



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

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## EPAR summary for the public

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# Combivir

lamivudine and zidovudine

This document is a summary of the European Public Assessment Report (EPAR) for Combivir. It explains how the Committee for Medicinal Products for Human Use (CHMP) assessed the medicine to reach its opinion in favour of granting a marketing authorisation and its recommendations on the conditions of use for Combivir.

### What is Combivir?

Combivir is a medicine that contains two active substances, lamivudine (150 mg) and zidovudine (300 mg). It is available as white capsule-shaped tablets.

### What is Combivir used for?

Combivir is used in combination with at least one other antiviral medicine to treat patients who are infected with human immunodeficiency virus (HIV), the virus that causes acquired immune deficiency syndrome (AIDS).

The medicine can only be obtained with a prescription.

### How is Combivir used?

Treatment with Combivir should be started by a doctor who has experience in the management of HIV infection.

The recommended dose of Combivir for patients over 12 years of age who weigh at least 30 kg is one tablet taken twice a day. In children (below 12 years of age) weighing between 14 and 30 kg, the number of tablets and half tablets to take depends on their weight. Children weighing less than 14 kg will need to use separate oral solutions containing lamivudine and zidovudine. Children taking Combivir should be closely monitored for side effects.



The tablets should ideally be swallowed without crushing. Patients who cannot swallow tablets may crush the tablets and add them to a small amount of food or drink immediately before swallowing it. If patients need to stop taking lamivudine or zidovudine, or need to take different doses because of problems with their kidneys, liver or blood, they will need to take medicines containing lamivudine or zidovudine separately.

For more information, see the Package Leaflet.

## **How does Combivir work?**

Both active substances in Combivir, lamivudine and zidovudine, are nucleoside reverse transcriptase inhibitors (NRTIs). They both work in similar ways by blocking the activity of reverse transcriptase, an enzyme produced by HIV that allows it to infect cells and make more viruses. Combivir, taken in combination with at least one other antiviral medicine, reduces the amount of HIV in the blood and keeps it at a low level. Combivir does not cure HIV infection or AIDS, but it may delay the damage to the immune system and the development of infections and diseases associated with AIDS.

Both active substances have been available in the European Union (EU) for a number of years: lamivudine has been authorised as Epivir since 1996 and zidovudine has been available in the EU since the mid-1980s.

## **How has Combivir been studied?**

Because lamivudine and zidovudine have been available in the EU for a number of years, the company presented information obtained in earlier studies of the two substances taken together.

The company also compared the combination tablet to separate tablets of lamivudine and zidovudine in 75 patients over 12 years of age who had not taken treatment for HIV infection before. The main measures of effectiveness were the change in the level of HIV in the blood (viral load) and the change in the number of CD4 T-cells in the blood (CD4 cell count) after 12 weeks of treatment. CD4 T-cells are white blood cells that are important in helping to fight infections, but which are killed by HIV. The company also looked at the way the combined tablet was absorbed in the body in comparison with the separate tablets.

In order to support its recommendations for Combivir doses in children, the company presented information from studies of the levels of lamivudine and zidovudine in the blood of children taking the medicines separately. It also presented information on the predicted blood levels of the two substances in children taking the two substances combined in one tablet.

## **What benefit has Combivir shown during the studies?**

Combivir was effective at reducing viral loads and allowing CD4 cell counts to rise. The earlier studies showed that the active substances taken together could reduce viral loads and allow CD4 cell counts to rise after up to one year of treatment.

In the new study, patients taking Combivir and those taking the two active substances separately had similar falls in viral load. After 12 weeks, the viral load had fallen by more than 95%. The two groups also had similar rises in CD4 cell counts. The combination tablet was absorbed in the body in the same way as the separate tablets.

The recommended doses of Combivir in children produced similar levels of the two active substances as in older patients.

## **What is the risk associated with Combivir?**

The most common side effects when taking Combivir (seen in more than 1 patient in 10) are diarrhoea and nausea (feeling sick). For the full list of all side effects reported with Combivir, see the Package Leaflet.

Combivir should not be used by people who may be hypersensitive (allergic) to lamivudine, zidovudine or any of the other ingredients. Because it contains zidovudine, Combivir must not be used by patients with low neutrophil counts (a type of white blood cell) or anaemia (low red blood cell counts).

As with other anti-HIV medicines, patients taking Combivir may be at risk of developing lipodystrophy (changes in the distribution of body fat), osteonecrosis (death of bone tissue) or immune reactivation syndrome (symptoms of infection caused by the recovering immune system). Patients who have problems with their liver (including hepatitis B or C infection) may be at an elevated risk of liver damage when taking Combivir. As with all other NRTIs, Combivir may also cause lactic acidosis (a build-up of lactic acid in the body) and, in the babies of mothers taking Combivir during pregnancy, mitochondrial dysfunction (damage to the energy-producing components within cells that can cause problems in the blood).

## **Why has Combivir been approved?**

The CHMP decided that Combivir's benefits are greater than its risks and recommended that it be given marketing authorisation.

## **Other information about Combivir:**

The European Commission granted a marketing authorisation valid throughout the EU for Combivir on 18 March 1998. The marketing authorisation holder is ViiV Healthcare UK Limited. The marketing authorisation is valid for an unlimited period.

The full EPAR for Combivir can be found [here](#). For more information about treatment with Combivir, read the Package Leaflet (also part of the EPAR) or contact your doctor or pharmacist.

This summary was last updated in 05-2010.