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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Ibrutinib for the treatment of treatment of lymphoplasmacytic lymphoma

On 29 April 2014, orphan designation (EU/3/14/1264) was granted by the European Commission to Janssen-Cilag International N.V., Belgium, for ibrutinib for the treatment of lymphoplasmacytic lymphoma.

What is lymphoplasmacytic lymphoma?

Lymphoplasmacytic lymphoma is a cancer of a type of white blood cell called B lymphocytes or B cells. In lymphoplasmacytic lymphoma, the B cells multiply too quickly and live for too long, so there are too many of them in places like the bone marrow, lymph nodes or spleen. The first signs of the disease are usually weakness and tiredness. In many patients with lymphoplasmacytic lymphoma, the abnormal B cells produce too much of a type of blood protein called immunoglobulin-type-M paraprotein (IgM paraprotein), which makes the blood too viscous (thick) and can lead to symptoms such as eye problems, heart failure, haemolytic anaemia (destruction of red blood cells) and effects on the nervous system.

Lymphoplasmacytic lymphoma is a life-threatening and long-term debilitating disease due to damage to the bone marrow and other organs.

What is the estimated number of patients affected by the condition?

At the time of designation, lymphoplasmacytic lymphoma affected less than 0.1 in 10,000 people in the European Union (EU). This was equivalent to a total of fewer than 5,000 people*, and is below the ceiling for orphan designation, which is 5 people in 10,000. This is based on the information provided by the sponsor and the knowledge of the Committee for Orphan Medicinal Products (COMP).

What treatments are available?

At the time of designation, the main treatments for diseases such as lymphoplasmacytic lymphoma available in the EU included immunotherapy (medicines that stimulate the body's own immune system to kill the cancer cells), and combinations of immunotherapy with chemotherapy (cancer medicines

*Disclaimer: For the purpose of the designation, the number of patients affected by the condition is estimated and assessed on the basis of data from the European Union (EU 28), Norway, Iceland and Liechtenstein. This represents a population of 511,100,000 (Eurostat 2014).

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intended to kill the cancer cells). Medicines designed to attach to the cancer cells and kill them with radiation (radioimmunotherapy) were also sometimes used.

The sponsor has provided sufficient information to show that ibrutinib might be of significant benefit for patients with lymphoplasmacytic lymphoma, because early studies in patients with lymphoplasmacytic lymphoma that was resistant to or had come back after existing treatments showed that some of these patients responded to ibrutinib. This assumption will need to be confirmed at the time of marketing authorisation, in order to maintain the orphan status.

How is this medicine expected to work?

Ibrutinib is expected to work in patients with lymphoplasmocytic lymphoma by blocking the action of an enzyme known as Bruton's tyrosine kinase (BTK). BTK is important for the growth of B cells, including the abnormal B cells of the cancer. By blocking the action of BTK, it is expected that the medicine will slow the progression of the disease.

What is the stage of development of this medicine?

The effects of ibrutinib have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with ibrutinib in patients with lymphoplasmacytic lymphoma were ongoing.

At the time of submission, ibrutinib was not authorised anywhere in the EU for lymphoplasmacytic lymphoma or designated as an orphan medicinal product elsewhere for this condition.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 12 March 2014 recommending the granting of this designation.

Opinions on orphan medicinal product designations are based on the following three criteria:

- the seriousness of the condition;
- the existence of alternative methods of diagnosis, prevention or treatment;
- either the rarity of the condition (affecting not more than 5 in 10,000 people in the EU) or insufficient returns on investment.

Designated orphan medicinal products are products that are still under investigation and are considered for orphan designation on the basis of potential activity. An orphan designation is not a marketing authorisation. As a consequence, demonstration of quality, safety and efficacy is necessary before a product can be granted a marketing authorisation.

For more information

Sponsor's contact details:

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For contact details of patients' organisations whose activities are targeted at rare diseases see:

- Orphanet, a database containing information on rare diseases, which includes a directory of patients' organisations registered in Europe;
- European Organisation for Rare Diseases (EURORDIS), a non-governmental alliance of patient organisations and individuals active in the field of rare diseases.

Translations of the active ingredient and indication in all official EU languages[1], Norwegian and Icelandic

Language	Active ingredient	Indication
English	Ibrutinib	Treatment of lymphoplasmacytic lymphoma
Bulgarian	Ибрутиниб	Лечение на лимфоплазмоцитен лимфом
Czech	Ibrutinib	Léčba lymfoplazmatického lymfomu
Croatian	Ibrutinib	Liječenje limfoplazmocitnog limfoma
Danish	Ibrutinib	Behandling af Waldenströms makroglobulinæmi
Dutch	Ibrutinib	Behandeling van lymfoplasmacytair lymfoom
Estonian	Ibrutiniib	Lümfoplasmatsütaarse lümfoomi ravi
Finnish	Ibrutinibi	Lymfoplasmasyyttisen lymfooman hoito
French	Ibrutinib	Traitement du lymphome lymphoplasmocytaire
German	Ibrutinib	Behandlung des lymphoplasmazytoiden Lymphoms
Greek	Ιβρουτινίμπη	Θεραπεία του λεμφοπλασματοκυτταρικού λεμφώματος
Hungarian	Ibrutinib	Lymphoplasmacytás lymphoma kezelése
Italian	Ibrutinib	Trattamento del linfoma linfoplasmacitico
Latvian	Ibrutinibs	Limfoplazmocitārās limfomas ārstēšana
Lithuanian	Ibrutinibas	Limfoplazmacitinės limfomos gydymas
Maltese	Ibrutinib	Kura tal-limfoma limfoplasmaċitika
Polish	Ibrutynib	Leczenie chłoniaków limfoplazmocytowych
Portuguese	Ibrutinib	Tratamento do linfoma linfoplasmocítico
Romanian	Ibrutinib	Tratamentul limfomului limfoplasmocitar
Slovak	Ibrutinib	Liečba lymfoplazmacytového lymfómu
Slovenian	Ibrutinib	Zdravljenje limfoplazmacitnega limfoma
Spanish	Ibrutinib	Tratamiento del linfoma linfoplasmacítico
Swedish	Ibrutinib	Behandling av lymfoplasmacytiskt lymfom
Norwegian	Ibrutinib	Behandling av lymfoplasmacytisk lymfom
Icelandic	Íbrútíníb	Meðferð við eitilfrumu- og plasmafrumueitlakrabbameini

[1] At the time of designation