PHARMACEUTICAL BENEFITS ADVISORY COMMITTEE (PBAC) MEETING OUTCOMES
JULY 2022 PBAC MEETING

The PBAC outcomes and recommendations are presented in alphabetical order by drug name.

DRUG NAME, FORM(S), STRENGTH(S), SPONSOR, TYPE OF SUBMISSION	DRUG TYPE AND USE	LISTING REQUESTED BY SPONSOR / PURPOSE OF SUBMISSION	PBAC OUTCOME	
ADALIMUMAB Injection 40 mg in 0.4 mL pre-filled pen Injection 40 mg in 0.4 mL pre-filled syringe Yuflyma® Celltrion Healthcare Australia Pty Ltd Category 3 submission (New PBS listing)	Severe Crohn disease Moderate to severe ulcerative colitis Severe active juvenile idiopathic arthritis Complex refractory fistulising Crohn disease Severe active rheumatoid arthritis Severe psoriatic arthritis Ankylosing spondylitis Severe chronic plaque psoriasis Moderate to severe hidradenitis suppurativa	To request listing of adalimumab biosimilar under the same conditions as its reference biologic.	Recommended	The PBAC recommended the Authority Required listing of adalimumab (Yuflyma®) in the form of 40 mg in 0.4 mL pre-filled syringe (PFS) and pre-filled pen (PFP) as a biosimilar brand of Humira®. The PBAC's recommendation for listing was based on, among other matters, its assessment that the cost effectiveness of Yuflyma® would be acceptable if it were cost minimised to Humira® for the same indications. The PBAC advised that Yuflyma® and Humira® PFS should be treated as equivalent to each other; and Yuflyma® and Humira® PFP should be treated as equivalent to each other for the purposes of substitution. The PBAC advised that Yuflyma® and Amgevita®, Hadlima®, Hyrimoz® and Idacio® PFP should be treated as equivalent to each other; and Yuflyma® and Amgevita®, Hadlima®, Hyrimoz® and Idacio® PFS should be treated as equivalent to each other for the purposes of substitution.
ANIFROLUMAB Solution concentrate for I.V. infusion 300 mg in 2 mL Saphnelo® AstraZeneca Pty Ltd Category 1 submission (New PBS listing)	Systemic lupus erythematosus	To request a Section 100 (Highly Specialised Drugs Program) Authority Required listing for the treatment of patients with severe systemic lupus erythematosus with a high degree of disease activity despite standard therapy.	Not Recommended	The PBAC did not recommend the listing of anifrolumab for patients with severe systemic lupus erythematosus who have high disease activity despite standard of care. The PBAC acknowledged there is a clinical need in the requested patient population. However, the PBAC considered the magnitude of benefit was modest and uncertain, and the incremental cost-effectiveness ratio was underestimated and highly uncertain. <u>Sponsor Comment:</u> The sponsor had no comment.

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APALUTAMIDE Tablet 60 mg Erlyand® Janssen-Cilag Pty Ltd Standard re-entry submission (Change to recommended PBS listing)	Prostate cancer	Resubmission to request a General Schedule Authority Required listing for the treatment of patients with metastatic hormone-sensitive prostate cancer who have low volume disease, or who have high-volume disease and are too frail for chemotherapy.	Recommended	The PBAC recommended apalutamide for the treatment of metastatic hormone sensitive prostate cancer (mHSPC). The PBAC considered that apalutamide plus androgen deprivation therapy (ADT) provides a moderate clinical benefit for patients with mHSPC compared to ADT alone. While the resubmission had proposed that apalutamide be used in patients with low volume (LV) disease and those with high volume (HV) disease who were unsuitable for treatment with docetaxel, the PBAC recommended apalutamide for use in patients with mHSPC regardless of disease volume or suitability for docetaxel. The PBAC noted that although the economic model presented in the resubmission incorporated a number of revisions suggested by the PBAC in November 2021, the overall survival curves were not converged, and the duration of NHA therapy for metastatic castrate resistant prostate cancer (mCRPC) was potentially overestimated. Incorporating these changes increased the incremental cost-effectiveness ratios (ICERs) and a price reduction is required for apalutamide to be considered cost-effective with ICERs within the range of $35,000 to < $45,000 to $45,000 to < $55,000 per QALY. The PBAC considered that the proposed risk sharing arrangement adequately managed the risk that patients would remain on apalutamide for longer than estimated based on the TITAN trial and the risk that use in patients with HV disease suitable for docetaxel would not be cost-effective.

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ASCIMINIB Tablet 20 mg Tablet 40 mg Scemblix® Novartis Pharmaceuticals Australia Pty Limited Category 1 submission (New PBS listing)	Chronic myeloid leukaemia	To request a General Schedule Authority Required listing for the treatment of patients with Philadelphia chromosome-positive chronic myeloid leukaemia in chronic phase previously treated with two or more tyrosine kinase inhibitors.	Not Recommended	The PBAC did not recommend the listing of asciminib for the treatment of patients with Philadelphia chromosome-positive chronic myeloid leukaemia in chronic phase, who had been previously treated with two or more tyrosine kinase inhibitors (TKIs). The PBAC considered that the claim of non-inferior effectiveness of asciminib compared with nilotinib is likely supported, despite the uncertainty associated with the unanchored, unadjusted indirect treatment comparison. However, it considered that the claim of non-inferior effectiveness of asciminib compared with ponatinib was not supported based on the comparisons presented in the submission. Further, it considered that the available data do not support the claim of superior safety to either nilotinib or ponatinib. The PBAC considered that a reasonable basis for establishing a cost effective price for asciminib would be benchmarking against the second generation TKIs. The PBAC considered the financial estimates to be unreliable. <u>Sponsor Comment:</u> Novartis are committed to working with the PBAC to achieve sustainable PBS listing conditions and timely Scemblix® (asciminib) access for chronic myeloid leukaemia patients.

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ATEZOLIZUMAB Solution concentrate for I.V. infusion 840 mg in 14 mL Solution concentrate for I.V. infusion 1200 mg in 20 mL Tecentriq® Roche Products Pty Ltd Category 2 submission (Change to PBS listing)	Non-small cell lung cancer (NSCLC)	To request a Section 100 (Efficient Funding of Chemotherapy Program) Authority Required listing as adjuvant treatment in patients with programmed cell death ligand-1 (PD-L1) positive Stage II-IIIA NSCLC following complete resection and platinum-based chemotherapy.	Recommended	The PBAC recommended the listing of atezolizumab for the adjuvant treatment of patients with Stage II to IIIA non-small cell lung cancer (NSCLC) whose tumours have PD-L1 expression on ≥ 50% of tumour cells and following a complete resection and no progression after platinum-based adjuvant chemotherapy. The PBAC's recommendation for listing was based on, among other matters, its assessment that the cost-effectiveness of atezolizumab would be acceptable at the price proposed in the submission. The PBAC recommended that the additional expenditure associated with atezolizumab in this population (taking into account the reduced use of immunotherapy in the advanced/ metastatic setting) could be added to the current risk sharing arrangement in place for immunotherapies for NSCLC.

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AZACITIDINE Tablet 200 mg Tablet 300 mg Onureg® Celgene Pty Limited Category 2 submission (New PBS listing)	Acute myeloid leukaemia (AML)	To request a General Schedule Authority Required listing for maintenance therapy in certain patients with AML who are not candidates for, including those who choose not to proceed to, haematopoietic stem cell transplantation.	Not Recommended	The PBAC did not recommend oral azacitidine as maintenance therapy in patients with acute myeloid leukaemia (AML) who achieve complete remission or complete remission with incomplete blood count recovery following induction chemotherapy with or without consolidation treatment, and who are not candidates for, including those who choose not to proceed to, haematopoietic stem cell transplantation. The PBAC noted the high unmet clinical need for AML treatments and was satisfied that oral azacitidine provides, for some patients, a significant improvement in efficacy, including improved overall survival and relapse free survival. However, the PBAC considered that changes to the economic model parameters would be required to achieve acceptable incremental cost-effectiveness. Further, the PBAC considered that the financial implications were overestimated. The PBAC nominated the Early Resolution resubmission pathway for this item. <u>Sponsor Comment:</u> The Sponsor welcomes the PBAC's decision to resubmit via an early resolution pathway and looks forward to continuing to work with the PBAC and the Department of Health to provide access of oral azacitidine (Onureg) to patients.

