

Abacavir (Ziagen) Sensitivity

Pharmacologic agent: **Abacavir** is a synthetic carbocyclic nucleoside analogue with inhibitory activity against HIV-1. It, in combination with other antiretroviral agents, is indicated for the treatment of human immunodeficiency virus (HIV-1) infection.

WARNING: RISK OF HYPERSENSITIVITY REACTIONS, LACTIC ACIDOSIS, AND SEVERE HEPATOMEGALY

Serious and sometimes fatal hypersensitivity reactions have been associated with abacavir. Hypersensitivity to abacavir is a multi-organ clinical syndrome usually characterized by a sign or symptom in 2 or more of the following groups: (1) fever, (2) rash, (3) gastrointestinal (including nausea, vomiting, diarrhea, or abdominal pain), (4) constitutional (including generalized malaise, fatigue, or achiness), and (5) respiratory (including dyspnea, cough, or pharyngitis).

Pharmacogenomic information: Patients who carry the HLA-B*5701 allele are at high risk for experiencing a hypersensitivity reaction to abacavir¹⁻³. Only 0-0.5% of patients who are HLA-B*5701 negative will develop hypersensitivity, while >70% who are HLA-B*5701 positive will develop hypersensitivity. The FDA issued an alert in July of 2008 about this and information was added to the boxed warning

Action required⁴:

- **Screening for the HLA-B*5701 allele is recommended for all patients prior to starting abacavir therapy. This approach has been found to decrease the risk of a hypersensitivity reaction.**
- **Patients who previously took abacavir and tolerated it have developed abacavir HSR upon restarting abacavir-containing therapy. Screening is recommended prior to reinitiation of abacavir in patients of unknown HLA-B*5701 status who have previously tolerated abacavir.**
- **For HLA-B*5701-positive patients, treatment with an abacavir-containing regimen is not recommended and should be considered only under exceptional circumstances when the potential benefit outweighs the risk.**

Reference/Resources

1. Mallal, S. et al. (2008) HLA-B*5701 [Screening for Hypersensitivity to Abacavir](http://content.nejm.org/cgi/content/short/358/6/568). N Engl J Med. 358(6):568-579. (<http://content.nejm.org/cgi/content/short/358/6/568>)
2. Hughes, C.A. et al. (2008) [Abacavir Hypersensitivity Reaction: an Update](http://www.theannals.com/cgi/content/abstract/aph.1K522v1). The Annals of Pharmacotherapy, 44:387-396. (<http://www.theannals.com/cgi/content/abstract/aph.1K522v1>)
3. Saag, M., et al. (2008) [High Sensitivity of Human Leukocyte Antigen-B*5701 as a Marker for Immunologically Confirmed Abacavir Hypersensitivity in White and Black Patients](http://www.ncbi.nlm.nih.gov/pubmed/18444831). Clinical Infectious Diseases (CID), 46:1111-1118. (<http://www.ncbi.nlm.nih.gov/pubmed/18444831>)

4. [Information for Healthcare Professionals: Abacavir \(marketed as Ziagen\) and Abacavir-Containing Medications](http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/ucm123927.htm)(<http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatientsandProviders/ucm123927.htm>)
5. Ma, J. et al (2010) HLA-B*5701 [Testing to understand Abacavir Sensitivity](#). (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3000684/?tool=pubmed>)

General drug information obtained from RxList: <http://www.rxlist.com/ziagen-drug.htm>