in cost to the PBS/RPBS for affected scriptsb (incl. wastage) |  　|　7 |  　|　7 |  　|　7 |  　|　7 |  　|　7 |  　|　7 |
| **Net cost to the PBS/RPBS (incl. wastage)** |  **|**5 |  **|**6 |  **|**6 |  **|**6 |  **|**6 |  **|**8 |

a Cost per SG script revised from $| |to $| |

b Cost per eribulin script revised from $643.06 to $797.03, cost per vinorelbine script revised from $110.64 to $161.89 and cost per gemcitabine script revised from $129.90 to $176.29

*The redacted values correspond to the following ranges:*

*1 500 to < 5,000*

*2 < 500*

*3 10,000 to < 20,000*

*4 20,000 to < 30,000*

*5 $20 million to < $30 million*

*6 $30 million to < $40 million*

*7 net cost saving*

*8 $40 million to < $50 million*

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

1. PBAC Outcome
	1. The PBAC did not recommend the listing of sacituzumab govitecan (SG), for the treatment of adult patients with unresectable locally advanced or metastatic hormone receptor positive (HR+), human epidermal growth factor receptor 2 (HER2) negative (HR+/HER2-) breast cancer, who have previously received at least two prior chemotherapeutic regimens. In making this recommendation, the PBAC considered that the changes made to the proposed restriction of SG appropriately reflected the inclusion criteria for the TROPiCS-02 trial and accepted that there is a moderate clinical need for new and effective therapies in this indication. The PBAC considered that SG provided a clinical benefit with a significant improvement in progression free survival (PFS) and overall survival (OS) compared with treatment of physician’s choice (TPC). However, the PBAC noted that revised economic evaluation had not addressed a number of the Committee’s previous concerns. The PBAC considered that the incremental cost-effectiveness ratio (ICER) remained underestimated and SG was not cost-effective at the price proposed in the submission.
	2. The PBAC considered that the key reason for this outcome was due to the economic evaluation provided.
	3. The PBAC noted the input received from consumer and medical organisations expressing their continued support for the listing of SG and emphasising the need for additional treatment options for this condition. The PBAC also noted that the input maintained that the improved PFS and OS demonstrated for patients treated with SG would be highly valuable to people with metastatic breast cancer and that the private cost of SG remained a financial barrier to patients.
	4. Noting that there are multiple therapies currently available in the HR+ metastatic breast cancer setting, and that patients are able to receive several lines of effective therapies with existing PBS listed medicines, the PBAC considered there remained a moderate clinical need for effective treatments for patients with this condition.
	5. The PBAC noted the changes made by the sponsor to the proposed restriction (see paragraphs 3.4−3.8). The PBAC noted that the revised restriction had been amended to restrict treatment to patients who develop progressive disease after receiving treatment with at least two prior chemotherapeutic regimens in the unresectable, locally advanced, or metastatic setting. The PBAC considered that this change accurately reflected the population of the TROPiCS-02 trial and addresses the Committee’s previous concerns, and overall considered the revised restriction was acceptable.
	6. The PBAC reaffirmed its view expressed in July 2023 that the nominated comparator of TPC was appropriate and that TPC would include eribulin, capecitabine, gemcitabine and vinorelbine but may also include other drugs (para 7.5, SG PSD, July 2023 PBAC meeting).
	7. The PBAC noted, as for the July 2023 submission, the clinical claim was based on the TROPiCS-02 trial, an open label, randomised comparison of SG and TPC. The PBAC recalled it previously considered that the clinical claim of superior efficacy was reasonable, though the magnitude of benefit is modest and likely to depend on the applicability of the trial population to the Australian PBS population (para 7.7, SG PSD, July 2023 PBAC meeting). The PBAC reaffirmed that based on the available data, the clinical claim of superior efficacy was reasonable.
	8. The PBAC recalled that in TROPiCS-02 the SG arm had higher rates of grade 3 or higher treatment emergent adverse events (TEAEs), treatment related TEAEs, treatment emergent treatment related SAEs, and TEAEs leading to dose interruption or discontinuation. Overall, the PBAC reaffirmed its view from July 2023 that SG has inferior safety compared with TPC (para 7.8, SG PSD, July 2023 PBAC meeting).
	9. The PBAC noted that the resubmission provided a revised economic model that incorporated a number of changes that were in line with its previous advice (para 7.9, SG PSD, July 2023 PBAC meeting). However, the PBAC noted there were issues previously raised that were not addressed in the revised economic model, including:
