

## 7.08 PANITUMUMAB

**100 mg/5 mL injection, 1 x 5 mL vial, 400 mg/20 mL injection, 1 x 20 mL vial;  
Vectibix®, Amgen Australia**

### 1 Purpose of Application

- 1.1 The minor submission requested first-line listing of panitumumab for RAS wild-type metastatic colorectal cancer on the basis of cost minimisation with cetuximab.

### 2 Requested listing

- 2.1 The submission requested the following listing.

Name, Restriction, Manner of administration and form	Max Amt	No. of Rpts	Proprietary Name and Manufacturer	
PANITUMUMAB				
panitumumab 100 mg/5 mL injection, 1 x 5 mL vial	720 mg	11	Vectibix®	AN
panitumumab 400 mg/20 mL injection, 1 x 20 mL vial				

<b>Severity:</b>	Metastatic
<b>Condition:</b>	Colorectal cancer
<b>Treatment phase:</b>	Initial treatment
<b>Restriction:</b>	Section 100 (Efficient Funding of Chemotherapy (EFC)) Private Hospital/Private Clinic Authority Required Public Hospital Authority Required (STREAMLINED)
<b>Clinical criteria:</b>	Patient must have RAS wild-type metastatic colorectal cancer  AND  Patient must have a WHO performance status of 2 or less  AND  The condition must be previously untreated  AND  The treatment must be in combination with an oxaliplatin-based therapy  AND  The treatment must be the sole PBS-subsidised anti-EGFR antibody therapy for this condition.
<b>Prescriber Instructions</b>	Patients who have developed intolerance to cetuximab of a severity necessitating permanent treatment withdrawal are eligible to receive PBS-subsidised panitumumab.
<b>Administrative advice</b>	Note Special Pricing Arrangements apply.

Severity:	Metastatic
Condition:	Colorectal cancer
Treatment phase:	Continuing treatment
Restriction:	Section 100 (Efficient Funding of Chemotherapy (EFC)) Private Hospital/Private Clinic Authority Required Public Hospital Authority Required (STREAMLINED)
Clinical criteria:	Patient must have received an initial authority prescription for panitumumab for treatment of RAS wild-type metastatic colorectal cancer  AND  Patient must not have progressive disease  AND  The treatment must be in combination with first-line oxaliplatin-based chemotherapy  AND  The treatment must be the sole PBS-subsidised anti-EGFR antibody therapy for this condition.
Prescriber Instructions	Patients who have developed intolerance to cetuximab of a severity necessitating permanent treatment withdrawal are eligible to receive PBS-subsidised panitumumab.
Administrative advice	Note Special Pricing Arrangements apply.

### 3 Background

- 3.1 Panitumumab is TGA registered for the treatment of patients with wild-type RAS metastatic colorectal cancer (mCRC) as first-line therapy in combination with FOLFOX, and as second-line therapy in combination with FOLFIRI for patients who have received first-line fluoropyrimidine-based chemotherapy (excluding irinotecan).
- 3.2 This is the fifth submission for panitumumab for consideration by the PBAC.
- 3.3 In March 2013, the PBAC recommended the listing of panitumumab in the later-line setting on a cost-minimisation basis with cetuximab, with the price of panitumumab to be lower than cetuximab's price given the lack of convincing evidence to confirm non-inferiority against cetuximab with sufficient statistical precision. The PBAC also rejected a request for first-line treatment of patients for whom treatment with bevacizumab is unsuitable.
- 3.4 In November 2013, the PBAC recommended listing of panitumumab for the later-line treatment of K-RAS WT mCRC on a cost-minimisation basis compared with cetuximab. The PBAC considered that this recommendation should replace the recommendation made at its meeting in March 2013. The equi-effective doses are panitumumab 6 mg/kg every two weeks and cetuximab 250 mg/m<sup>2</sup> weekly, following an initial loading dose of 400 mg/m<sup>2</sup>.
- 3.5 A two-component panitumumab application was considered at the July 2014 PBAC meeting:
- The request to change the existing later-line listings from KRAS WT to RAS WT mCRC was recommended. These changes took effect from 1 January 2015.
  - The request for first-line panitumumab listing in RAS WT mCRC was rejected on the basis on uncertainty in the extent of incremental clinical benefit.

