



Oxaliplatin (Eloxatin)

Drug type

- An antineoplastic agent containing platinum

Indications

- Lymph node positive colorectal carcinoma
- Metastatic colorectal cancer
 - Used in combination therapy with leucovorin and fluorouracil in patients with stage III cancer of the colon who have undergone primary tumor resection
 - Used in combination with leucovorin and fluorouracil for advanced cancer of the colon and rectum

Unlabeled uses

- Refractory malignant tumor of testis
- GI carcinomas: pancreatic carcinoma, esophageal cancer, hepatobiliary cancer
- Non-Hodgkin lymphoma
- Ovarian cancer

Mechanism of action

- Cycle-phase nonspecific
- Binds to DNA forming cross-links, which inhibit DNA replication and transcription
- Synergistic antiproliferative activity of oxaliplatin and fluorouracil exhibited in vitro and in vivo

Dosage and administration

- Oxaliplatin is administered IV.
- Should only be given in dextrose-containing solutions, incompatible with normal saline
- Care should be taken to avoid extravasation of the drug
- Adult dose
 - 147.05 mg/1.73 m² to 236.145 mg/1.73 m²
- Pediatric dose
 - 213.655 mg/1.73 m² to 236.145 mg/1.73 m²
 - Efficacy not established for patients <18 years

Pregnancy and lactation

- Pregnancy category D
 - Oxaliplatin may cause fetal harm when administered to a pregnant woman.
- Lactation
 - Absolute contraindication

Cautions and adverse effects

- Precaution: neuropathy
 - Acute or persistent peripheral neuropathy consistently associated with oxaliplatin treatment
- Acute neuropathy is reversible and symptoms may be exacerbated by cold
- Adverse effects
 - Most frequent: Abdominal pain with cramps, anemia, anorexia, arthralgia, back pain, chest pain, chills, constipation, cough, dehydration, diarrhea, dizziness, dyspepsia, dyspnea, edema, fatigue, fever, headache disorder, injection site sequelae, insomnia, nausea, neuropathy, neutropenic disorder, palmar-plantar erythrodysesthesia, paresthesia, rhinitis, stomatitis, thrombocytopenic disorder, thromboembolic disorder, upper respiratory infection, vomiting
 - Less frequent: Allergic reactions, alopecia, anxiety, depression, dysgeusia, dysuria, epistaxis, eye tearing, flatulence, flushing, gastroesophageal reflux, hiccups, hyperglycemia, hyperhidrosis, hypoalbuminemia, hypocalcemia, hypokalemia, hyponatremia, peripheral edema, pharyngitis, pulmonary fibrosis, skin rash
 - Rare: Acute pancreatitis, anaphylaxis, angioedema, dysarthria, GI obstruction, granulocytopenic disorder, hearing loss, hemolytic uremic syndrome,

hypersensitivity drug reactions, hyporeflexia, hypotension, ileus, increased urinary frequency, leukopenia, Lhermitte sign, metabolic acidosis, muscle weakness, optic neuritis, reduced visual acuity, renal disease, severe diarrhea, twitching, vision loss, visual field defect

Drug interactions

- Anticoagulants
 - Prolongation of prothrombin time (PT) and international normalized ratio (INR) sometimes associated with hemorrhage reported in patients treated with oxaliplatin/fluorouracil/leucovorin concomitantly with oral anticoagulant therapy
- Antibiotic: nalidixic acid
- Immunotherapy: live vaccines, immunosuppressives, immunomodulators, and natalizumab (Tysabri)

What to tell your patient

- You have been prescribed oxaliplatin, which is an anti-cancer (antineoplastic or cytotoxic) chemotherapy drug.
- Oxaliplatin is given as an infusion through a vein (intravenously or IV).
- The dose you receive depends on many factors, including your height and weight, your general health, your other health problems, and the type of cancer that you have. Your doctor will determine the dose and schedule.
- Remember that your doctor has prescribed this medication because he or she has judged that the benefit is greater than the risk of side effects.
- Most people do not experience all of the side effects listed.
- Onset and duration of side effects are often predictable.
- Side effects are almost always reversible and will go away after treatment.
- There are many ways to help minimize or prevent side effects.
- Common side effects
 - Peripheral neuropathy, or tingling, numbness or pain of the hands or feet that is often set off by cold. Peripheral neuropathy is often dose related; therefore, your nurse or doctor will monitor this symptom with you and adjust your dose accordingly.
- Diarrhea
- Nausea and possible occasional vomiting
- Mouth sores
- Poor appetite
- Fatigue
- Low blood counts
 - WBC counts, RBC counts, and platelets may

temporarily decrease, increasing your risk for infection, anemia and/or bleeding.

- Less common side effects: Constipation, coughing, fever, generalized pain, headache, temporary abnormal liver function tests
- Contact your health care provider immediately, day or night, if you should experience fever of 100.5°F (38°C) or higher, or chills (possible signs of infection), or any of the following:
 - Nausea (interferes with ability to eat and unrelieved with prescribed medication)
 - Vomiting (vomiting more than 4-5 times in a 24-hour period)
 - Black or tarry stools, or blood in your stools or urine
 - Diarrhea (4-6 episodes in a 24-hour period)
 - Severe abdominal pain
 - Extreme fatigue (unable to perform self-care activities)
 - Mouth sores/skin rash (painful redness, swelling, or ulcers)
 - Inability to eat or drink for 24 hours or have signs of dehydration (tiredness, thirst, dry mouth, dark and decreased amount of urine, or dizziness)
- This is not a complete list of side effects and others may occur. Call your nurse or doctor for medical advice about side effects.

Precautions

- Before starting this treatment, make sure you tell your doctor about any other medications you are taking (including prescription, over-the-counter [OTC], vitamins, herbal remedies, etc.).
- Do not receive any kind of immunization or vaccination without your doctor's approval while taking this medication.
- Inform your health care professional if you are pregnant or may be pregnant prior to starting this treatment.
- Pregnancy category D (may be hazardous to the fetus). Women who are pregnant or become pregnant must be advised of the potential hazard to the fetus.
- For both men and women: Do not conceive a child (get pregnant) while on this medication. Barrier methods of contraception, such as condoms, are recommended. Discuss with your doctor when you may safely become pregnant or conceive a child after therapy.
- Do not breast-feed while on this medication. ■

Prepared by **Bette Weinstein Kaplan**. Reviewed by **Maribel Pereiras, PharmD, BCPS, BCOP**.