ofatumumab (oh-fah-too-moo-mab)

**Class**

Antineoplastics

**Pharmacologic**

Monoclonal antibodies

**Pregnancy Category**

C

## Indications

Chronic lymphocytic leukemia (CLL) refractory to fludarabine and alemtuzumab.

## Action

A monoclonal antibody that specifically binds to CD20 molecule found on the surface of B lymphocytes, resulting in B-cell lysis.

**Therapeutic Effects:**

Reduced numbers of leukemic cells in CLL.

## Pharmacokinetics

**Absorption:**

IV administration results in complete bioavailability.

**Distribution:**

Unknown.

**Metabolism and Excretion:**

Unknown.

**Half-life:**

14 days (range: 2.3–61.5 days).

## Contraindications/Precautions

### Contraindicated in:

None noted.

### Use Cautiously in:

- History of hepatitis B infection (may reactivate);
- OB: Use only if potential benefit to mother justifies potential risk to fetus;
- Lactation: Lactation;
- Pedi: Safety and effectiveness not established.

## Adverse Reactions/Side Effects

### CNS:

- PROGRESSIVE MULTIFOCAL LEUKOENCEPHALOPATHY (PML), weakness.

### CV:

- Peripheral edema.

### GI:

- INTESTINAL OBSTRUCTION, REACTIVATION OF HEPATITIS B.

### Derm:

- Sweating.

### Hemat:

- Anemia, neutropenia, thrombocytopenia.

### MS:

- Back pain, muscle spasm.

### Misc:

- HEPATITIS B REACTIVATION, INFECVISION, INFUSION REACTIONS, chills, fever, tumor lysis syndrome.

## Interactions

### Drug-Drug:

May 

May 

Risk of adverse reactions from live-virus vaccines.

## Route/Dosage

### IV (Adults):

- 300 mg initial dose, followed 1 wk later by 2000 mg weekly for 7 doses, followed 4 wk later by 2000 mg every 4 wk for 4 doses (total regimen is 12 doses).

## Nursing Implications

### Assessment

- Monitor for infusion reactions (bronchospasm, dyspnea, laryngeal edema, pulmonary edema, flushing, hyperventilation, hypotension, syncope, cardiac ischemia/infarction, back pain, abdominal pain, pyrexia, rash, urticaria, and angioedema); may occur more frequently with first 2 infusions. Administer in facilities equipped to monitor and treat infusion reactions. Institute medical management for severe infusion reactions.

### Contraindications/Precautions

- Use cautiously in: History of hepatitis B infection (may reactivate); OB: Use only if potential benefit to mother justifies potential risk to fetus; Lactation: Lactation; Pedi: Safety and effectiveness not established.

### Adverse Reactions/Side Effects

- CNS: PROGRESSIVE MULTIFOCAL LEUKOENCEPHALOPATHY (PML), weakness, CV: peripheral edema. 

- **Interactions:** May 

### Route/Dosage

- IV (Adults):

- 300 mg initial dose, followed 1 wk later by 2000 mg weekly for 7 doses, followed 4 wk later by 2000 mg every 4 wk for 4 doses (total regimen is 12 doses).
**Screen patients at high risk for hepatitis B virus (HBV) infection before initiating therapy.**

Monitor carriers of HBV for clinical and laboratory signs during and for at least 12 mo following discontinuation of therapy. Discontinue ofatumumab in patients who develop viral hepatitis or reactivation of viral hepatitis and institute appropriate treatment.

**Monitor patient for tumor lysis syndrome due to rapid reduction in tumor volume (acute renal failure, hyperkalemia, hypercalcemia, hyperuricemia, or hypophosphatemia).** Risks are higher in patients with greater tumor burden and rapidly proliferating tumors; may be fatal. Correct electrolyte abnormalities, hydrate patient, administer antithrombotic agents, monitor renal function and fluid balance, and administer supportive care, including dialysis, as indicated.

**Lab Test Considerations:**

Monitor CBC and platelet counts regularly during therapy and frequency of monitoring in patients who develop Grade 3 or 4 cytopenias. May cause prolonged (1-2 wk) severe neutropenia and thrombocytopenia.

**Potential Nursing Diagnoses**

**Risk for infection (Adverse Reactions)**

**Implementation**

- Premedicate 30 min-2 hr prior to each dose with acetaminophen PO 1000 mg, PO or IV antihistamine (cetirizine 10 mg or equivalent), and IV corticosteroid (prednisolone 100 mg or equivalent). Do not reduce corticosteroid dose for Doses 1, 2, and 9. Corticosteroid dose may be reduced for Doses 3–8 and 10–12.

**Y-Site Incompatibility:** Do not mix with or infuse with other products.

- Include the purpose of ofatumumab in patient and caregiver.

- Advise patient to notify health care professional immediately if signs and symptoms of infusion reactions (fever, chills, rash, breathing problems) occur within 24 hr of infusion or if bleeding, PML (progressive weakness on one side of the body or clumsiness of limbs, disturbance of vision, changes in thinking, memory, and orientation leading to confusion and personality changes), urinary, or allergic reactions occur.

- Advise female patients to notify health care professional if pregnancy is planned or suspected or if breast feeding.

- Emphasize the need for periodic blood count monitoring.

**Evaluation/Desired Outcomes**

- number of leukemic cells in blood.

*Why was this drug prescribed for your patient?*