* The resubmission applied a 7-year time horizon to the economic evaluation (paras 4.12−4.13). The PBAC reaffirmed its view expressed in July 2023, that if the proposed PBS population is aligned to the TROPiCS-02 trial a time horizon of 5 years would be more appropriate for the heavily pre-treated population (para 7.9, SG PSD, July 2023 PBAC meeting).
* The economic model used Kaplan-Meier (KM) time to discontinuation (TTD) data from the TROPiCS-02 trial up to the mean follow-up time (13.1 months) (paras 4.16−4.17). However, the PBAC maintained that as TTD data were mature, the economic model should include the complete KM curve without extrapolation (para 7.9, SG PSD, July 2023 PBAC meeting), and noted that in this case low patient numbers at risk indicates the data are robust, as few patients remain on treatment.
* The resubmission applied treatment specific utility values for the progression free (PF) health state (paras 4.19−4.20). The PBAC noted that SG was associated with higher rates of adverse events and inferior safety compared with TPC (para 5.8) and considered that the resubmission had not provided evidence to suggest that SG was associated with higher utility in the PF health state compared with TPC and therefore a pooled utility for PF was more appropriate.
* The economic model applied an assumption of vial sharing for SG and comparator drugs (paras 4.21−4.23). The PBAC reaffirmed its position in July 2023 that the economic model should include wastage, consistent with the PBAC Guidelines (paras 6.45, 7.9, SG PSD, July 2023 PBAC meeting).
	1. The PBAC noted that the revised base case ICER was $95,000 to < $115,000 per QALY gained and that a price reduction was not proposed in the resubmission. Noting the outstanding issues described above, the Committee considered that the ICER remained underestimated. The PBAC noted that, with changes applied as above, the ICER increased to $155,000 to < $255,000 per QALY gained. The PBAC reiterated that SG was not cost-effective at the proposed price.
	2. The PBAC recalled it previously considered that SG would be acceptably cost-effective at a price resulting in an ICER of $75,000 per QALY. However, the PBAC revised its previous advice and considered that a base case ICER of $45,000-$50,000 per QALY gained would be more appropriate in the HR+/HER2- population, based on previous considerations in similar patient populations (i.e., eribulin, CDK4/6 inhibitors) and recognising the moderate clinical need. The PBAC recalled it had recommended pembrolizumab and SG for triple negative breast cancer (TNBC) with higher ICERs but noted TNBC was an aggressive condition, with poorer survival and fewer treatment options. The PBAC also recalled it had recommended trastuzumab deruxtecan (T-DXd) for HER2+ breast cancer with a higher ICER but noted HER2+ was an aggressive condition and the relative benefit of treatment was substantially higher.
	3. The PBAC noted that the resubmission had revised the incident population of the financial estimates to reflect patients initiating CDK4/6 inhibitors (palbociclib, ribociclib and abemaciclib) based on PBS data, and reduced the uptake rates consistent with the July 2023 submission (65% in Year 1, increasing to 75% by Year 3). The PBAC considered the changes made in the resubmission to the financial estimates were appropriate and in line with previous advice (para 7.11, SG PSD, July 2023 PBAC meeting). However, the PBAC noted that the revised estimates did not account for wastage. As above, the PBAC reaffirmed its view that the financial estimates should include wastage.
	4. The PBAC considered any resubmission needs to address the outstanding issues related to the economic evaluation and financial estimates. The resubmission may be lodged at any future standard due date for PBAC submissions using the standard re‑entry pathway.
	5. The PBAC noted that this submission is eligible for an Independent review.

**Outcome:**

Not recommended

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

Gilead Sciences is disappointed by this decision as we believe Australians living with metastatic breast cancer need new treatment options. We wish to thank the many patient organisations and clinicians who took the time to submit consumer comments in support of our submission.

1. Cherny NI, Dafni U, Bogaerts J, et al: ESMO-Magnitude of Clinical Benefit Scale version 1.1. Annals of Oncology 28:2340-2366, 2017 [↑](#footnote-ref-2)
2. Alexander M, King J, Bajel A, Doecke C, Fox P, Lingaratnam S, Mellor JD, Nicholson L, Roos I, Saunders T, Wilkes J, Zielinski R, Byrne J, MacMillan K, Mollo A, Kirsa S, Green M. Australian consensus guidelines for the safe handling of monoclonal antibodies for cancer treatment by healthcare personnel. Intern Med J. 2014 Oct;44(10):1018-26. [↑](#footnote-ref-3)