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BECLOMETASONE WITH FORMOTEROL Pressurised inhalation containing beclometasone dipropionate 200 micrograms and formoterol fumarate dihydrate 6 micrograms per dose, 120 doses Fostair® 200/6 Chiesi Australia Pty Ltd Category 2 submission (New PBS listing)	Asthma	To request a General Schedule Authority Required listing for the treatment of asthma in certain patients previously treated with oral corticosteroids or optimal doses of inhaled corticosteroids.	Recommended	The PBAC recommended an Authority Required listing for Fostair® 200/6 µg metered dose inhaler (MDI), a fixed dose combination (FDC) of beclometasone (BEC), an inhaled corticosteroid (ICS), with formoterol (FOR), a long-acting beta agonist (LABA), as maintenance treatment for asthma. The PBAC considered the claim of non-inferior effectiveness and safety to the FDC of fluticasone propionate with salmeterol (FP/SAL 500/50 µg, two inhalations daily and 250/25 µg, four actuations daily) was reasonable. However, the PBAC considered for purposes of satisfying Section 101(3B) of the *National Health Act 1953*, any high dose ICS with LABA FDCs are relevant alternative therapies. The PBAC's recommendation for listing was therefore based on, among other matters, its assessment that the cost-effectiveness for BEC/FOR 200/6 µg would be acceptable if it was cost-minimised against the least costly high dose ICS/LABA FDC.

CANNABIDIOL Oral liquid 100 mg per mL, 100 mL Epidyolex® Chiesi Australia Pty Ltd Early re-entry submission (Change to PBS listing)	Lennox-Gastaut syndrome (LGS)	Resubmission to request a General Schedule Authority Required listing for the adjunctive treatment of seizures in patients with LGS aged 2 years and older.	Not Recommended	The PBAC did not recommend the listing of cannabidiol for the treatment of LGS in patients who have not achieved adequate seizure control with at least two other anti-epileptic drugs (AEDs), as the incremental cost-effectiveness ratio (ICER) was unacceptably high at the requested price. The previous submissions were considered in July 2020, November 2020 and March 2022. <u>Comparator: Standard care (unchanged from previous submission).</u> The PBAC previously considered this was reasonable. <u>Clinical claim: Cannabidiol plus standard care is superior in terms of comparative effectiveness and inferior comparative safety to placebo plus standard care (unchanged from previous submission).</u> The PBAC previously considered that cannabidiol appears to be effective for the treatment of seizures in LGS. The PBAC previously considered that cannabidiol was of inferior comparative safety to placebo. <u>Economic claim: Cost utility analysis of cannabidiol plus standard care versus placebo plus standard care.</u> The PBAC considered that the ICER of cannabidiol was unacceptably high ($75,000 to < $95,000 per quality adjusted life year gained) at the requested price. The PBAC recalled it had previously considered cannabidiol would be cost-effective for this population with an ICER less than $45,000 to < $55,000 per quality adjusted life year gained (excluding carer utilities). <u>Sponsor Comment:</u> The sponsor is extremely disappointed with the PBAC's conclusions; the sponsor submitted a model which, in the sponsor's view, was highly conservative, was consistent with PBAC advice (model structure, dose,

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				QoL impact) and resulted in considerable bias against Epidyolex. The sponsor wishes to reiterate the impact of refractory LGS on patients and their families and reiterates the benefit Epidyolex offers this high need patient group.
CEMIPLIMAB Solution for I.V. infusion 350 mg in 7 mL Libtayo® Sanofi-Aventis Australia Pty Ltd Category 2 submission (Change to recommended PBS listing)	Cervical cancer	To request a Section 100 (Efficient Funding of Chemotherapy Program) Authority Required listing for the treatment of patients with recurrent or metastatic cervical cancer with disease progression on or after chemotherapy.	Not applicable	This submission was withdrawn.
DAUNORUBICIN WITH CYTARABINE Powder for I.V. infusion containing daunorubicin 44 mg and cytarabine 100 mg Vyxeos® Jazz Pharmaceuticals ANZ Pty Ltd Category 1 submission (New PBS listing)	Acute myeloid leukemia	To request a Section 100 (Efficient Funding of Chemotherapy Program) Restricted Benefit listing for the treatment of therapy-related acute myeloid leukaemia and acute myeloid leukaemia with myelodysplasia-related changes.	Not applicable	This submission was withdrawn.

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DUPILUMAB Injection 200 mg in 1.14 mL single dose pre-filled syringe Injection 300 mg in 2 mL single dose pre-filled syringe Dupixent® Sanofi-Aventis Australia Pty Ltd Category 3 submission (Other matters)	Chronic severe atopic dermatitis	To request the PBAC consider the previously estimated utilisation for chronic severe atopic dermatitis.	Not Recommended	The PBAC advised that its previous recommendation. regarding the utilisation estimates for dupilumab for the treatment of severe atopic dermatitis in adult and adolescent patients should not be amended. The PBAC considered the proposed revisions to the previously agreed assumptions informing the financial estimates, where the submission's revised estimates were substantially higher than those previously recommended and agreed by the sponsor for listing on the PBS, were not adequately supported. The PBAC further considered that it would be premature (less than 18 months since PBS listing) to increase the agreed estimates when the available data potentially suggest that, although the initial uptake was more rapid than expected, uptake in new patients is likely to continue to reduce and utilisation over a longer time frame may be considerably less than the submission's revised estimates. <u>Sponsor Comment:</u> The Sponsor is disappointed with this outcome and considers that, in light of the recognised challenges with estimating utilisation for the first new treatment in over 20 years in a patient population with high unmet clinical need, a revision of the current utilisation estimates is both timely and appropriate. Sanofi will continue to work with the PBAC and the Department of Health and Aged Care in good faith to resolve this matter.

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EPTINEZUMAB Solution concentrate for I.V. infusion 100 mg in 1 mL Vyepti® Lundbeck Australia Pty Ltd Category 2 submission (New PBS listing)	Chronic migraine	To request a General Schedule Authority Required listing for the treatment of chronic migraine.	Recommended	The PBAC recommended the Authority Required listing of eptinezumab for the treatment of chronic migraine in patients who have experienced an inadequate response, intolerance or a contraindication to at least three prophylactic migraine medications. The PBAC's recommendation for listing was based on, among other matters, its assessment that the cost-effectiveness of eptinezumab would be acceptable if it were cost-minimised against the lowest cost alternative. The PBAC considered it was appropriate for eptinezumab to be added to the risk sharing arrangement in place for galcanezumab and fremanezumab with no increase in expenditure caps.

ESKETAMINE Nasal spray solution 28 mg in 0.2 mL Spravato® Janssen-Cilag Pty Ltd Standard re-entry submission (New PBS listing)	Depression	Resubmission to request a Section 100 (Highly Specialised Drugs Program) Authority Required listing for the treatment of treatment-resistant depression.	Not Recommended	The PBAC did not recommend the PBS listing of esketamine for the treatment of treatment-resistant depression (TRD), in patients who have failed at least two prior oral antidepressants (OADs). The PBAC considered there was a moderate to high clinical need for alternative treatment options for TRD, however considered a number of issues remained unresolved in the resubmission, including the wording of the restriction, when it would be appropriate to reduce or discontinue treatment, structure and inputs to the economic model and substantially overestimated financial impact. The PBAC acknowledged that esketamine may be an appropriate treatment option after an inadequate response to only two prior OADs for some patients; however, considered that for most patients, esketamine should be considered after additional options had been trialled or considered. The PBAC acknowledged the input from patients, clinicians and organisations, many of whom highlighted the severe impacts of TRD on everyday life and described how esketamine (and ketamine) treatment had been transformative and restored hope in their lives. The previous submission was considered in July 2021. The PBAC nominated the standard re-entry pathway for this item. <u>Comparator: Placebo (+ a new OAD)</u> The PBAC reaffirmed its previously expressed view (in July 2021) that the nominated comparator was reasonable. <u>Clinical claim: superior effectiveness and inferior safety compared with placebo (+ a new OAD)</u> The PBAC noted no new clinical evidence was provided in the resubmission.

