Kivexa

FACT SHEET

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Summary

Kivexa is a combination of two anti-HIV drugs, both of which belong to the group commonly called nukes. Each Kivexa tablet contains 600 mg of abacavir (Ziagen) and 300 mg of 3TC (lamivudine). The most common side effects of Kivexa can include unexpected tiredness, diarrhea, nausea, and headache. Kivexa is usually taken at a dose of one tablet daily, with or without food.

Note: Some people who take Kivexa may have a serious allergic ("hypersensitivity") reaction to the abacavir it contains: please see the "Warnings" section. There is now a screening test to help predict whether you are likely to have an abacavir hypersensitivity reaction. See CATIE's fact sheet *Abacavir hypersensitivity screening*.

What is Kivexa?

Kivexa is the brand name of two anti-HIV drugs—abacavir (Ziagen) and 3TC—that are combined together in one tablet. Both of these drugs belong to a group or class of anti-HIV drugs (antiretrovirals) called nucleoside analogues or "nukes". Kivexa is used in combination with other anti-HIV drugs to treat (but not cure) HIV.

In the US, Kivexa goes by the brand name Epzicom.

How does Kivexa work?

To explain how Kivexa works, we need to first tell you some information about HIV. When HIV infects a cell, it takes control of that cell. HIV then forces the cell to make many more copies of the virus. To make these copies, the cell uses proteins called enzymes. When the activity of these enzymes is reduced the production of HIV slows.

Kivexa contains abacavir and 3TC, two drugs that belong to a class of anti-HIV drugs called nucleoside analogues. Abacavir and 3TC interfere with an enzyme called reverse transcriptase (RT), which is used by HIV-infected cells to make new viruses. Since abacavir and 3TC both inhibit, or reduce the activity of this enzyme, Kivexa causes HIV-infected cells to produce fewer viruses.

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How do people with HIV use Kivexa?

Kivexa is used in combination with several other anti-HIV drugs, usually including drugs from different classes, such as protease inhibitors and/or non-nukes (non-nucleoside reverse transcriptase inhibitors). Combinations such as this are called antiretroviral therapy, or ART. For more information on ART, see CATIE's *Your Guide to HIV Treatment*.

For many people with people with HIV, the use of ART has increased their CD4+ cell counts and decreased the amount of HIV in their blood (viral load). These beneficial effects help to reduce the risk of developing a life-threatening infection. Neither Kivexa nor any other anti-HIV medication is a cure for HIV. It is therefore important that you do the following:

- see your doctor regularly so that he/she monitors your health
- continue to practice safer sex and take other precautions so as not to pass HIV on to other people

Warnings

1. Hypersensitivity reaction

Up to 8% of people with HIV who use Kivexa experience an exaggerated immune reaction against the abacavir component of the combination. **This reaction, called abacavir hypersensitivity reaction, is very serious and can be fatal.**

Although the hypersensitivity reaction can occur at any time while a person is taking Kivexa, on average it occurs within the first six weeks of use. The manufacturer, ViiV Healthcare, states that you should stop using Kivexa if you have signs or symptoms from two or more of the following groups:

1. Fever
2. Rash
3. Gastrointestinal symptoms (including nausea, vomiting, diarrhea or belly pain)
4. General symptoms (including fatigue, lack of energy, achiness)
5. Respiratory symptoms (sore throat, shortness of breath, cough, unusual findings on X-rays of the chest)

If you develop symptoms from two or more of these groups while you are taking Kivexa or any drug containing abacavir, you should stop taking this medicine and contact your doctor right away. If a hypersensitivity reaction to abacavir has indeed occurred, then Kivexa should never be restarted, as a fatal reaction could occur within hours. You should also never take any other drug that contains abacavir.

There is now a screening test to help predict whether you are likely to have an abacavir hypersensitivity reaction. See CATIE's fact sheet *Abacavir hypersensitivity screening*.

2. Restarting treatment

Kivexa should never be restarted following a hypersensitivity reaction, as a fatal reaction could occur within hours. You should also never take any other drug that contains abacavir (this includes Ziagen and Trizivir).

