



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

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Zelboraf (*vemurafenib*)

An overview of Zelboraf and why it is authorised in the EU

What is Zelboraf and what is it used for?

Zelboraf is a cancer medicine used to treat adults with melanoma (a type of skin cancer) that has spread to other parts of the body or cannot be surgically removed. Zelboraf is only for patients whose melanoma tumour cells have a specific mutation (genetic change) called 'BRAF V600'.

Zelboraf contains the active substance vemurafenib.

How is Zelboraf used?

Zelboraf can only be obtained with a prescription and treatment should be started and supervised by a specialist doctor experienced in treating cancer. Before starting treatment a test must be carried out to make sure that the patient's tumours have the BRAF V600 mutation.

Zelboraf is available as tablets (240 mg). The recommended dose is 960 mg (four tablets) twice daily. The first dose is taken in the morning and the second dose in the evening around 12 hours later. Each dose can be taken with or without food, but Zelboraf should be taken in the same way day-to-day.

Treatment should be continued until the disease worsens or the side effects become too severe.

For more information about using Zelboraf, see the package leaflet or contact your doctor or pharmacist.

How does Zelboraf work?

The active substance in Zelboraf, vemurafenib, is an inhibitor of BRAF, a protein involved in stimulating cell division. In melanoma tumours with the BRAF V600 mutation, an abnormal form of BRAF is present which plays a role in the development of the cancer by allowing uncontrolled division of the tumour cells. By blocking the action of the abnormal BRAF, Zelboraf helps to slow down the growth and spread of the cancer.

What benefits of Zelboraf have been shown in studies?

Zelboraf was compared with the cancer medicine dacarbazine in a main study involving 675 patients with melanoma containing the BRAF V600 mutation whose tumours had spread or could not be surgically removed. Patients were to receive either medicine until their disease got worse or their



treatment became too toxic for them. The main measures of effectiveness were how long the patients lived (overall survival) and how long they lived without their disease getting worse (progression-free survival).

Zelboraf was shown to be effective at prolonging patients' lives and delaying the worsening of the disease. The study showed that patients taking Zelboraf lived on average for 13.2 months compared with 9.9 months for patients on dacarbazine, and it took on average 5.3 months for the disease to worsen in the Zelboraf group compared with 1.6 months in the dacarbazine group.

What are the risks associated with Zelboraf?

The most common side effects with Zelboraf (which may affect more than 3 in 10 patients) include arthralgia (joint pain), tiredness, rash, photosensitivity reaction (sunburn-like reactions following exposure to light), nausea and vomiting (feeling sick and being sick), alopecia (hair loss), diarrhoea, headache, pruritus (itching), skin papilloma (warts) and hyperkeratosis (thickening and toughening of the skin). The most common serious side effects include another type of skin cancer called 'cutaneous squamous cell carcinoma', which is commonly treated by local surgery, keratoacanthoma (benign skin tumour), rash, arthralgia and change in liver test results (increased gamma-glutamyltransferase [GGT]).

For the full list of side effects and restrictions with Zelboraf, see the package leaflet.

Why is Zelboraf authorised in the EU?

The European Medicines Agency decided that Zelboraf's benefits are greater than its risks and it can be authorised for use in the EU. The Agency noted that Zelboraf had been convincingly shown to improve overall survival and to delay the worsening of 'BRAF V600 positive' melanoma which has spread or cannot be surgically removed. With regard to its risks, in the main study around half of the patients taking Zelboraf experienced a severe side effect and about one fifth developed cutaneous squamous cell carcinoma. The Agency considered the side effects to be manageable and included recommendations for doctors to help reduce the risks in the product information.

What measures are being taken to ensure the safe and effective use of Zelboraf?

Recommendations and precautions to be followed by healthcare professionals and patients for the safe and effective use of Zelboraf have been included in the summary of product characteristics and the package leaflet.

As for all medicines, data on the use of Zelboraf are continuously monitored. Side effects reported with Zelboraf are carefully evaluated and any necessary action taken to protect patients.

Other information about Zelboraf

Zelboraf received a marketing authorisation valid throughout the EU on 17 February 2012.

Further information on Zelboraf can be found on the Agency's website: [ema.europa.eu/Find/medicine/Human medicines/European Public Assessment Reports](http://ema.europa.eu/Find/medicine/Human%20medicines/European%20Public%20Assessment%20Reports).

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