				The PBAC considered esketamine likely provided at least a moderate benefit for some patients, however considered that for a proportion of patients there may be no clinical benefit from treatment with esketamine, with added toxicity. <u>Economic claim: cost-utility versus placebo</u> The PBAC noted a number of key changes were made to the economic model based on the previous consideration but a number of issues remained outstanding. The PBAC noted the base case economic model in the resubmission resulted in an ICER of $45,000 to < $55,000 per QALY gained. The PBAC noted the results were sensitive to a number of inputs and assumptions and sensitivity analyses resulted in a very wide range of ICERs. The PBAC considered the cost effectiveness of esketamine remained highly uncertain and not cost-effective. The PBAC noted the cost of administration of esketemine remained highly uncertain, particularly in the absence of an MBS item or alternative method to estimate the cost of administration and monitoring in practice. <u>Utilisation of esketemine in practice and equity of access issues:</u> The PBAC noted the net cost to the PBS/ RPBS of listing esketamine was estimated to be $500 million to < 600 million over the first six years of listing. The PBAC noted the resubmission estimated 500 to < 5,000 patients would initiate treatment with esketamine in year 1, increasing to 500 to < 5,000 in year 2 and 5,000 to < 10,000 in year 6 The PBAC considered the estimated number of patients likely to initiate treatment with esketamine was not

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				well justified and likely to be substantially overestimated. The PBAC noted a number of aspects of treatment, including access to psychiatrists, access to accredited treatment centres, patient reluctance given the monitoring requirements and nature of the treatment and out of pocket costs, may limit the uptake of esketamine. Additionally, the PBAC noted the estimated eligible patient population was based on the minimum prior exposure (i.e., at least two prior OADs) rather than the expected prior exposure (i.e., two to five prior OADs) which would overestimate the eligible population. The PBAC considered it would be appropriate for a stakeholder meeting to be convened to further refine the PBS restriction, discuss potential issues related to access, discuss the likely extent of use and discuss what additional information might be required to support the PBS listing of esketamine. <u>Sponsor Comment:</u> Janssen are disappointed that the PBAC did not recommend esketamine but welcome the PBAC's consideration that there is a need for treatment options for treatment resistant depression, their understanding of the severe impact of treatment resistant depression on daily life and their acceptance of the clinically meaningful benefits of esketamine. Janssen agree with the PBAC that a Stakeholder meeting would be useful to help discuss some of the remaining issues and help move towards reimbursement of this important treatment for patients. Janssen looks forward to working with the PBAC to bring SPRAVATO® (esketamine hydrochloride) to Australian patients in a timely way.

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EVOLOCUMAB Injection 140 mg in 1 mL single use pre-filled pen Injection 420 mg in 3.5 mL single use pre-filled cartridge Repatha® Amgen Australia Pty Limited Category 2 submission (Change to PBS listing)	Hypercholesterolaemia	To request a change to the low-density lipoprotein cholesterol criterion on the existing PBS evolocumab listings for hypercholesterolaemia from 2.6 mmol/L to 1.8 mmol/L, and also to extend the existing listings to allow general practitioners to initiate treatment in consultation with a specialist physician.	Recommended	The PBAC recommended extending the existing PBS listings for evolocumab for hypercholesterolaemia, to include patients who have a low density lipoprotein cholesterol (LDL-C) level between 1.8 and 2.6 mmol/L despite optimised treatment with statins and ezetimibe, and to allow initial prescribing by any medical practitioner in consultation with a specialist physician. The PBAC was satisfied that evolocumab provides, for some patients, a significant improvement in efficacy over optimised background treatment, in the extended population. The PBAC advised that the expanded LDL-C criteria were consistent with current international clinical guidelines and the expanded prescriber criteria would reduce current equity and access issues associated with initiation only by specialists. The PBAC also advised that the listing would be cost-effective at a reduced price (resulting in an incremental cost-effectiveness ratio of $15,000 to < $25,000), but that no increases to the current expenditure caps under the existing risk sharing arrangement were justified. The PBAC noted that it had previously considered relevant clinical evidence with respect to alirocumab, and recommended that these changes flow on to alirocumab listings, at established pricing relativities with evolocumab.

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FINERENONE Tablet 10 mg Tablet 20 mg Kerendia® Bayer Australia Ltd Category 2 submission (New PBS listing)	Diabetic kidney disease	To request a General Schedule Authority Required listing for patients with diabetic kidney disease.	Not Recommended	The PBAC did not recommend the PBS listing of finerenone for the treatment of diabetic kidney disease. The PBAC had low confidence (due to imprecision and heterogeneity) in the clinical evidence presented for finerenone, particularly in the incremental benefit achieved over and above standard of care (including ACE inhibitor/Angiotensin II receptor blocker and sodium–glucose co-transporter-2 (SGLT2) inhibitor treatment). It also considered that finerenone had a more limited role in clinical practice than had been suggested by the submission. The PBAC considered the economic model was unreliable, and had likely underestimated the incremental cost-effectiveness ratio, which appeared to be well above that previously accepted for similar conditions. The PBAC considered that finerenone likely had a more limited place in therapy than had been proposed in the submission, and that a claim of comparable safety to standard of care was not adequately supported by the data presented in the submission. The PBAC considered that the financial estimates presented in the submission were overestimated and that an alternate approach for estimating the eligible patient population be considered. The PBAC nominated the standard re-entry resubmission pathway for this item. <u>Sponsor Comment:</u> Bayer is disappointed by the PBAC's decision not to recommend Finerenone for the treatment of diabetes kidney disease. Bayer remains committed to working with the PBAC to find a pathway forward to bring this treatment to Australian patients in a timely manner.

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HUMAN MENOPAUSAL GONADOTROPHIN Injection 600 I.U. in 0.96 mL pre-filled multi-dose pen Injection 1200 I.U. in 1.92 mL pre-filled multi-dose pen Menopur® 600 Menopur® 1200 Ferring Pharmaceuticals Pty Limited Category 4 submission (New PBS listing)	Assisted Reproductive Technology	To request Section 100 (IVF Program) listing of a new form under the same conditions as the currently listed form of human menopausal gonadotrophin.	Recommended	The PBAC recommended the listing of 600 I.U and 1200 I.U pre-filled multi-dose pen forms of human menopausal gonadotrophin on the basis that it should be available under the Section 100 (In Vitro Fertilisation Program) as Authority Required benefits for Assisted Reproductive Technology.
LEUPRORELIN ACETATE Suspension for subcutaneous injection (modified release) containing 45 mg of leuprorelin acetate Eligard® 6 month Mundipharma Pty Limited Category 2 submission (Change to PBS listing)	Central precocious puberty	To request a General Schedule Restricted Benefit listing for the treatment of central precocious puberty.	Recommended	The PBAC recommended the listing of leuprorelin acetate 45 mg syringe for the treatment of central precocious puberty (CPP) on a cost-minimisation basis to leuprorelin acetate 30 mg modified release injection (Lucrin Paediatric®). In making this recommendation, the PBAC considered that Eligard® 6 month was non-inferior in effectiveness and safety to Lucrin Paediatric® and triptorelin embonate (Diphereline®) for the treatment of CPP. The PBAC considered that the equi-effective doses over a 1-year period were: • 2 injections of Eligard® 6 month (45 mg) ≡ 4 injections of Lucrin Paediatric® • 2 injections of Eligard® 6 month (45 mg) ≡ 2 injections of Diphereline® (22.5 mg)