This hypersensitivity reaction has even occurred among people who did not have any problems when they first took abacavir-containing drugs, but who then stopped and restarted.

3. Cardiovascular risk

There are conflicting data from some studies about a link between heart attacks and the initial use of abacavir-containing products (Ziagen and in Kivexa and Trizivir). However, a review by the U.S. Food and Drug Administration (FDA) of randomized clinical trials has not found any link between abacavir use and an increased risk of heart attack. Another large observational study, the French Hospital Database also assessed the risk of heart attack among its participants who used abacavir. French researchers found that after adjusting for use of cocaine (a powerful stimulant that by itself can cause heart attacks), exposure to abacavir was not linked to an increased risk for heart attacks.

If you or your close family members (mother, father, brother, sister) have a history of heart problems or

if you use cocaine or inject street drugs, let your doctor know. Before using abacavir-containing medicines, always speak to your doctor about getting tested for abacavir hypersensitivity.

4. Lactic acidosis and hepatic steatosis

Two related conditions, lactic acidosis (a buildup of lactic acid in the blood) and hepatic steatosis (excess fat in the liver), have occurred in some people who have used nucleoside analogues. These conditions can be serious or fatal. They have mostly been seen in women and people who are overweight or who have been on nucleosides a long time, and can cause the following symptoms:

- unexpected tiredness or weakness
- nausea and/or vomiting
- persistent abdominal pain
- painful inflammation of the pancreas (pancreatitis)

If any of these symptoms occur without apparent reason, call your nurse or doctor right away.

Lactic acidosis is rare (less than one case per year for every thousand patients). If you do develop any of these symptoms, it does not necessarily mean you have lactic acidosis, but you should still let your doctor know right away.

5. Hepatitis B

If someone with hepatitis B infection is taking 3TC—a component of Kivexa—the hepatitis can "flare up" if the medication is stopped. People with hepatitis B who are taking Kivexa should be carefully monitored if they stop taking the drug. If you are co-infected with HBV, talk to your doctor about how best to treat this co-infection.

6. Pancreatitis

Some people taking the two medications found in Kivexa—abacavir and 3TC—have developed a painful inflammation of their pancreas gland. Talk to your doctor right away if these symptoms occur as they may be suggestive of pancreatitis:

- abdominal pain
- nausea
- vomiting
- fever
- anxiety
- unexpected sweating

Side effects

1. General

The general side effects that occur in people with HIV taking 3TC and abacavir separately may also occur in people taking Kivexa. These side effects include unexpected tiredness, diarrhea, nausea, and headache. Many people find that side effects caused by anti-HIV drugs improve or go away after the first several weeks of treatment.

Less common, but more serious, side effects may include peripheral neuropathy (a numbness, tingling or burning sensation in the hands or feet), neutropenia (a decrease in the number of white blood cells called neutrophils), and anemia (a decrease in hemoglobin or red blood cells).

2. Lipodystrophy syndrome

The HIV lipodystrophy syndrome is the name given to a range of symptoms that can develop over time when people use ART.

Of all the anti-HIV drugs, 3TC and abacavir appear to be among the least likely to cause or contribute to lipodystrophy.

Some features of the lipodystrophy syndrome include:

- loss of fat just under the skin (subcutaneous fat) in the face, arms, and legs
- bulging veins in the arms and/or legs due to the loss of fat under the skin
- increased waist and belly size

- fat pads at the back of the neck ("buffalo hump") or at the base of the neck ("horse collar")
- small lumps of fat in the abdomen
- increased breast size (in women)

Together with these physical changes, lab tests of your blood may detect the following:

- increased levels of fatty substances called triglycerides
- increased levels of LDL-cholesterol (low-density lipoprotein), or "bad" cholesterol
- increased levels of sugar (glucose)
- increased levels of the hormone insulin
- decreased sensitivity to insulin (insulin resistance)
- decreased levels of HDL-cholesterol (high-density lipoprotein), or "good" cholesterol

The precise causes of the HIV lipodystrophy syndrome are not clear and are difficult to understand because in some people with HIV there may be one or more aspects of the syndrome taking place. For instance, some people may experience fat wasting, others fat gain, and others may experience both fat gain and wasting. What is becoming increasingly clear is that unfavourable changes in the lab readings of glucose, cholesterol, and triglycerides over a period of several years increase the risk of diabetes and cardiovascular disease. So far, however, the many benefits of ART are much greater than the increased risk of cardiovascular disease or other side effects.