- 3.6 The November 2014 PBAC meeting recommended the listing of cetuximab for the first-line treatment of mCRC, on a cost-minimisation basis compared with bevacizumab.

#### **4 Clinical place for the proposed therapy**

- 4.1 Panitumumab is currently PBS-subsidised for RAS WT mCRC in later-line therapy. The submission proposed a first-line listing and stated that an EGFR inhibitor may be the preferred first-line choice if tumour shrinkage is a relevant goal.

#### **5 Comparator**

- 5.1 The minor submission nominated cetuximab as the comparator. The PBAC had previously accepted this as the appropriate comparator.

#### **6 PBAC consideration of the evidence**

- 6.1 No additional clinical data were made available or expected that would further inform the PBAC's decision to list panitumumab in the first-line setting.
- 6.2 The basis of the minor submission's request was the proven non-inferiority of panitumumab to cetuximab, with equi-effective doses as established in the later-line setting.
- 6.3 The recently reported CALGB/SWOG 80405 trial had established that adding either bevacizumab or cetuximab to backbone first-line therapy are similarly effective with regard to overall survival (OS).

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

- 6.4 The minor submission claimed that the proposed listing would be cost neutral to the PBS/RPBS.
- 6.5 The submission agreed to an equivalent price of panitumumab compared with first-line cetuximab, based on the established equi-effective doses and anticipated duration of treatment in first-line. The sponsor also acknowledged joining the same risk share arrangement as cetuximab in the first-line setting.
- 6.6 The PBAC recommended that panitumumab should join the same risk share arrangement as cetuximab and bevacizumab in the first-line setting, as this was considered appropriate at the July 2014 PBAC meeting.

#### **7 PBAC Outcome**

The PBAC recommended the first-line listing of panitumumab, for the treatment of RAS wild-type metastatic colorectal cancer, on the basis of cost minimisation with cetuximab. The equi-effective doses are panitumumab 6 mg/kg every two weeks and cetuximab 250 mg/m<sup>2</sup> weekly, following an initial loading dose of 400 mg/m<sup>2</sup>.

The PBAC recalled that it had previously accepted the two anti-EGFR inhibitors as being clinically equivalent. This minor submission was an anticipated flow-on from PBAC’s positive recommendation in November 2014, when the PBAC had recommended the listing of cetuximab for the first-line treatment of mCRC, on a cost-minimisation basis compared with bevacizumab.

The PBAC noted that, as a result, this listing would be cost neutral to the Commonwealth.

The PBAC recommended that the restriction of first-line panitumumab should be the same as the restriction for first-line cetuximab, noting that there would be flow on changes to the first-line cetuximab restriction to include the statements; “Patients who have progressive disease on cetuximab are not eligible to receive PBS-subsidised panitumumab” and “Patients who have developed intolerance to cetuximab of a severity necessitating permanent treatment withdrawal are eligible to receive PBS-subsidised panitumumab”. The PBAC noted that the amendment of later-line restriction of cetuximab for the treatment of RAS wild-type metastatic colorectal cancer due to the first-line listing of cetuximab would also have follow on changes to the later-line restriction of panitumumab for the same indication.

The PBAC recommended that panitumumab should not be treated as interchangeable on an individual patient basis with cetuximab.

The PBAC advised that panitumumab is not suitable for prescribing by nurse practitioners as antineoplastic agents are currently considered to be out of scope for prescribing by nurse practitioners.

The PBAC recommended that the Safety Net 20 Day Rule should not apply as this rule does not apply to antineoplastic agents.