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MIDAZOLAM Oromucosal solution in pre-filled syringe 2.5 mg in 0.25 mL Oromucosal solution in pre-filled syringe 5 mg in 0.5 mL Oromucosal solution in pre-filled syringe 7.5 mg in 0.75 mL Oromucosal solution in pre-filled syringe 10 mg in 1 mL Zyamis® Clinect Pty Ltd Category 2 submission (New PBS listing)	Epilepsy	To request a General Schedule Authority Required listing for the treatment of generalised convulsive status epilepticus.	Not Recommended	The PBAC did not recommended midazolam oromucosal solution for the treatment of generalised convulsive status epilepticus. The PBAC considered that the proposed population was not well defined, and that expert clinical advice would be needed to refine the PBS restriction. The PBAC noted that a number of benefits were described in the consumer comments, the ESC advice and the submission documents, including reduced time to administration of the dose, reduced risk of incorrect dosing and ease of administration for carers during the acute stressful situation of a seizure. However, the PBAC considered that the proposed price was not justified by the submission and that a price reduction would be required to achieve a cost-effective listing. The PBAC considered that revised financial estimates would be required to incorporate changes to the restriction and price, and that a risk sharing arrangement would be required due to uncertain financial estimates. The PBAC nominated the Early Re-entry resubmission pathway for this item. <u>Sponsor Comment:</u> Clinect will continue to work with the PBAC to provide access to Zyamis® for this patient group.

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NATALIZUMAB Solution concentrate for I.V. infusion 300 mg in 15 mL Tysabri® Biogen Australia Pty Ltd Committee secretariat submission (Change to PBS listing)	Multiple sclerosis	To request removal of the clinical criterion which requires neurologists prescribing natalizumab under the PBS to be registered with the Tysabri Australian Prescribing Program.	Recommended	The PBAC recommended removing the prescribing instruction 'Neurologists prescribing natalizumab under the PBS listing must be registered with the Tysabri® Australian Prescribing Program' from the circumstances under which natalizumab (Tysabri®) is available on the PBS for the treatment of clinically definite relapsing-remitting multiple sclerosis.
NIVOLUMAB Injection concentrate for I.V. infusion 40 mg in 4 mL Injection concentrate for I.V. infusion 100 mg in 10 mL Opdivo® Bristol-Myers Squibb Australia Pty Ltd Category 2 submission (Change to PBS listing)	Urothelial carcinoma	To request a Section 100 (Efficient Funding of Chemotherapy Program) Authority Required listing for adjuvant treatment of patients who have undergone radical resection of muscle invasive urothelial carcinoma originating in the bladder or upper urinary tract (renal pelvis or ureter) and are at high risk of recurrence.	Not Recommended	The PBAC did not recommend the listing of nivolumab for adjuvant treatment of patients who have undergone radical resection of muscle invasive urothelial carcinoma originating in the bladder or upper urinary tract (renal pelvis or ureter) and are at high risk of recurrence. The PBAC considered that, while a small improvement in disease free survival was demonstrated with nivolumab compared to placebo in the overall trial population, there was a strong suggestion that a benefit was observed only in patients who had received prior neoadjuvant platinum-based chemotherapy. The PBAC also noted the impact of nivolumab on overall survival was unknown. The PBAC considered that the incremental cost-effectiveness ratio was uncertain and likely underestimated, and that revisions to the structure and inputs for the economic model are required. <u>Sponsor Comment:</u> The Sponsor is committed to working with the PBAC to bring nivolumab for the adjuvant treatment of patients with high-risk muscle invasive urothelial carcinoma to Australian patients in a timely manner.

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NIVOLUMAB Injection concentrate for I.V. infusion 40 mg in 4 mL Injection concentrate for I.V. infusion 100 mg in 10 mL Opdivo® Bristol-Myers Squibb Australia Pty Ltd Category 2 submission (Change to PBS listing)	Oesophageal carcinoma or gastroesophageal junction carcinoma	To request a Section 100 (Efficient Funding of Chemotherapy Program) Authority Required listing for the adjuvant treatment of patients with oesophageal carcinoma or gastroesophageal junction carcinoma who have previously received platinum-based chemoradiotherapy and surgery.	Not Recommended	The PBAC did not recommend the listing of nivolumab for the adjuvant treatment of patients with oesophageal carcinoma (OC) or gastroesophageal junction carcinoma (GOJC) who have previously received platinum-based chemoradiotherapy and surgery. The PBAC considered nivolumab provided moderate clinical benefit over 'watch and wait' surveillance in terms of disease free survival, however it was uncertain if it provided an overall survival benefit as clinical data for this outcome was unavailable. The PBAC considered the incremental cost-effectiveness ratio (ICER) presented in the submission was highly uncertain and likely to be substantially underestimated. The PBAC considered the estimated number of patients likely to be treated was reasonable but the financial estimates should account for reduced use of immunotherapy in the advanced/metastatic treatment setting. The PBAC considered the outstanding issues could be resolved in a resubmission with a conservative economic model and a price reduction to achieve an acceptable ICER. The PBAC nominated the Early Re-entry resubmission pathway for this item. <u>Sponsor Comment:</u> The Sponsor welcomes the PBAC's decision to resubmit via an early re-entry pathway and looks forward to continuing to work with the PBAC and the Department of Health to provide access of nivolumab for the adjuvant treatment of patients with oesophageal carcinoma (OC) or gastro-oesophageal junction carcinoma (GOJC) who have received previous platinum based chemoradiotherapy (CRT) and surgery.

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OLAPARIB Tablet 100 mg Tablet 150 mg Lynparza® AstraZeneca Pty Ltd Category 1 submission (Change to PBS listing)	Ovarian cancer	To request a General Schedule Authority Required listing for use in combination with bevacizumab for maintenance therapy in patients with newly diagnosed homologous recombination deficiency (HRD) positive BRCA wild type advanced epithelial ovarian, fallopian tube or primary peritoneal cancer.	Not Recommended	The PBAC did not recommend olaparib for use in combination with bevacizumab for maintenance therapy in patients with newly diagnosed HRD positive BRCA wild type advanced epithelial ovarian, fallopian tube or primary peritoneal cancer. The PBAC considered that a clinical claim of superior efficacy was supported for olaparib with bevacizumab in the HRD positive group, compared with bevacizumab alone. The PBAC considered that olaparib with bevacizumab was inferior compared with bevacizumab alone in terms of safety. The PBAC considered that revisions to the inputs for the economic model were required so that they were consistent with those previously accepted by the PBAC for olaparib monotherapy in the BRCAm group and with these revisions the incremental cost-effectiveness ratio would increase substantially and hence a price reduction would be required for the proposed listing to be considered acceptably cost effective. The PBAC nominated the Early Re-entry re-submission pathway for this item. The PBAC noted uncertainties regarding the proposed HRD testing require MSAC advice. <u>Sponsor Comment:</u> The sponsor had no comment.

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PEGCETACOPLAN Solution for subcutaneous infusion 1,080 mg in 20 mL Empaveli® Swedish Orphan Biovitrum Pty Ltd Early re-entry submission (New PBS listing)	Paroxysmal nocturnal haemoglobinuria	Resubmission to request a Section 100 (Highly Specialised Drugs Program) Authority Required listing for the treatment of adults with paroxysmal nocturnal haemoglobinuria who have an inadequate clinical response to complement component 5 (C5) inhibitor treatment.	Recommended	The PBAC recommended the Section 100 (Highly Specialised Drugs Program), Authority Required listing for pegcetacoplan for the treatment of adults with paroxysmal nocturnal haemoglobinuria (PNH) who have inadequate clinical response or are intolerant to treatment with eculizumab or ravulizumab. The PBAC's recommendation for listing was based on, among other matters, its assessment that the cost-effectiveness of pegcetacoplan would be acceptable if it were cost-minimised against ravulizumab. The PBAC recommended pegcetacoplan be included in the current risk sharing arrangement for eculizumab and ravulizumab. The PBAC recommended potential flow on changes to the PBS restrictions for eculizumab to allow switching from PBS subsidised pegcetacoplan for pregnancy and for eculizumab and ravulizumab to allow return for patients who are intolerant/resistant to pegcetacoplan.

