Panitumumab

Product:
PANITUMUMAB (Vectibix®)

Class of drugs:
Anti-EGFR monoclonal antibody

Indication:
Treatment of metastatic colorectal cancer

Manufacturer:
Amgen Canada Inc.

CED Recommendation

The CED recommended that panitumumab (Vectibix) be funded through Cancer Care Ontario's New Drug Funding Program for the treatment of metastatic colorectal cancer, according to specific criteria. The CED noted that panitumumab (Vectibix) has been shown to provide a clinical benefit and reasonable value for money in selected patients with metastatic colorectal cancer.

Executive Officer Decision

Based on the CED's recommendation and a subsequent listing agreement that addresses appropriate utilization, the Executive Officer decided to fund panitumumab (Vectibix) through Cancer Care Ontario's New Drug Funding Program, according to specific criteria.

Status

Funding is available through Cancer Care Ontario's New Drug Funding Program.

Highlights of Recommendation:

- Panitumumab (Vectibix) is indicated for the treatment of metastatic colorectal cancer (bowel cancer that has spread to other organs). It is specifically indicated for use as a single-agent treatment for patients whose disease has progressed on standard chemotherapies and whose tumours have tested negative for a mutation of the KRAS gene.
- The Committee reviewed a study comparing panitumumab (Vectibix) to best supportive care (i.e. no active cancer drug treatment) in patients with metastatic colorectal cancer who had failed standard chemotherapies. The study found that panitumumab (Vectibix) prolonged progression-free survival (the length of time in which a patient's cancer does not worsen).
- A subsequent analysis of the study results revealed that the efficacy of panitumumab (Vectibix) is restricted to the subgroup of patients with non-mutated (i.e. wild-type) KRAS tumours. Because patients with mutated KRAS tumours do not appear to benefit from panitumumab (Vectibix), treatment should be targeted to patients whose tumours have tested negative for the mutation on the KRAS gene.
- Common side effects with panitumumab (Vectibix) include skin rash, paronychia (finger/toe nail infection), hypomagnesemia (low magnesium levels in the blood), fatigue, abdominal pain, nausea and diarrhea.
- Panitumumab (Vectibix) costs approximately $2,500-3,000 per treatment cycle. An economic analysis has shown that panitumumab (Vectibix) provides reasonable value for money.
- **Overall, the Committee noted that panitumumab (Vectibix) offers a treatment option for patients with metastatic colorectal cancer who have failed standard chemotherapies and whose tumours express the non-mutated (wild-type) KRAS gene.**

Background:

Colorectal cancer refers to cancer of the colon (large bowel) and cancer of the rectum. Metastatic colorectal cancer is colorectal cancer that has spread to other parts of the body, such as the liver and lung.

Only a small minority of patients can be cured with surgery once their cancer has spread to other organs. Chemotherapy (e.g. fluoropyrimidine, irinotecan, oxaliplatin), with or without bevacizumab (to enhance the anti-tumour effects of other chemotherapy drugs), can be used to prolong survival. In most patients, resistance to chemotherapy develops over time.

Panitumumab (Vectibix) is indicated as single-agent treatment for epidermal growth factor receptor (EGFR) expressing metastatic colorectal cancer in patients with non-mutated (wild-type) KRAS after failure of fluoropyrimidine, oxaliplatin, and irinotecan-containing chemotherapy regimens (i.e. as third-line therapy). Panitumumab (Vectibix) has been shown to be ineffective in patients with mutations on the KRAS gene. Testing can be done to determine whether a patient has a tumour with a non-mutated (wild-type) KRAS gene.

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Detailed Discussion:

- The focus of the Committee's review was a single randomized study in 463 patients with EGFR expressing metastatic colorectal cancer whose disease has failed standard chemotherapy (*Van Cutsem et al. Journal of Clinical Oncology, 25(13); 2007)*. Single-agent panitumumab (Vectibix) plus best supportive care was compared against best supportive care alone.
- The study reported that panitumumab (Vectibix) prolonged progression-free survival (the length of time that a patient remains alive and disease-free). The median progression free survival time was 8 weeks for patients treated with panitumumab (Vectibix) compared with 7.3 weeks for patients on best supportive care. The objective response rates were also higher in patients treated with panitumumab (Vectibix) versus those on best supportive care (10% versus 0%). No difference was observed in overall survival, but the overall survival results were confounded by the fact that many patients in the best supportive care group were able to receive panitumumab (Vectibix) when their disease progressed.
- A separate analysis of the study results was conducted to assess the efficacy of panitumumab (Vectibix) based on the KRAS gene status of the patient's disease *(Amado et al. Journal of Clinical Oncology, 26(10); 2008)*. The analysis revealed that the efficacy of panitumumab (Vectibix) is confined to patients with tumours expressing the non-mutated (wild-type) KRAS gene. The median progression-free survival was 12.3 weeks in patients with non-mutated KRAS and 7.4 weeks in those with mutated KRAS tumours.
- The most common side effect with panitumumab (Vectibix) is skin reactions. Other side effects include hypomagnesemia, fatigue, abdominal pain, nausea, and diarrhea.
- Panitumumab (Vectibix) costs approximately $2,500-3,000 per treatment cycle. An economic analysis has shown that panitumumab (Vectibix) provides reasonable value for money.
- Overall, the Committee noted that panitumumab (Vectibix) offers a treatment option for patients with metastatic colorectal cancer who have failed standard chemotherapies and whose tumours express the non-mutated (wild-type) KRAS gene.

NDFP Criteria:

- The CED recommended that panitumumab (Vectibix) be funded through Cancer Care Ontario's New Drug Funding Program (NDFP) according to the following criteria:

  As monotherapy for the treatment of patients with EGFR expressing metastatic colorectal carcinoma with non-mutated (wild-type) KRAS after failure of fluoropyrimidine, oxaliplatin, and irinotecan-containing chemotherapy regimens.

  The recommended dose is 6mg/kg every 2 weeks until disease progression.

- The CED worked jointly with a subcommittee involving cancer experts to review this cancer drug, as is done for all other cancer drug treatments.

Cancer Care Ontario Information:

Information on CCO's advice report on panitumumab (Vectibix) can be found at: http://www.cancercare.on.ca/english/home/toolbox/qualityguidelines/other-reports/evaldrug-rep/

Ontario

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