

Pemetrexed (for non-small cell lung cancer)

Product:

PEMETREXED (Alimta®)

Class of drugs:

Antineoplastic agent

Indication:

Treatment of non-small cell lung cancer (NSCLC)

Manufacturer:

Eli Lilly Canada Inc.

CED Recommendation

The CED recommended that pemetrexed (Alimta) not be funded through Cancer Care Ontario's New Drug Funding Program for the treatment of non-small cell lung cancer, on the basis that its price premium over the current alternative could not be justified.

Executive Officer Decision

Taking into consideration the CED's review and recommendation and based on a subsequent pricing agreement, the Executive Officer decided to fund pemetrexed (Alimta) for the second-line treatment of non-small cell lung cancer.

Status

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

Highlights of Recommendation:

- ◆ Pemetrexed (Alimta) is indicated for the treatment of locally advanced or metastatic non-small cell lung cancer (NSCLC) after failure of initial or first-line platinum-based chemotherapy (i.e., in second-line treatment).
- ◆ Docetaxel is a commonly used chemotherapy for the second-line treatment of NSCLC.
- ◆ In a key study that the Committee reviewed, there was no difference between patients treated with pemetrexed (Alimta) and those treated with docetaxel in terms of survival. While pemetrexed (Alimta) was shown to be associated with fewer side effects compared with docetaxel, this advantage did not translate into an improved quality of life in the study.
- ◆ Based on the manufacturer's submitted price, the treatment cost of pemetrexed (Alimta) is approximately \$24,000 per patient. Docetaxel costs approximately \$16,000 - \$18,000 per patient.
- ◆ **Overall, the Committee acknowledged that pemetrexed (Alimta) has a more favourable side effect profile compared to docetaxel. However, the Committee indicated that the substantial price premium for pemetrexed (Alimta) could not be justified, given the absence of survival or quality of life advantage over docetaxel. The Committee indicated that funding of pemetrexed (Alimta) could be considered if the price was significantly reduced.**

Background:

Lung cancer is the most common cause of cancer-related deaths in men and women in Canada. Non-small cell lung cancer (NSCLC) accounts for approximately 70-80% of all lung cancer diagnoses.

The standard first-line treatment for advanced NSCLC is platinum-based combination chemotherapy. Patients who relapse or whose cancer progresses go on to receive second-line chemotherapy.

Pemetrexed (Alimta) is indicated as a treatment option for patients with locally advanced or metastatic NSCLC as second-line therapy.

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Detailed Discussion:

- ◆ The Committee considered pemetrexed (Alimta) for second-line treatment of NSCLC on two occasions, initially in June 2007 and again in February 2008.
 - ◆ The JMEI 2004 study (*Hanna et al. J Clin Oncol. 2004;22(9):1589-97*) is a randomized controlled trial comparing pemetrexed (Alimta) to docetaxel for the second-line treatment of NSCLC. The primary outcome was overall survival. Secondary objectives were toxicity, overall response rate, progression-free survival, time to disease progression, and quality of life.
 - ◆ The JMEI 2004 trial reported no difference between docetaxel and pemetrexed (Alimta) in terms of response rate, time to progression and overall survival.
 - ◆ Compared with docetaxel, pemetrexed (Alimta) was associated with less neutropenia, febrile neutropenia, hair loss, diarrhea, edema, neuropathy and hospitalization. (Although the JMEI 2004 study also reported that patients on pemetrexed (Alimta) had lower rates of use of granulocyte colony stimulating factor (G-CSF), the Committee noted that G-CSF use in this study may not be reflective of clinical practice in Canada.) Pemetrexed (Alimta) was associated with more nausea, rash and liver function abnormalities versus docetaxel.
 - ◆ Despite a more favourable toxicity profile with pemetrexed (Alimta), the study reported no statistically significant difference in quality of life between patients on pemetrexed (Alimta) versus patients on docetaxel.
 - ◆ The estimated treatment cost of pemetrexed (Alimta) is \$24,000 per patient (based on the price submitted by the manufacturer).
 - ◆ Docetaxel is currently reimbursed through Cancer Care Ontario's New Drug Funding Program for the first- and second-line treatment of NSCLC. At approximately \$16,000 - \$18,000 per patient, it costs significantly less than pemetrexed (Alimta).
- ◆ Overall, the Committee acknowledged that pemetrexed (Alimta) is associated with an improved toxicity profile compared with docetaxel. However, the Committee indicated that the price premium for pemetrexed (Alimta) could not be justified, given the absence of survival or quality of life advantage over docetaxel. The Committee indicated that funding of pemetrexed (Alimta) could be considered if the price was significantly reduced.
 - ◆ 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 (CCO) Information:

Information on CCO chemotherapy regimens for NSCLC is available at:
http://www.cancercare.on.ca/index_chemoRegimensbyDisease.htm

The Lung Disease Site Group (DSG) Program in Evidence-based Care (PEBC) guideline for the use of chemotherapy in NSCLC is available at:
http://www.cancercare.on.ca/index_lungCancerguidelines.htm



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