DRUG NAME, FORM(S), STRENGTH(S), SPONSOR, TYPE OF SUBMISSION	DRUG TYPE AND USE	LISTING REQUESTED BY SPONSOR / PURPOSE OF SUBMISSION	PBAC OUTCOME	
PEGVALIASE Solution for injection 2.5 mg in 0.5 mL Solution for injection 10 mg in 0.5 mL Solution for injection 20 mg in 1 mL Palynziq® BioMarin Pharmaceutical Australia Pty Ltd Category 1 submission (New PBS listing)	Phenylketonuria	To request a General Schedule Authority Required listing for the treatment of hyperphenylalaninemia due to phenylketonuria in patients aged 16 years and over who are not responsive to sapropterin.	Not Recommended	The PBAC did not recommend pegvaliase for the treatment of hyperphenylalaninemia (HPA) due to phenylketonuria (PKU) in patients aged 16 years and over who are not responsive to sapropterin. The PBAC considered there was a high clinical need in a small patient population, but that the sponsor's proposal to restrict use to patients who are not responsive to sapropterin was inequitable and not clinically appropriate. The PBAC also considered the magnitude of the benefit of pegvaliase was unclear, and that the cost effectiveness was uncertain and the incremental cost-effectiveness ratio was exceptionally high at the price proposed. The PBAC acknowledged the meaningful consumer support and engagement with regards to the submissions for pegvaliase and saproterin, which was also considered at the July 2022 PBAC meeting. Consumers outlined the very high clinical need for effective treatments for this condition given the impacts of high phenylalanine levels on cognitive function and psychiatric well-being. Consumers also outlined the burden of current management which involves a very restrictive diet, and the need for effective treatments that may allow patients to increase their dietary protein intake to a sustainable level. The PBAC considered that consumer input was valuable in establishing the clinical need and clinical place for pegvaliase. <u>Sponsor Comment:</u> BioMarin thanks the PBAC for acknowledging the high clinical need in this small patient population, and looks forward to working with the PBAC to identify the appropriate place for pegvaliase in the treatment of PKU, so that it can be made available on the PBS.

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PEMBROLIZUMAB Solution concentrate for I.V. infusion 100 mg in 4 mL Keytruda® Merck Sharp & Dohme (Australia) Pty Ltd Category 3 submission (Change to PBS listing)	Urothelial cancer Colorectal cancer Primary Mediastinal B-cell Lymphoma Classical Hodgkin Lymphoma	To request addition of a new dosing regimen of 400 mg every 6 weeks (Q6W) for pembrolizumab for urothelial cancer, colorectal cancer, primary mediastinal B-cell lymphoma and classical Hodgkin lymphoma indications. The submission also requested that Q6W dosing be extended to potential future pembrolizumab listings for squamous cell carcinoma of the head and neck (SCCHN) and oesophageal carcinoma which were considered by PBAC at its March 2022 meeting.	Recommended	The PBAC recommended the addition of 400 mg Q6W pembrolizumab dosing regimen for all existing and recommended pembrolizumab PBS listings. The PBAC recommended to combine Initial and Continuing treatment phases into one listing for all pembrolizumab indications except for Stage IV (metastatic) non-small cell lung cancer (NSCLC), Resected stage IIIB, IIIC, IIID malignant melanoma and Unresectable stage III, IV malignant melanoma. Further, the PBAC advised pembrolizumab for the treatment of primary mediastinal B-cell lymphoma and classical Hodgkin's lymphoma be moved to streamlined authority to be aligned with other lymphoma treatments. The PBAC considered there would be savings to the Government due to the reduced administration and dispensing costs from the fewer scripts dispensed for the Q6W dosing regimen compared to the Q3W dosing regimen.
POLYETHYLENE GLYCOL 400 WITH PROPYLENE GLYCOL Eye drops 4 mg-3 mg per mL, 15 mL Optix® Petrus Pharmaceuticals Pty Ltd Committee secretariat submission (New PBS listing)	Severe dry eye syndrome, including Sjogren's syndrome	To request a General Schedule Restricted Benefit listing of a new brand under the same conditions as the currently listed brand of polyethylene glycol 400 with propylene glycol.	Recommended	The PBAC recommended the listing of a new generic brand of polyethylene glycol 400 with propylene glycol eye drops (Optix®) under the same circumstances as the PBS-listed Systane® eye drops, for the treatment of severe dry eye syndrome, including Sjogren's syndrome. The PBAC advised that Optix® and Systane® should be marked as equivalent in the Schedule of Pharmaceutical Benefits for the purposes of substitution. The PBAC noted that the listing of Optix® was estimated to result in a net cost saving to the PBS/RPBS over the forward estimates.

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PROGESTERONE Pessary 400 mg Cyclogest® Gedeon Richter Australia Pty Ltd Category 2 submission (New PBS listing)	Infertility	To request a Section 100 (IVF Program) Authority Required listing for luteal phase support as part of an assisted reproductive technology treatment cycle for infertile women.	Recommended	The PBAC recommended the Authority Required listing of progesterone 400 mg pessary (Cyclogest®) on the basis it should be available only under special arrangements covered under the PBS Section 100 – IVF Program for the treatment of infertile women who require luteal phase support as part of an Assisted Reproductive Technology treatment cycle. The PBAC's recommendation for listing was based on, among other matters, its assessment, that the cost-effectiveness of Cyclogest® would be acceptable if it were cost-minimised against the least costly progesterone for luteal phase support currently listed on the PBS. The PBAC considered the equi-effective doses to be: Cyclogest® 400 mg BID ≡ Crinone® 8% (90 mg) QD and Cyclogest® 400 mg BID ≡ Utrogestan® 200 mg TID. The PBAC considered that the claim of non-inferior comparative effectiveness and safety to Crinone® was reasonable. The PBAC recommended the Administrative Advice 'No increase in the maximum number of repeats may be authorised' be flowed on to other listings under the PBS Section 100 – IVF Program to align with the Section 100 – IVF Program policy.

DRUG NAME, FORM(S), STRENGTH(S), SPONSOR, TYPE OF SUBMISSION	DRUG TYPE AND USE	LISTING REQUESTED BY SPONSOR / PURPOSE OF SUBMISSION	PBAC OUTCOME	
RELATLIMAB WITH NIVOLUMAB Injection concentrate for I.V. infusion containing 80 mg relatlimab and 240 mg nivolumab in 20 mL Opdualag® Bristol-Myers Squibb Australia Pty Ltd Category 1 submission (New PBS listing)	Melanoma	To request a Section 100 (Efficient Funding of Chemotherapy Program) Authority Required listing for the treatment of Stage III or IV metastatic melanoma.	Not Recommended	The PBAC did not recommend the listing of relatlimab with nivolumab (RELA+NIVO) fixed dose combination product for the treatment of patients with unresectable Stage III or IV malignant melanoma. The PBAC considered that there is a low clinical need for RELA+NIVO as there are existing effective treatment options available on the PBS (programmed cell death protein 1 (PD-1) monotherapy (nivolumab and pembrolizumab) and combination therapy (nivolumab plus ipilimumab)). The PBAC considered that the nominated primary comparator of nivolumab monotherapy was not appropriate and that the cost utility analysis versus nivolumab monotherapy was therefore not informative. The PBAC noted that the estimated financial impact of RELA+NIVO was high and uncertain. <u>Sponsor Comment:</u> The Sponsor is committed to working with the PBAC to bring relatlimab in combination with nivolumab for treatment of metastatic melanoma to Australian patients in a timely manner.
RISANKIZUMAB Solution concentrate for I.V. infusion 600 mg in 10 mL Injection 360 mg in 2.4 mL in pre-filled cartridge Skyrizi® AbbVie Pty Ltd Category 2 submission (New PBS listing)	Crohn disease	To request General Schedule Authority Required listings for the treatment of severe Crohn disease and for complex refractory fistulising Crohn disease.	Deferred	The PBAC deferred making its decision on whether to recommend the listing of risankizumab for the treatment of severe Crohn's disease, as a TGA Delegate's Overview was not available at the time of PBAC consideration. The PBAC noted the requested listing for severe, refractory fistulating Crohn's disease was withdrawn by the sponsor prior to its July 2022 meeting. <u>Sponsor Comment:</u> The sponsor had no comment.