**Outcome:**  
Recommended

## 8 Recommended listing

Add new item:

### First-line panitumumab mCRC listing

Name, Restriction, Manner of administration and form	Max Amt	No. of Rpts	Proprietary Name and Manufacturer	
PANITUMUMAB				
panitumumab 100 mg/5 mL injection, 1 x 5 mL vial	720 mg	449	Vectibix®	AN
panitumumab 400 mg/20 mL injection, 1 x 20 mL vial				

Category / Program	Section 100 (Efficient Funding of Chemotherapy (EFC)) for Public/Private Hospital Use
Prescriber type:	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives
Severity:	Metastatic
Condition:	Colorectal cancer
Treatment phase:	Initial treatment
Restriction:	<input type="checkbox"/> Restricted benefit

	<input type="checkbox"/> Authority Required - In Writing <input type="checkbox"/> Authority Required - Telephone <input type="checkbox"/> Authority Required – Emergency <input type="checkbox"/> Authority Required – Electronic OR <input checked="" type="checkbox"/> Streamlined
<b>Clinical criteria:</b>	Patient must have RAS wild-type metastatic colorectal cancer,  AND  Patient must have a WHO performance status of $\leq 1$ or less,  AND  The condition must be previously untreated,  AND  The treatment must be in combination with <del>an oxaliplatin-based</del> first-line chemotherapy,  AND  The treatment must be the sole PBS-subsidised anti-EGFR antibody therapy for this condition.
<b>Prescriber Instructions</b>	<p><i>Patients who have progressive disease on cetuximab are not eligible to receive PBS-subsidised panitumumab.</i></p> <p>Patients who have developed intolerance to cetuximab of a severity necessitating permanent treatment withdrawal are eligible to receive PBS-subsidised panitumumab.</p>
<b>Administrative advice</b>	<p>Note Special Pricing Arrangements apply.</p> <p><i>Note Panitumumab is not PBS-subsidised for use in combination with another anti-EGFR antibody or in combination with an anti-VEGF antibody.</i></p>

Public Summary Document – March 2015 PBAC Meeting

Name, Restriction, Manner of administration and form	Max Amt	№.of Rpts	Proprietary Name and Manufacturer	
PANITUMUMAB panitumumab 100 mg/5 mL injection, 1 x 5 mL vial panitumumab 400 mg/20 mL injection, 1 x 20 mL vial	720 mg	449	Vectibix®	AN

<b>Category / Program</b>	Section 100 (Efficient Funding of Chemotherapy (EFC)) for Public/Private Hospital Use
<b>Prescriber type:</b>	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives
<b>Severity:</b>	Metastatic
<b>Condition:</b>	colorectal cancer
<b>Treatment phase:</b>	Continuing treatment
<b>Restriction:</b>	<input type="checkbox"/> Restricted benefit <input type="checkbox"/> Authority Required - In Writing <input type="checkbox"/> Authority Required - Telephone <input type="checkbox"/> Authority Required – Emergency <input type="checkbox"/> Authority Required – Electronic OR <input checked="" type="checkbox"/> Streamlined
<b>Clinical criteria:</b>	Patient must have received an initial authority prescription for panitumumab <i>for first-line treatment</i> of RAS wild-type metastatic colorectal cancer,  AND  Patient must not have progressive disease,  AND  The treatment must be in combination with first-line oxaliplatin-based chemotherapy,  AND  The treatment must be the sole PBS-subsidised anti-EGFR antibody therapy for this condition.
<b>Prescriber Instructions</b>	<i>Patients who have progressive disease on cetuximab are not eligible to receive PBS-subsidised panitumumab.</i>  Patients who have developed intolerance to cetuximab of a severity necessitating permanent treatment withdrawal are eligible to receive PBS-subsidised panitumumab.
<b>Administrative advice</b>	Note Special Pricing Arrangements apply.  Note <i>Panitimumab is not PBS-subsidised for use in combination with another anti-EGFR antibody or in combination with an anti-VEGF antibody.</i>  Note <i>Panitimumab is not PBS-subsidised when chemotherapy partners are switched whilst maintaining an anti-EGFR antibody backbone in the face of progressive disease.</i>  Note <i>The treatment must not exceed a single course of therapy with panitumumab for metastatic colorectal cancer in a patient's lifetime.</i>

**Amendment to second-line panitumumab mCRC listing**

Name, Restriction, Manner of administration and form	Max Amt	No. of Rpts	Proprietary Name and Manufacturer	
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panitumumab 100 mg/5 mL injection, 1 x 5 mL vial	720 mg	5	Vectibix®	AN
panitumumab 400 mg/20 mL injection, 1 x 20 mL vial				

