abacavir (ah-bak-ah-ver) 

Ziagen 

Classification 
Therapeutic: antiretrovirals 
Pharmacologic: nucleoside reverse transcriptase inhibitors 

Pregnancy Category C 

Indications 
Management of HIV infection (AIDS) in combination with other antiretrovirals (not with lamivudine and/or tenofovir). 

Action 
Converted inside cells to carbovir triphosphate, its active metabolite. Carbovir triphosphate inhibits the activity of HIV-1 reverse transcriptase, which in turn terminates viral DNA growth. 

Therapeutic Effects: Slows the progression of HIV infection and decreases the occurrence of its sequelae. Increases CD4 cell counts and decreases viral load. 

Pharmacokinetics 
Absorption: Rapidly and extensively (83%) absorbed. 
Distribution: Distributes into extravascular space and readily distributes into erythrocytes. 
Metabolism and Excretion: Mostly metabolized by the liver; 1.2% excreted unchanged in urine. 
Half-life: 1.5 hr. 

TIME/ACTION PROFILE (blood levels) 

ROUTE ONSET PEAK DURATION 
PO unknown unknown unknown 

Contraindications/Precautions 
Contraindicated in: Hypersensitivity (rechallenge may be fatal); Lactation: Breast feeding not recommended for HIV-infected patients. 

Use Cautiously in: Coronary heart disease; OB: Safety not established; Pedi: Children <3 mo (safety not established). 

Adverse Reactions/Side Effects 
CNS: headache, insomnia. 
CV: MYOCARDIAL INFARCTION. 
GI: HEPATOMEGALY (WITH STEATOSIS), diarrhea, nausea, vomiting, anorexia. 
Derm: rashes. 
F and E: LACTIC ACIDOSIS. 
Misc: HYPERSENSITIVITY REACTIONS, fat redistribution, immune reconstitution syndrome. 

Interactions 
Drug-Drug: Alcohol q methadone metabolism in some patients; slight q in methadone dosing may be needed. 

Route/Dosage 
PO (Adults): 300 mg twice daily. 
PO (Children 3 mo–16 yr): 8 mg/kg twice daily (not to exceed 300 mg twice daily). 

NURSING IMPLICATIONS 
Assessment 
• Assess patient for change in severity of HIV symptoms and for symptoms of opportunistic infections throughout treatment. 
• Assess for signs of hypersensitivity reactions (fever; rash; gastrointestinal—nausea, vomiting, diarrhea, abdominal pain; constitutional—malaise, fatigue, achiness; respiratory—dyspnea, cough, pharyngitis). May also cause elevated liver function tests, increased creatine phosphokinase or creatinine, and lymphopenia. 
• Patients who carry the HLA-B*5701 allele are at high risk for hypersensitivity reaction. Discontinue promptly if hypersensitivity reaction is suspected. Regardless of HLA-B*5701 status, permanently discontinue abacavir if hypersensitivity cannot be ruled out, even when other diagnoses are possible. Following a hypersensitivity reaction, never restart abacavir or abacavir-containing products. More severe symptoms may occur within hours and may include life-threatening hypotension and death. Symptoms usually resolve upon discontinuation. 
• May cause lactic acidosis and severe hepatomegaly with steatosis. Monitor patient for signs (serum lactate levels, liver enzymes, liver enlargement on palpation). Therapy should be suspended if clinical or laboratory signs occur. 

NURSING EXERCISES 
Extreme Caution in: Patients positive for HLA-B*5701 allele (unless exceptional circumstances exist where benefits clearly outweigh the risks). 

Adverse Reactions/Side Effects 
CNS: headache, insomnia; CV: hypotension; GI: diarrhoea (with nausea, vomiting, anorexia, constipation, flatulence); hepatic; bone marrow suppression; rash; lactic acidosis. 

Interactions 
Drug-Drug: Alcohol q methadone metabolism in some patients; slight q in methadone dosing may be needed. 

Route/Dosage 
PO (Adults): 300 mg twice daily. 
PO (Children 3 mo–16 yr): 8 mg/kg twice daily (not to exceed 300 mg twice daily).
Lab Test Considerations:
- Monitor viral load and CD4 cell count regularly during therapy.
- Monitor liver function. May cause levels of AST, ALT, and alkaline phosphatase to increase, which usually resolve after interruption of therapy.

Drug Interactions:
- May cause increases in serum glucose and triglyceride levels.

Potential Nursing Diagnoses
Risk for infection (Indications)
Noncompliance (Patient/Family Teaching)

Implementation
- PO: May be administered with or without food. Oral solution may be stored at room temperature or refrigerated; do not freeze. Tablet may be used with children if able to swallow and dose is correctly calculated.

Patient/Family Teaching
- Emphasize the importance of taking abacavir as directed. Must always be used in combination with other antiretroviral drugs. Do not take more than prescribed amount, and do not stop taking without consulting health care professional. Take missed doses as soon as remembered; do not double doses. Advise patient to read Medication Guide prior to starting therapy and with each Rx refill in case of changes.
- Instruct patient not to share abacavir with others.
- Inform patient that abacavir does not cure AIDS or prevent associated or opportunistic infections. Abacavir does not reduce the risk of transmission of HIV to others through sexual contact or blood contamination. Caution patient to use a condom, and avoid sharing needles or donating blood to prevent spreading the AIDS virus to others. Advise patient that the long-term effects of abacavir are unknown at this time.
- Advise patient of potential for hypersensitivity reactions that may result in death. Instruct patient to discontinue abacavir and notify health care professional immediately if symptoms of hypersensitivity or signs of Immune Reconstitution Syndrome (signs and symptoms of an infection) occur. Advise patient to read Medication Guide thoroughly with each refill in case of changes. A warning and summarizing symptoms of abacavir hypersensitivity is provided with each prescription; instruct patient to carry card at all times.
- Instruct patient to notify health care professional immediately if symptoms of lactic acidosis (tiredness or weakness, unusual muscle pain, trouble breathing, stomach pain with nausea and vomiting, cold especially in arms or legs, abdominal pain) or signs of hepatic toxicity (yellow skin or whites of eyes, dark urine, light-colored stools, lack of appetite for several days or longer, nausea, abdominal pain) occur. These symptoms may occur more frequently in patients that are female, obese, or have been taking medications like abacavir for a long time.
- Instruct patient that redistribution and accumulation of body fat may occur, causing central obesity, diastolic arterial hypertension (blood pressure), peripheral wasting, breast enlargement, and striae distensae (striae of the abdomen). These adverse effects are more frequent in patients that are female, obese, or have been taking medications like abacavir for a long time.
- Advise patient to notify health care professional if pregnancy is planned or suspected.
- Emphasize the importance of regular follow-up exams and blood counts to determine progress and monitor for side effects.

Evaluation/Desired Outcomes
- Delayed progression of AIDS, and decreased opportunistic infections in patients with HIV.
- Decrease in viral load and increase in CD4 cell count.

Why was this drug prescribed for your patient?