ROMOSOZUMAB Injection 105 mg in 1.17 mL single use pre-filled syringe Evenity® Amgen Australia Pty Limited Standard re-entry submission (Change to PBS listing)	Osteoporosis	Resubmission to request a General Schedule Authority Required listing for the first-line treatment of patients with severe osteoporosis at very high risk of fracture. The submission also requests an expansion to the current second-line PBS listing by removing the requirement for patients to have had two or more fractures and by reducing the Bone Mineral Density T-score threshold from ≤ -3 to ≤ -2.5.	Not Recommended	The PBAC did not recommend romosozumab for the treatment of severe osteoporosis in the first line setting, and an expanded listing in the second line setting as the incremental cost-effectiveness ratio (ICER) was not acceptable as proposed and unacceptably high at the requested price and the financial estimates were highly uncertain. The previous submissions were considered in November 2018, July 2019 and March 2020 <u>Comparator: Alendronate</u> The PBAC considered that alendronate, as a proxy for anti-resorptive therapy, was appropriate as the nominated comparator. <u>Clinical claim: Romosozumab is superior in terms of efficacy and inferior in terms of safety compared to alendronate.</u> The PBAC considered the claim of superior comparative effectiveness was reasonable for the first line setting and unclear for the second line setting. However, the PBAC considered the magnitude of benefit was uncertain. The PBAC considered that the claim of inferior comparative safety was reasonable. <u>Economic claim: Cost utility analysis of romosozumab versus alendronate.</u> The PBAC considered that the ICER of romosozumab was unacceptably high ($55,000 to < $75,000 per quality adjusted life year) at the requested price. The PBAC considered the cost-effectiveness of romosozumab in the expanded second line setting was unable to be adequately assessed using the data presented. <u>Sponsor Comment</u>: Amgen is disappointed with this outcome and will continue to work with the PBAC to provide improved access to romosozumab. Amgen wishes to note that the ICER for 1st-line use of romosozumab vs alendronate in

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				the submission base case was $35,000 to < $45,000 per quality adjusted life year. Amgen would also like to thank all of the healthcare professionals, professional societies, patient organisations and consumers for their support of the romosozumab submission.
RUXOLITINIB Tablet 5 mg Tablet 10 mg Jakavi® Novartis Pharmaceuticals Australia Pty Limited Category 2 submission (Change to PBS listing)	Graft versus host disease	To request a Section 100 (Highly Specialised Drugs Program) Authority Required listing for the treatment of patients aged 12 years and older with Grade II to Grade IV acute graft versus host disease (GVHD) or moderate to severe chronic GVHD who are refractory to, dependent on or intolerant of corticosteroids.	Recommended	The PBAC recommended the listing of ruxolitinib for the treatment of acute graft versus host disease (aGVHD). The PBAC was satisfied that ruxolitinib provides, for some patients, a significant improvement in efficacy, including an improvement in overall response rate (ORR), compared with best available therapy (BAT), and noted that the need for effective treatments in this therapeutic area was high. The PBAC considered that ruxolitinib would be cost effective with some minor changes to the model presented and that the financial impact of listing would be modest. The PBAC did not recommend the listing of ruxolitinib for the treatment of chronic graft versus host disease (cGVHD). The PBAC was satisfied that ruxolitinib provides, for some patients, a significant improvement in efficacy, including an improvement in ORR, compared with BAT. However, the PBAC considered that changes to the economic model inputs would be required to achieve acceptable incremental cost-effectiveness. Further the PBAC considered that the financial estimates provided in the pre-PBAC response were overestimated. Noting that the need for effective treatments was high, the PBAC nominated the Early Resolution resubmission pathway for this item.

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SAPROPTERIN Tablet (soluble) containing sapropterin dihydrochloride 100 mg Powder for oral solution 500 mg (as dihydrochloride) Kuvan® BioMarin Pharmaceutical Australia Pty Ltd Category 2 submission (Change to PBS listing)	Phenylketonuria	To request an extension to the current PBS listing for sapropterin for the treatment of hyperphenylalaninemia due to phenylketonuria to allow adults to be eligible for sapropterin responsiveness testing and continuing treatment for those who are sapropterin responsive.	Recommended	The PBAC recommended the listing of sapropterin for initiation in adult patients with hyperphenylalaninemia (HPA) due to phenylketonuria (PKU). The PBAC was satisfied that sapropterin provides, for some patients, a significant improvement in efficacy over a phenylalanine-restricted diet alone. The PBAC considered there was a high clinical need in a small patient population. Although difficult to quantify, the PBAC considered sapropterin use would be expected to lead to improvements in neurological function and increases in dietary protein intake. The PBAC considered the incremental cost-effectiveness ratio was very high at the price proposed by the sponsor and considered that a substantial price reduction would be required to achieve a cost-effective listing for initiation in adult patients. Further, the PBAC considered that a risk sharing arrangement would be required to manage the cost-effectiveness, the uncertain patient population, and the risk of use in patients not continuing to respond. The PBAC acknowledged the meaningful consumer support and engagement with regards to the submissions for sapropterin and pegvaliase, which was also considered at the July 2022 PBAC meeting. Consumers outlined the very high clinical need for effective treatments for this condition given the impacts of high phenylalanine levels on cognitive function and psychiatric well-being. Consumers also outlined the burden of current management which involves a very restrictive diet, and the need for effective treatments that may allow patients to increase their dietary protein intake to a sustainable level. The PBAC considered that consumer input was valuable in establishing the clinical need for sapropterin and identifying and describing outcomes that were not well captured in the clinical evidence.

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TEZEPELUMAB Injection 210 mg in 1.91 mL single use pre-filled pen Tezspire® AstraZeneca Pty Ltd Category 2 submission (New PBS listing)	Asthma	To request a Section 100 (Highly Specialised Drugs Program) Authority Required listing for patients with severe uncontrolled allergic and/or eosinophilic asthma.	Not applicable	Sponsor has subsequently withdrawn their application
TRASTUZUMAB DERUXTECAN Powder for I.V. infusion 100 mg Enhertu® AstraZeneca Pty Ltd Category 1 submission (New PBS listing)	Breast cancer	To request a Section 100 (Efficient Funding of Chemotherapy Program) Authority Required listing for the treatment of human epidermal growth factor receptor 2 positive (HER2) metastatic breast cancer in patients whose disease has progressed following treatment with at least one prior HER2-directed regimen in the metastatic setting or whose disease has progressed during or within 6 months following HER2-directed adjuvant treatment.	Not Recommended	The PBAC did not recommend trastuzumab deruxtecan (T-DXd) for the treatment of human epidermal growth factor receptor 2 (HER2) positive metastatic breast cancer for patients who have progressed following a prior HER2 directed therapy in the metastatic setting or relapsed during or within 6 months of receiving a HER2 directed therapy in the adjuvant setting. The PBAC considered the evidence presented demonstrated substantial clinical benefit that is likely to translate into clinically meaningful gains in overall survival. The PBAC considered that the incremental cost-effectiveness ratio presented in the submission was unacceptably high and likely underestimated due to an optimistic extrapolation. The PBAC considered a substantial price reduction would be required for T-DXd to be considered cost-effective. The PBAC also considered that the number of patients likely to be treated was overestimated, and that the financial impact was extremely high at the proposed price. The PBAC nominated the Early Resolution re-submission pathway for this item. <u>Sponsor Comment:</u> The sponsor had no comment.

