



EUROPEAN MEDICINES AGENCY  
SCIENCE MEDICINES HEALTH

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## Questions and answers

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# Withdrawal of the marketing authorisation application for Kyndrisa (drisapersen)

On 31 May 2016, BioMarin International Limited officially notified the Committee for Medicinal Products for Human Use (CHMP) that it wishes to withdraw its application for a marketing authorisation for Kyndrisa, for the treatment of Duchenne muscular dystrophy.

## What is Kyndrisa?

Kyndrisa is a medicine that contains the active substance drisapersen. It was to be available as a solution for injection under the skin.

## What was Kyndrisa expected to be used for?

Kyndrisa was expected to be used for the treatment of Duchenne muscular dystrophy in patients aged 5 years and older who are able to walk and whose disease is due to certain genetic mutations (defects) that can be treated with 'exon 51 skipping technology'. Duchenne muscular dystrophy is a serious genetic disease, which mainly affects boys and is usually diagnosed before the age of 6. It causes progressive weakness and loss of muscle function, and usually leads to death in adolescence or early adulthood.

Kyndrisa was designated an 'orphan medicine' (a medicine to be used in rare diseases) on 27 February 2009 for Duchenne muscular dystrophy. Further information on the orphan designation can be found [here](#).

## How is Kyndrisa expected to work?

Duchenne muscular dystrophy is caused by mutations in the gene for the protein dystrophin, which lead to the production of a non-functional dystrophin. This medicine works by 'exon 51 skipping



technology'. This technology enables the protein-making apparatus in cells to skip some areas of the dystrophin gene and allow the production of a shortened but partially working dystrophin protein.

### **What did the company present to support its application?**

Kyndrisa was investigated in three studies in a total of 290 patients with Duchenne muscular dystrophy. The studies compared the effects of Kyndrisa with placebo (a dummy treatment) and the main measure of effectiveness was the change in the distance the patient could walk in six minutes after 24 or 48 weeks of treatment.

### **How far into the evaluation was the application when it was withdrawn?**

The application was withdrawn after the CHMP had evaluated the documentation provided by the company and formulated lists of questions. After the CHMP had assessed the company's responses to the last round of questions, there were still some important unresolved issues.

### **What was the recommendation of the CHMP at that time?**

Based on the review of the data and the company's response to the CHMP lists of questions, at the time of the withdrawal, the CHMP had some concerns and was of the provisional opinion that Kyndrisa could not have been approved for the treatment of Duchenne muscular dystrophy.

The Committee considered that data from the clinical studies did not sufficiently demonstrate a beneficial effect of Kyndrisa: the main study did not show any benefit in patients with the condition, while two other studies failed to consistently show a beneficial effect. Further, the safety profile of the medicine was not considered satisfactory, particularly because of the risk of persisting reactions at the injection site (such as swelling, inflammation and ulceration) which could have a negative impact on quality of life, and the risk of thrombocytopenia (low blood platelet counts) which could put patients at risk of serious bleeding complications. In addition, the Committee questioned the proposed method of sterilisation of the medicine.

Therefore, at the time of the withdrawal, the CHMP was of the opinion that the benefits of Kyndrisa did not outweigh its risks.

### **What were the reasons given by the company for withdrawing the application?**

In its letter notifying the Agency of the withdrawal of application, the company stated that it would not be able to address the CHMP concerns regarding the results of the clinical studies within the expected timeframe.

The withdrawal letter is available [here](#).

### **What consequences does this withdrawal have for patients in clinical trials or compassionate use programmes?**

The company stated that it intended to stop the development of the medicine, but that it plans to work with doctors, patients and local regulatory authorities to allow currently treated patients to access the remaining supply of Kyndrisa.

If you are in a clinical trial and need more information about your treatment, contact the doctor who is giving it to you.