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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Imatinib mesilate for the treatment of acute lymphoblastic leukaemia

First publication	29 November 2005
Rev.1: information about Marketing Authorisation	28 February 2007
Rev.2: withdrawal from the Community Register	19 April 2012
Rev.3: administrative update	5 December 2013
Rev.4: sponsor's change of address	4 February 2015

Disclaimer

Please note that revisions to the Public Summary of Opinion are purely administrative updates. Therefore, the scientific content of the document reflects the outcome of the Committee for Orphan Medicinal Products (COMP) at the time of designation and is not updated after first publication.

Please note that this product was withdrawn from the Community Register of designated orphan medicinal products in April 2012 on request of the sponsor.

On 26 August 2005, orphan designation (EU/3/05/304) was granted by the European Commission to Novartis Europharm Limited, United Kingdom, for imatinib mesilate for the treatment of acute lymphoblastic leukaemia.

What is acute lymphoblastic leukemia?

Acute lymphoblastic leukemia is a disease in which cancer cells are found in the blood and the bone marrow. The bone marrow is the spongy tissue inside the large bones in the body. Normally, the bone marrow makes cells called "blasts" that mature into several different types of blood cells that have specific functions in the body. These include red cells, white cells and platelets. Red blood cells carry oxygen and other materials to all tissues of the body. White blood cells fight infection. Platelets make the blood clot. When leukemia develops, the bone marrow produces large numbers of abnormal blood cells. There are several types of leukemias. Acute lymphoblastic leukemia is a cancer of certain white blood cells called lymphocytes. In this disease the lymphocytes multiply too quickly and live too long, so there are too many of them circulating in the blood. These leukaemic lymphocytes look normal, but they are not fully developed and do not work properly. Over a period of time these abnormal cells

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replace the normal white cells, red cells and platelets in the bone marrow. Acute lymphoblastic leukemia is the most common type of leukemia in young children. This disease also affects adults, especially those aged 65 and older. Many patients with acute leukemia can be cured. However, despite the available treatments, acute lymphoblastic leukemia remains a serious and life threatening condition in a subgroup of patients.

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

At the time of designation, acute lymphoblastic leukaemia affected approximately 0.5 in 10,000 people in the European Union (EU). This was equivalent to a total of around 23,000 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?

Treatment for leukemia is complex and depends on a number of factors including the type of leukemia, the extent of the disease and whether the leukemia has been treated before. It also depends on the patient's age, symptoms, and general health. The primary treatment of acute lymphoblastic leukemia is chemotherapy (using drugs to kill cancer cells) followed or combined with radiotherapy (using high-energy x-rays or other types of high-energy rays to kill cancer cells). Bone marrow transplantation is also available.

The sponsor has provided sufficient information to show that imatinib mesilate might be of significant benefit for patients with acute lymphoblastic leukemia because it might improve the long-term outcome of the patients.

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?

Enzymes are proteins produced by the human body that speed up the conversion of certain substances into other substances. Imatinib mesilate blocks (inhibits) the enzyme tyrosine kinase. This enzyme plays a role in a cascade of molecular reactions to bring a certain signal from outside the cell into the cell thereby controlling the growth of the cells. In cancer cells, the function of this enzyme is disturbed causing uncontrolled growth and multiplication of the cancer cells. Imatinib mesilate might, by inhibition of this enzyme activity, help in slowing down or stopping the further growth of the cancer cells.

What is the stage of development of this medicine?

At the time of submission of the application for orphan designation, clinical trials in patients with acute lymphoblastic leukaemia were ongoing.

Imatinib mesilate was not marketed anywhere worldwide for acute lymphoblastic leukaemia, at the time of submission. Orphan designation of imatinib mesilate was granted in Europe and in the United States for chronic myeloproliferative leukaemia and for gastrointestinal stromal tumours.

*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 25), Norway, Iceland and Liechtenstein.
At the time of designation, this represented a population of 466,600,000 (Eurostat 2005).

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 13 July 2005 recommending the granting of this designation.

Update: Imatinib mesilate (Glivec) has been authorised in the EU since 13 September 2006 for the treatment of adults patients with newly diagnosed Philadelphia chromosome positive acute lymphoblastic leukaemia (Ph+ ALL) integrated with chemotherapy.

More information on Glivec can be found in the European public assessment report (EPAR) on the Agency's website: ema.europa.eu/Find medicine/Human medicines/European Public Assessment Reports

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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	Imatinib mesilate	Treatment of acute lymphoblastic leukaemia
Czech	Imatinib mesilát	Léčba akutní lymfoblastické leukémie
Danish	Imatinib mesilat	Behandling af akut lymfoblastær leukæmi
Dutch	Imatinib mesilaat	Behandeling van acute lymfoblastaire leukemie
Estonian	Imatiniibmesülaat	Ägeda lümfoblastilise leukeemia ravi
Finnish	Imatinibi mesilaatti	Akuutin lymfoblastileukemian hoito
French	Imatinib mésylate	Traitement de la leucémie lymphoblastique aiguë
German	Imatinib mesilat	Behandlung der akuten lymphatischen Leukämie
Greek	Imatinib mesilate	Θεραπεία της οξείας λεμφοβλαστικής λευχαιμίας
Hungarian	Imatinib mezilát	Akut lymphoblastos leukaemia kezelése
Italian	Imatinib mesilato	Trattamento della leucemia linfoblastica acuta
Latvian	Imatiniba mezilāts	Akūtas limfoblastiskas leikozes ārstēšana
Lithuanian	Imatinibo mezilatas	Ūmios limfoblastinės leukemijos gydymas
Polish	Imatynib w postaci metanosulfonianu	Leczenie ostrej białaczki limfoblastycznej
Portuguese	Mesilato de imatinib	Tratamento da leucemia linfoblástica aguda
Slovak	Imatinibi mesilas	Liečba akútnej lymfoblastickej leukémie
Slovenian	Imatinib mesilat	Zdravljenje akutne limfoblastne levkemije
Spanish	Imatinib mesilato	Tratamiento de la leucemia linfoblástica aguda
Swedish	Imatinib mesylat	Behandling av akut lymfatisk leukemi
Norwegian	Imatinib mesilat	Behandling av akutt lymfoblastisk leukemi
Icelandic	Imatíníb mesílat	Meðferð við bráðu eitlifrumuhvítblæði

[1] At the time of designation