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UPADACITINIB Tablet 15 mg Tablet 30 mg Tablet 45 mg Rinvoq® AbbVie Pty Ltd Category 2 submission (Change to PBS listing)	Ulcerative colitis	To request a General Schedule Authority Required listing for the treatment of moderate to severe ulcerative colitis, in patients who are contraindicated to, or whose disease has not adequately responded to conventional therapies.	Deferred	The PBAC deferred making a recommendation on upadacitinib for the treatment of moderate to severe ulcerative colitis, as a TGA Delegate's Overview was not available at the time of PBAC consideration. <u>Sponsor Comment:</u> The sponsor had no comment.
USTEKINUMAB Injection 90 mg in 1 mL pre-filled syringe Solution concentrate for I.V. infusion 130 mg in 26 mL Stelara® Janssen-Cilag Pty Ltd Category 2 submission (New PBS Listing)	Ulcerative colitis	To request General Schedule and Section 100 (Highly Specialised Drugs Program) Authority Required listings for the treatment of moderate to severe ulcerative colitis, in patients who are contraindicated to, or whose disease has not adequately responded to conventional therapies.	Recommended	The PBAC recommended the Section 100 (Highly Specialised Drugs Program) (intravenous administration) and General Schedule (subcutaneous administration) listings of ustekinumab (UST) for the treatment of moderate to severe ulcerative colitis (MSUC), on a cost-minimisation basis with the least costly alternative disease modifying anti-rheumatic drug (DMARD) (excluding adalimumab (ADA)). The Committee considered the claim of non-inferior comparative effectiveness and safety to vedolizumab (VDZ) and superior comparative effectiveness to ADA were reasonable. The PBAC's recommendation was therefore, among other matters, based on its assessment that the cost of UST should be no greater than the cost of the alternative therapies (excluding ADA) over two years. The PBAC noted the flow-on changes to other DMARD listings in MSUC to include UST in the list of eligible treatments in a treatment cycle.

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USTEKINUMAB Injection 90 mg in 1 mL pre-filled syringe Stelara® Janssen-Cilag Pty Ltd Category 4 submission (New PBS listing)	Severe Crohn disease Severe chronic plaque psoriasis	To request a General Schedule Authority Required listing of a new form for the treatment of patients with Crohn disease and chronic plaque psoriasis.	Recommended	The PBAC recommended listing ustekinumab injection 90 mg in 1 mL pre-filled syringe (PFS) for the treatment of patients with Crohn disease and severe chronic plaque psoriasis requiring a 90 mg dose of ustekinumab, under the same circumstances as the current PBS-listed ustekinumab 45 mg vial for these indications. The PBAC considered the equi-effective doses to be ustekinumab 90 mg PFS and 2 x ustekinumab 45 mg vials. The PBAC recommended that ustekinumab 90 mg PFS be listed on a cost-minimisation basis with the least costly biological disease modifying anti-rheumatic drug (bDMARD) for these conditions. The PBAC considered that ustekinumab 90 mg PFS did not satisfy the criteria for a price higher than the lowest cost of other available PBS-listed bDMARDs for the treatment of Crohn disease and severe chronic plaque psoriasis.

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VERICIGUAT Tablet 2.5 mg Tablet 5 mg Tablet 10 mg Verquvo® Bayer Australia Ltd Early re-entry submission (New PBS listing)	Chronic heart failure	Resubmission to request a General Schedule Authority Required listing for the treatment of symptomatic (NYHA class II, III or IV) chronic heart failure in patients with a reduced ejection fraction (left ventricular ejection fraction less than 45%) and who are stabilised after a recent decompensation heart failure event requiring hospitalisation and/or intravenous diuretic therapy.	Recommended	The PBAC recommended listing of vericiguat as an Authority Required for the initial restriction and an Authority Required for the continuing restriction, for the treatment of symptomatic (NYHA class II, III or IV) chronic heart failure in patients with a reduced ejection fraction (left ventricular ejection fraction less than 45%) and who are stabilised after a recent decompensation heart failure event requiring hospitalisation and/or intravenous diuretic therapy. The PBAC was satisfied that vericiguat, with concomitant use of standard of care therapies, provides a modest improvement in efficacy over standard of care in high-risk patients in a late-line of therapy. The PBAC considered that the resubmission had addressed the substantive outstanding issues identified at the March 2022 PBAC meeting via its restriction amendments, respecified economic model and revised financial estimates, which also incorporated the reduced price proposed in the resubmission. The PBAC's recommendation for listing was based on, among other matters, its assessment that the cost-effectiveness of vericiguat would be acceptable at the price proposed in the resubmission and using the intention to treat population in the VICTORIA trial. The PBAC considered the uptake rate in the estimated PBS usage remained optimistic, however the PBAC acknowledged the uncertainty in estimating the uptake and considered a risk sharing arrangement was appropriate to address any residual uncertainty regarding estimated patient numbers.

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VOSORITIDE Powder for injection 0.4 mg with diluent Powder for injection 0.56 mg with diluent Powder for injection 1.2 mg with diluent Voxzogo® BioMarin Pharmaceutical Australia Pty Ltd Category 1 submission (New PBS listing)	Achondroplasia	To request a General Schedule Authority Required listing for the treatment of patients with achondroplasia whose epiphyses are not closed.	Not Recommended	The PBAC did not recommended vosoritide for the treatment of patients with achondroplasia whose epiphyses are not closed. The PBAC recognised that there are no treatments on the PBS available specifically for this condition, and it considered that the addition of vosoritide offered high added therapeutic value. The PBAC considered that the claim of superior efficacy compared to placebo was well-supported in 5 to <18 year old children and uncertain but likely reasonable in children under 5 years old. The PBAC considered that the safety of vosoritide was inferior to placebo. The PBAC considered the incremental cost-effectiveness ratio in this setting was unacceptably high at the proposed price, even in the context of relatively rare diseases. The PBAC considered that a price reduction would be required to achieve a cost-effective listing. The PBAC nominated the Early Resolution resubmission pathway for this item. <u>Sponsor Comment:</u> BioMarin welcomes the opportunity for early resolution and is committed to working with PBAC to make this important treatment available to Australian children with achondroplasia.

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BEVACIZUMAB Solution for I.V. infusion 100 mg in 4 mL Solution for I.V. infusion 400 mg in 16 mL Zirabev® Pfizer Australia Pty Ltd	Metastatic colorectal cancer, advanced, metastatic or recurrent non-squamous non-small cell lung cancer, relapsed or recurrent glioblastoma, epithelial ovarian, fallopian tube or primary peritoneal cancer, cervical cancer	Review of positive PBAC recommendations not accepted by applicants	Recommendation extended 12 months (if listing process has not commenced by the end of July 2023 the sponsor will be asked to justify the recommendation again).
BIMATOPROST 300 micrograms per mL, 3 mL Vizo-PF Bimatoprost® AFT Pharmaceuticals Pty Ltd	Elevated intraocular pressure or open angle glaucoma	Review of positive PBAC recommendations not accepted by applicants	The PBAC advised that the July 2020 recommendation be revoked.
ENOXAPARIN 120 mg/mL injection, 10 x 0.8 mL syringes 150 mg/mL injection, 10 x 1 mL syringes Clexane Forte® Enoxaparin Winthrop® Clexane Forte Safety-Lock® Sanofi-Aventis Australia Pty Ltd	Thromboembolic disorders in patients undergoing surgery, prophylaxis of venous thromboembolism, prevention of thrombosis during haemodialysis, deep vein thrombosis, unstable angina, non-Q-wave myocardial infarction, acute ST-segment elevation myocardial infarction as an adjunctive to thrombolytic treatment	Review of positive PBAC recommendations not accepted by applicants	Recommendation extended for 6 months (if listing process has not commenced by the end of January 2023 the sponsor will be asked to justify the recommendation again).
GLYCOMACROPEPTIDE FORMULA WITH DOCOSAHEXAENOIC ACID WITH LOW PHENYLALANINE Sachets containing oral powder 33.3 g PKU GMPro® Nutricia Australia Pty Limited	Phenylketonuria	Review of positive PBAC recommendations not accepted by applicants	The PBAC advised that the November 2018 recommendation be revoked.