Maintaining a normal weight, eating a healthy diet, exercising regularly, and quitting smoking are all important in helping you to reduce your risk of diabetes, heart disease, and other complications. Regular visits to your doctor for checkups and blood tests are a vital part of staying healthy. If necessary, your doctor can prescribe lipid-lowering therapy.

Researchers are studying the lipodystrophy syndrome to try to discover ways of helping people with HIV avoid or reduce this problem. To find out more about options for managing aspects of the lipdystrophy syndrome, see CATIE's *A Practical Guide to HIV Drug Side Effects*.

Drug interactions

Always consult your doctor and pharmacist about taking any other prescription or non-prescription medication, including herbs, supplements, and street drugs.

Some drugs can interact with the abacavir in Kivexa, increasing or decreasing its levels in your body. Increased drug levels can cause you to experience side effects or make pre-existing side effects worse. On the other hand, if drug levels become too low, HIV can develop resistance and your future treatment options may be reduced.

It may also be necessary to avoid drugs that do not affect abacavir drug levels, but cause similar side effects.

If you must take a drug that has the potential to interact with your existing medications, your doctor can do the following:

- adjust your dose of either your anti-HIV drugs or other medications
- prescribe different anti-HIV drugs for you

Drug interactions for Kivexa

No significant drug interactions have been reported with 3TC.

The following drugs interact or have the potential to interact with the abacavir in Kivexa. This list is not exhaustive.

- In men, the use of alcohol in combination with abacavir causes an increase of abacavir in the blood, which could cause an increase in toxicity. This has not been studied in women.
- Abacavir can reduce levels of methadone in the blood, which might require an adjustment to your dose of methadone.

Resistance and cross-resistance

Over time, as new copies of HIV are made in the body, the virus changes its structure. These changes

are called mutations and can cause HIV to resist the effects of anti-HIV drugs, which means those drugs will no longer work for you. Combining Kivexa with at least two other anti-HIV drugs delays the development of drug resistance.

To reduce the risk of developing drug resistance, all anti-HIV drugs should be taken every day exactly as prescribed and directed. If doses are delayed, missed, or not taken as prescribed, levels of abacavir and 3TC in the blood may fall too low. If this happens, resistant virus can develop. If you find you are having problems taking your medications as directed, speak to your doctor and nurse about this. They can find ways to help you.

When HIV becomes resistant to one drug in a class, it sometimes becomes resistant to other drugs in that class. This is called cross-resistance. Feel free to talk with your doctor about your current and future treatment options. To help you decide what these future therapies might be, at some point your doctor can have a small sample of your blood analysed using resistance testing. Should HIV in your body become resistant to abacavir and/or 3TC, your doctor, with the help of resistance testing, can help put together a new treatment regimen for you.

Dosage and formulations

Kivexa is available as tablets, each containing 600 mg abacavir and 300 mg 3TC (lamivudine). The usual standard adult dose of Kivexa is one tablet daily, with or without food. All medications should always be taken as prescribed and directed.

Availability

Kivexa is licensed in Canada for the treatment of HIV infection in adults, in combination with other anti-HIV drugs. Your doctor can tell you more about the availability and coverage of Kivexa in your region. CATIE's online module *Federal, Provincial and Territorial Drug Access Programs* also contains information about Canadian drug coverage.

Also see CATIE's fact sheets on abacavir, 3TC, Trizivir and abacavir hypersensitivity screening.

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Disclaimer

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

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