FIRST TIME GENERIC APPROVAL

Brand Name	Alimta®
Generic Name	pemetrexed disodium
Drug Manufacturer	Accord Healthcare Inc.

New Drug Approval

TYPE OF CLINICAL UPDATE

First Time Generic

FDA APPROVAL DATE

May 25, 2022

LAUNCH DATE

May 26, 2022

REVIEW DESIGNATION

Standard

TYPE OF REVIEW

Abbreviated New Drug Application (ANDA): 203485, 209851

DISPENSING RESTRICTIONS

N/A

Overview

INDICATION FOR USE

Pemetrexed for injection is a folate analog metabolic inhibitor indicated:

- in combination with pembrolizumab and platinum chemotherapy, for the initial treatment of patients with metastatic non-squamous NSCLC, with no EGFR or ALK genomic tumor aberrations.
- in combination with cisplatin for the initial treatment of patients with locally advanced or metastatic, non-squamous, non-small cell lung cancer (NSCLC).
- as a single agent for the maintenance treatment of patients with locally advanced or metastatic, non-squamous NSCLC whose disease has not progressed after four cycles of platinum-based first-line chemotherapy.
- as a single agent for the treatment of patients with recurrent, metastatic non-squamous, NSCLC after prior chemotherapy.
  Limitations of Use: Pemetrexed for injection is not indicated for the treatment of patients with squamous cell, non-small cell lung cancer.
- initial treatment, in combination with cisplatin, of patients with malignant pleural mesothelioma whose disease is unresectable or who are otherwise not candidates for curative surgery.

MECHANISMS OF ACTION

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Pemetrexed is a folate analog metabolic inhibitor that disrupts folate-dependent metabolic processes essential for cell replication. In vitro studies show that pemetrexed inhibits thymidylate synthase (TS), dihydrofolate reductase, and glycinamide ribonucleotide formyl transferase (GARFT), which are folate-dependent enzymes involved in the de novo biosynthesis of thymidine and purine nucleotides. Pemetrexed is taken into cells by membrane carriers such as the reduced folate carrier and membrane folate binding protein transport systems. Once in the cell, pemetrexed is converted to polyglutamate forms by the enzyme folylpolyglutamate synthetase. The polyglutamate forms are retained in cells and are inhibitors of TS and GARFT.

DOSE FORM AND STRENGTH

For Injection: 100 mg, 500 mg, 752 mg, and 1-gram lyophilized powder in single-dose vial.

DOSE & ADMINISTRATION

- The recommended dose of pemetrexed for injection administered with pembrolizumab and platinum chemotherapy in patients with a creatinine clearance (calculated by Cockcroft-Gault equation) of 45 mL/min or greater is 500 mg/m 2 as an intravenous infusion over 10 minutes, administered after pembrolizumab and prior to platinum chemotherapy, on Day 1 of each 21-day cycle.
- The recommended dose of pemetrexed for injection, administered as a single agent or with cisplatin, in patients with creatinine clearance of 45 mL/minute or greater is 500 mg/m 2 as an intravenous infusion over 10 minutes on Day 1 of each 21-day cycle.
- Initiate folic acid 400 mcg to 1000 mcg orally, once daily, beginning 7 days prior to the first dose of pemetrexed for injection and continue until 21 days after the last dose of pemetrexed for injection.
- Administer vitamin B 12, 1 mg intramuscularly, 1 week prior to the first dose of pemetrexed for injection and every 3 cycles.
- Administer dexamethasone 4 mg orally, twice daily the day before, the day of, and the day after pemetrexed for injection administration.