PHARMACEUTICAL BENEFITS ADVISORY COMMITTEE (PBAC) MEETING OUTCOMES
JULY 2022 PBAC MEETING

DRUG NAME, FORM(S), STRENGTH(S) AND SPONSOR	DRUG TYPE AND USE	LISTING REQUESTED BY SPONSOR / PURPOSE OF SUBMISSION	PBAC OUTCOME
INSULIN ASPART Injection (human analogue) cartridges, 100 units per mL, 3 mL Fiasp® Novo Nordisk Pharmaceuticals Pty Ltd	Diabetes mellitus	Review of positive PBAC recommendations not accepted by applicants	The PBAC advised that the recommendation be extended for 6 months (if listing process has not commenced by the end of January 2023 the sponsor will be asked to justify the recommendation again).
RAMUCIRUMAB Injection concentrate for I.V. infusion 100 mg in 10 mL Injection concentrate for I.V. infusion 500 mg in 50 mL Cyramza® Eli Lily Australia Pty Ltd	Gastric or gastro-oesophageal junction adenocarcinoma	Review of positive PBAC recommendations not accepted by applicants	The PBAC advised that the March 2018 recommendation be revoked.
SECUKINUMAB Powder for injection, 150 mg Pre-filled syringe, 150 mg per mL Cosentyx® Novartis Pharmaceuticals	Plaque psoriasis	Review of positive PBAC recommendations not accepted by applicants	The PBAC advised that the March 2015 recommendation could be revoked as other forms of the same strength product were available on the PBS (the pre-filled pen 150 mg/mL, which was recommended at the same meeting, have been PBS listed).
SEVELAMER Sachet 2.4 g Renvela® Sanofi-Aventis Australia Pty Ltd	Hyperphosphataemia in patients undergoing dialysis for chronic kidney disease	Review of positive PBAC recommendations not accepted by applicants	The PBAC advised that the November 2017 recommendation be revoked.

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TENOFOVIR ALAFENAMIDE Tablet 25 mg Vemlidy® Gilead Sciences Pty Ltd	Hepatitis B	Review of positive PBAC recommendations not accepted by applicants	The PBAC advised that the March 2017 recommendation could be revoked, noting that the recommendation was over 5 years old and there had been no progression towards listing.

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Correspondence from the Renal Society of Australia regarding nurse practitioner prescribing of erythropoietin stimulating agents (ESAs) DARBEPOETIN ALFA EPOETIN ALFA EPOETIN BETA EPOETIN LAMBDA METHOXY POLYETHYLENE GLYCOL-EPOETIN BETA	ESAs currently listed on the Highly Specialised Drugs Program Chronic anaemia in patients with chronic kidney disease	To request nurse practitioner prescribing of ESAs for treatment of chronic anaemia in patients with chronic kidney disease	The PBAC considered correspondence from the Renal Society of Australia and recommended that nurse practitioners be eligible to prescribe ESAs under the S100 Highly Specialised Drugs program on the PBS.
Cost-effectiveness Review (CER) of GLP-1 analogues EXANATIDE DULAGLUTIDE SEMAGLUTIDE All brands and strengths AstraZeneca Pty Ltd Eli Lilly Australia Pty Ltd Novo Nordisk Pharmaceuticals Pty Ltd	GLP-1 analogues class of medicines Type 2 diabetes mellitus (T2DM)	To assess the clinical and cost utility of glucagon-like peptide-1 (GLP-1) receptor agonists for the treatment of T2DM in the Australian setting.	In response to a stakeholder request for broader PBS listings for glucagon-like peptide-1 receptor agonists (GLP-1 RAs), PBAC requested that the Department undertake a clinical and cost utility analysis comparing GLP-1 RAs to sulfonylureas (SUs) for the treatment of type 2 diabetes mellitus (T2DM) in patients with cardiovascular disease or high cardiovascular risk, as add-on therapy to metformin without a glycaemic requirement. PBAC considered the clinical outcomes to be uncertain due to the paucity of trial data, resulting in low confidence in the results of the cost utility analysis. Noting the potentially high and uncertain estimates of cost-effectiveness, PBAC did not recommend broadening the current PBS restrictions for GLP-1 RAs. The PBAC expressed concern over the price difference between GLP-1 RAs and sodium-glucose cotransporter-2 (SGLT2) inhibitors, and the rapid growth in PBS-subsidised use of GLP-1 RAs. The PBAC recommended a review of the utilisation of T2DM medicines, including an estimation of the extent of use of GLP-1 RAs outside the PBS restrictions, such as use in monotherapy, and in dual therapy in patients not contraindicated/intolerant to a combination of metformin and a SU.

Version 3
Item amended
1. TEZEPELUMAB (Tezspire®) - Sponsor has subsequently withdrawn their application

Item added previously
1. Added entry for nurse practitioner prescribing of ESAs.

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Submission category types

Category 1	A request for PBS or NIP listing of one or more of the following: • A first in class medicine or vaccine, and/or a medicine or vaccine for a new population. OR • A drug with a codependent technology that requires an integrated codependent submission to the PBAC and MSAC. OR • A drug or designated vaccine with a TGA Provisional determination related to the proposed population.
Category 2	A request for PBS or NIP listing of a new medicine or new vaccine, a new indication of a currently listed medicine or vaccine, or to make material changes to a currently listed indication and do not meet the criteria for a Category 1 submission.
Category 3	Requests to change existing listings that do not change the population or cost-effectiveness of the medicine or vaccine that do not meet the criteria for a Category 4 submission.
Category 4	A request for one or more of the following: • Listing of a new pharmaceutical item of a listed medicine. • Consideration as an exempt item (Exempt item as per subsection 84AH of the *National Health Act 1953*). • Including a listed medicine on the prescriber bag, or varying an existing prescriber bag listing. • A change/new manner of administration of a listed medicine. • A change to the maximum quantity and/or number of repeats of a listed medicine. • A change or addition to the prescriber type(s) of a listed medicine.
Committee Secretariat	Application is not in Categories 1, 2, 3 or 4 and requests for one or more of the following: • New or varied listed drugs, medicinal preparations and designated vaccines that pose no greater risk • Pharmaceutical benefits that can no longer be supplied early • New brand of glucose indicator pharmaceutical item.

Resubmission pathways

*There are four different resubmission pathways available to applicants following a 'not recommended' PBAC outcome. Resubmission pathways are not available for submissions that receive a positive recommendation from the PBAC. The resubmission pathways are classified into the following categories:	
Standard re-entry	The Standard Re-entry Pathway is the default pathway for resubmissions and also applies where: • an applicant chooses not to accept the PBAC nominated resubmission pathway; or • an Early Re-entry or Early Resolution Pathway has been nominated by the PBAC and an applicant decides to address issues other than those identified by the PBAC (including a subset of issues); or • an applicant decides to lodge later than the allowable timelines for the other pathways.
Early re-entry pathway	An Early Re-entry Pathway may be nominated by the PBAC where the PBAC considers that the remaining issues could be easily resolved and the medicine or vaccine does not represent HATV for the proposed population. Applicants who accept this pathway are eligible for PBAC consideration at the immediate next meeting.
Early resolution pathway	For medicines or vaccines deemed by the PBAC to represent High Added Therapeutic Value (HATV) AND where the PBAC considers that the remaining issues could be easily resolved, including when: • new clinical study data requiring evaluation is not considered necessary by the PBAC to support new clinical claims to be made in the resubmission; and • a revised model structure or input variable changes (beyond those specified by the PBAC) are not necessary to support any new economic claims, or to estimate the utilisation and financial impacts to be made in the resubmission. Applicants who accept this pathway are eligible for PBAC consideration out-of-session (before the main meeting), unless the department, in consultation with the PBAC Chair, identifies an unexpected issue such that the resubmission needs consideration at the next main PBAC meeting.
Facilitated resolution pathway	A Facilitated Resolution Pathway may be nominated by the PBAC where the PBAC considers the issues for resolution could be explored through a workshop AND where the medicine or vaccine meets the HATV criteria. Applicants who accept this pathway are eligible for a solution-focussed workshop with one or more members of the PBAC. The workshop agenda will be based on the issues for resolution outlined in the PBAC Minutes. This can be further clarified during the post-PBAC meeting with the Chair.