<b>Category / Program</b>	Section 100 (Efficient Funding of Chemotherapy (EFC)) for Public/Private Hospital Use
<b>Prescriber type:</b>	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives
<b>Severity:</b>	Metastatic
<b>Condition:</b>	Colorectal cancer
<b>Treatment phase:</b>	Initial treatment
<b>Restriction:</b>	<input type="checkbox"/> Restricted benefit <input type="checkbox"/> Authority Required - In Writing <input type="checkbox"/> Authority Required - Telephone <input type="checkbox"/> Authority Required – Emergency <input type="checkbox"/> Authority Required – Electronic OR <input checked="" type="checkbox"/> Streamlined
<b>Clinical criteria:</b>	Patient must have RAS wild-type metastatic colorectal cancer,  AND  Patient must have a WHO performance status of 2 or less,  AND  The condition must have failed to respond to first-line chemotherapy,  AND  The treatment must be as monotherapy; OR The treatment must be in combination with <del>irinotecan-based</del> chemotherapy,  AND  The treatment must be the sole PBS-subsidised anti-EGFR antibody therapy for this condition.
<b>Prescriber Instructions</b>	<i>Patients who have progressive disease on cetuximab are not eligible to receive PBS-subsidised panitumumab.</i>  Patients who have developed intolerance to cetuximab of a severity necessitating permanent treatment withdrawal are eligible to receive PBS-subsidised panitumumab.
<b>Administrative advice</b>	Note Special Pricing Arrangements apply.  Note Panitumumab is not PBS-subsidised for use in combination with <del>oxaliplatin-based therapies</del> another anti-EGFR antibody or in combination with an anti-VEGF antibody.

Public Summary Document – March 2015 PBAC Meeting

Name, Restriction, Manner of administration and form	Max Amt	No. of Rpts	Proprietary Name and Manufacturer	
PANITUMUMAB panitumumab 100 mg/5 mL injection, 1 x 5 mL vial panitumumab 400 mg/20 mL injection, 1 x 20 mL vial	720 mg	5	Vectibix®	AN

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<b>Prescriber type:</b>	<input type="checkbox"/> Dental <input checked="" type="checkbox"/> Medical Practitioners <input type="checkbox"/> Nurse practitioners <input type="checkbox"/> Optometrists <input type="checkbox"/> Midwives
<b>Severity:</b>	Metastatic
<b>Condition:</b>	colorectal cancer
<b>Treatment phase:</b>	Continuing treatment
<b>Restriction:</b>	<input type="checkbox"/> Restricted benefit <input type="checkbox"/> Authority Required - In Writing <input type="checkbox"/> Authority Required - Telephone <input type="checkbox"/> Authority Required – Emergency <input type="checkbox"/> Authority Required – Electronic OR <input checked="" type="checkbox"/> Streamlined
<b>Clinical criteria:</b>	Patient must have received an initial authority prescription for this drug for treatment of RAS wild-type metastatic colorectal cancer after failure of first-line chemotherapy,  AND  Patient must not have progressive disease,  AND  The treatment must be as monotherapy; OR The treatment must be in combination with irinotecan based chemotherapy,  AND  The treatment must be the sole PBS-subsidised anti-EGFR antibody therapy for this condition.
<b>Prescriber Instructions</b>	<i>Patients who have progressive disease on cetuximab are not eligible to receive PBS-subsidised panitumumab.</i>  Patients who have developed intolerance to cetuximab of a severity necessitating permanent treatment withdrawal are eligible to receive PBS-subsidised panitumumab.
<b>Administrative advice</b>	Note Special Pricing Arrangements apply.  Note Panitumumab is not PBS-subsidised for use in combination with <del>oxaliplatin-based therapies</del> another anti-EGFR antibody or in combination with an anti-VEGF antibody.  Note Panitumumab is not PBS-subsidised when chemotherapy partners are switched whilst maintaining an anti-EGFR antibody backbone in the face of progressive disease.  Note The treatment must not exceed a single course of therapy with panitumumab for metastatic colorectal cancer in a patient's lifetime.

**9 Context for Decision**

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

**10 Sponsor's Comment**

Amgen is pleased that panitumumab will be made available on the PBS for Australian patients in the 1st-line setting.