



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

EMA/213330/2017
EMA/H/C/003918

EPAR summary for the public

Dinutuximab beta Apeiron

dinutuximab beta

This is a summary of the European public assessment report (EPAR) for Dinutuximab beta Apeiron. It explains how the Agency assessed the medicine to recommend its authorisation in the EU and its conditions of use. It is not intended to provide practical advice on how to use Dinutuximab beta Apeiron.

For practical information about using Dinutuximab beta Apeiron, patients should read the package leaflet or contact their doctor or pharmacist.

What is Dinutuximab beta Apeiron and what is it used for?

Dinutuximab beta Apeiron is a cancer medicine used to treat neuroblastoma, a cancer of nerve cells, in patients over 1 year of age.

It is used in 2 groups of patients who have high-risk neuroblastoma (which has a high chance of coming back):

- patients who have had some improvement with previous treatments, which included blood stem-cell transplantation (a transplant of blood-producing cells);
- patients whose neuroblastoma has not improved with other cancer treatments or has come back.

If the neuroblastoma has come back after previous treatment, it should be stabilised (stopped from getting worse) before treatment with Dinutuximab beta Apeiron is started. Dinutuximab beta Apeiron is used together with another medicine called interleukin-2 (aldesleukin) in some cases where previous treatments have not worked well enough.

Because the number of patients with neuroblastoma is low, the disease is considered 'rare', and Dinutuximab beta Apeiron was designated an 'orphan medicine' (a medicine used in rare diseases) on 8 November 2012.



The medicine contains the active substance dinutuximab beta.

How is Dinutuximab beta Apeiron used?

Dinutuximab beta Apeiron is given as an infusion (drip) into a vein. Each course of treatment with the medicine is given for 5 or 10 days every 35 days. It is given for a total of 5 courses. The recommended dose depends on the patient's weight and height.

The doctor may need to reduce or delay doses if certain side effects occur, or stop treatment altogether if side effects are severe.

Treatment with Dinutuximab beta Apeiron should not be started unless the patient has satisfactory results in certain blood tests of liver, lung, kidney and bone marrow function.

Treatment with Dinutuximab beta Apeiron must be supervised by a doctor experienced in the treatment of cancer. It must be given in hospital by a doctor or nurse who can manage severe allergic reactions and who has full resuscitation services immediately available if needed. The medicine can only be obtained with a prescription.

For further information, see the summary of product characteristics (also part of the EPAR).

How does Dinutuximab beta Apeiron work?

Dinutuximab beta Apeiron is a monoclonal antibody (a type of protein) that has been designed to recognise and attach to a structure called GD2 that is present in high amounts on the surface of neuroblastoma cells, but not normal cells.

When Dinutuximab beta Apeiron attaches to the neuroblastoma cells, it makes them a target for the body's immune system (the body's natural defences), which then kills the cancer cells.

What benefits of Dinutuximab beta Apeiron have been shown in studies?

Studies have shown that Dinutuximab beta Apeiron is effective at increasing survival in patients with neuroblastoma.

Two studies analysed data from 88 children and adults with neuroblastoma that had not improved with other cancer treatments or had come back. Patients were treated with Dinutuximab beta Apeiron plus interleukin-2 and another medicine called isotretinoin. In these studies, 70% and 78% of the patients whose neuroblastoma had not improved with other treatments were still alive 2 years after treatment. Of the patients with neuroblastoma that had come back, 42% and 69% were still alive 2 years after treatment.

In a third study, 370 children with high-risk neuroblastoma that had improved after other treatments were given Dinutuximab beta Apeiron and isotretinoin with or without interleukin-2. At the start of treatment some of these patients had no sign of neuroblastoma and some still had some sign of the disease. Of the patients who had no sign of neuroblastoma, 71% were still alive 3 years after treatment and the results were similar whether the treatment included interleukin-2 or not. Of the patients who had some sign of neuroblastoma, 63% of those given interleukin-2 were still alive 3 years after treatment compared with 54% of patients who did not receive interleukin-2.

In these studies, outcomes with Dinutuximab beta Apeiron compared favourably with those previously seen in patients treated for neuroblastoma without Dinutuximab beta Apeiron.

What are the risks associated with Dinutuximab beta Apeiron?

The most common side effects with Dinutuximab beta Apeiron (which may affect more than 7 in 10 people) are pyrexia (fever) and pain. Other side effects (which may affect more than 3 in 10 people) are hypersensitivity (allergy), vomiting, diarrhoea, capillary leak syndrome (leakage of fluid from blood vessels that can cause swelling and a drop in blood pressure) and hypotension (low blood pressure).

Dinutuximab beta Apeiron must not be used in patients with severe or widespread graft-versus-host disease (when transplanted cells attack the body).

For the full list of all side effects and restrictions with Dinutuximab beta Apeiron, see the package leaflet.

Why is Dinutuximab beta Apeiron approved?

The Agency's Committee for Medicinal Products for Human Use (CHMP) noted the lack of treatment options to prevent high-risk neuroblastoma from coming back.

Taken together, data on outcomes with Dinutuximab beta Apeiron show that the medicine is effective. However, more data are needed to fully understand the medicine's effectiveness.

Although treatment with Dinutuximab beta Apeiron can cause serious side effects, the safety of the medicine is considered acceptable.

Therefore the CHMP decided that Dinutuximab beta Apeiron's benefits are greater than its risks and recommended that it be approved for use in the EU.

Dinutuximab beta Apeiron has been authorised under 'exceptional circumstances'. This is because it has not been possible to obtain complete information about Dinutuximab beta Apeiron for ethical reasons. As dinutuximab is a recommended treatment for high-risk neuroblastoma, it would not be ethical to carry out a trial in which some patients were given placebo (a dummy treatment). Every year, the European Medicines Agency will review any new information that becomes available and this summary will be updated as necessary.

What information is still awaited for Dinutuximab beta Apeiron?

Since Dinutuximab beta Apeiron has been approved under exceptional circumstances, the company that markets Dinutuximab beta Apeiron will monitor the safety of the medicine using a patient registry and provide yearly updates. The company will also perform tests to obtain more information on how the medicine is processed by the body and how the immune system responds to the medicine. Results of a study looking at the effect of giving Dinutuximab beta Apeiron together with interleukin-2 will be provided by the company. In addition, the company will report on the 5-year survival rates of patients who took part in studies.

What measures are being taken to ensure the safe and effective use of Dinutuximab beta Apeiron?

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

Other information about Dinutuximab beta Apeiron

The European Commission granted a marketing authorisation valid throughout the European Union for Dinutuximab beta Apeiron on 8 May 2017.

The full EPAR for Dinutuximab beta Apeiron can be found on the Agency's website: [ema.europa.eu/Find medicine/Human medicines/European public assessment reports](http://ema.europa.eu/Find%20medicine/Human%20medicines/European%20public%20assessment%20reports). For more information about treatment with Dinutuximab beta Apeiron, read the package leaflet (also part of the EPAR) or contact your doctor or pharmacist.

The summary of the opinion of the Committee for Orphan Medicinal Products for Dinutuximab beta Apeiron can be found on the Agency's website: [ema.europa.eu/Find medicine/Human medicines/Rare disease designation](http://ema.europa.eu/Find%20medicine/Human%20medicines/Rare%20disease%20designation).

This summary was last updated in 05-2017.