

Abacavir-Lamivudine-Zidovudine (*Trizivir*)

Table of Contents

- [Abacavir-Lamivudine-Zidovudine *Trizivir* Editor's Summary](#)
- [Drug Summary](#)
- [Key Clinical Trials](#)
- [Adverse Effects](#)
- [Use In Pregnancy](#)
- [Resistance](#)
- [Key Drug Interactions](#)

Drug Summary

Abacavir-lamivudine-zidovudine is a triple-nucleoside reverse transcriptase inhibitor combination tablet that was studied as a potential single-tablet regimen for HIV treatment and as part of intensified regimens for initial or salvage therapy. As a single-tablet, it had lower efficacy than other triple-drug antiretroviral options and had higher rates of toxicity due to the zidovudine component. As a single tablet, it is not considered adequate for antiretroviral therapy and therefore we are not classifying this medication in the Single Tablet Regimen category. As part of a 4-drug regimen for initial therapy it provided no more benefit than a standard 3-drug regimen. Thus, the use of abacavir-lamivudine-zidovudine has now largely been abandoned. Unless there is a clear indication, patients taking abacavir-lamivudine-zidovudine should be strongly encouraged to change to a recommended option. In addition, since this regimen contains abacavir, HLA-B*5701 testing must be performed prior to prescribing abacavir-lamivudine-zidovudine, and those who test positive for HLA-B*5701 should not take this medication.

Key Clinical Trials

Several trials of antiretroviral-naïve individuals found that abacavir-lamivudine-zidovudine, as compared to zidovudine-lamivudine plus an early-generation protease inhibitor, was non-inferior in terms of virologic response if the baseline HIV RNA level was low, but inferior if baseline HIV RNA level was above 100,000 copies/mL [[ACTION](#) and [CNAAB3005](#)]. Trials also showed abacavir-lamivudine-zidovudine to have a less adverse impact on lipid profile than zidovudine-lamivudine plus early protease inhibitors [[FREE](#) and [ESS40002](#)]. Abacavir-lamivudine-zidovudine was compared to zidovudine-lamivudine plus efavirenz as initial therapy; the triple-NRTI arm resulted in inferior virologic efficacy and shorter time to virologic failure, regardless of baseline HIV RNA level; this trial also included an arm that received 4-drug therapy with abacavir-lamivudine-zidovudine plus efavirenz; the intensification of initial antiretroviral therapy with the fourth drug showed no benefit as compared to the three-drug antiretroviral groups [[ACTG 5095](#)].

Adverse Effects

Zidovudine frequently causes gastrointestinal side effects, headache, and malaise, and can cause neutropenia, anemia, myopathy, lactic acidosis, lipoatrophy, and hepatomegaly with steatosis. Overall, lamivudine tends to be well tolerated. It may rarely cause side effects such as headache, diarrhea, nausea, or rash. It may be difficult to distinguish the cause of these side effects, since they are more commonly caused by other antiretrovirals in a regimen. A life-threatening abacavir hypersensitivity reaction can occur in individuals who are positive for HLA-B*5701. Thus, all patients need to undergo testing for HLA-B*5701 prior to receiving abacavir-lamivudine-zidovudine and those who test positive for HLA-B*5701 should not take abacavir-lamivudine-zidovudine.

Use In Pregnancy

In the HHS Perinatal Guidelines section Recommendations for Use of Antiretroviral Drugs During Pregnancy (last updated October 19, 2017), **abacavir-lamivudine-zidovudine** is designated in the category Not Recommended for Initial ART in Pregnancy because of inferior virologic efficacy.

- For additional information regarding the safety and toxicity of abacavir-lamivudine-zidovudine in pregnancy see the HHS Perinatal Guidelines summary on [Abacavir](#), [Lamivudine](#), and [Zidovudine](#).
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Resistance

For a listing of the most common clinically significant mutations associated with abacavir-lamivudine-zidovudine (ABC-3TC-ZDV) resistance, see the [NRTI Resistance Notes on the Stanford University HIV Drug Resistance Database](#).

Key Drug Interactions

For complete information on abacavir-lamivudine-zidovudine-related drug interactions, see the [Drug Interactions section in the Abacavir-Lamivudine-Zidovudine \(Trizivir\) Prescribing Information](#).

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<https://www.hiv.uw.edu/page/treatment/drugs/abacavir-lamivudine-zidovudine>