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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Propranolol for the treatment of soft tissue sarcoma

On 12 December 2016, orphan designation (EU/3/16/1805) was granted by the European Commission to The Anticancer Fund, Belgium, for propranolol for the treatment of soft tissue sarcoma.

What is soft tissue sarcoma?

Soft tissue sarcoma is a type of cancer that affects the soft, supportive tissues of the body. It can occur in muscles, blood vessels, fat tissue or in other tissues that support, surround and protect organs. Patients with soft tissue sarcoma do not usually have symptoms in the early stages of the disease. First symptoms appear when the tumour grows large enough to cause swelling and pain.

Soft tissue sarcoma is a long-term debilitating and life-threatening disease, particularly when the cancer has spread to other parts of the body.

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

At the time of designation, soft tissue sarcoma affected approximately 3.5 in 10,000 people in the European Union (EU). This was equivalent to a total of around 180,000 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 treatment for early-stage soft tissue sarcoma was surgery. For large sarcomas, surgery was usually followed by radiotherapy (treatment with radiation) and chemotherapy (medicines to treat cancer) to kill any cancer cells that were left behind. Several medicines were authorised in the EU for the treatment of soft tissue sarcoma.

The sponsor has provided sufficient information to show that propranolol might be of significant benefit for patients with a particular type of soft tissue sarcoma affecting the blood vessels called angiosarcoma, because early studies show improved progression-free survival (how long patients lived

*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 513,700,000 (Eurostat 2016).

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without their disease getting worse) when the medicine was used in combination with standard treatments. 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?

Propranolol is a medicine known as a beta blocker, which has been used for many years in the EU to treat a variety of conditions, including diseases of the heart and high blood pressure, and non-cancerous growth of the blood vessels (haemangioma) in children. It blocks receptors in the body called beta adrenoceptors, preventing them from responding to the natural hormones adrenaline and noradrenaline.

Beta adrenoceptors are present in high amounts in the cancer cells of certain soft tissue sarcomas such as angiosarcoma where they are thought to play a role in stimulating growth and spread of the cancer. In addition, beta adrenoceptors play a role in reducing activity of the immune system (the body's natural defences) as a response to stress. By blocking the activity of beta adrenoceptors, propranolol is expected to help boost the immune response against cancer and reduce cancer growth and spread.

What is the stage of development of this medicine?

The effects of propranolol have been evaluated in experimental models.

At the time of submission of the application for orphan designation, clinical trials with the medicine in patients with soft tissue sarcoma were ongoing.

At the time of submission, propranolol was not authorised anywhere in the EU for soft tissue sarcoma 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 4 November recommending the granting of this designation.

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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:

Contact details of the current sponsor for this orphan designation can be found on EMA website, on the medicine's rare disease designations page.

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	Propranolol	Treatment of soft tissue sarcoma
Bulgarian	Пропранолол	Лечение на сарком на меките тъкани
Croatian	Propranolol	Liječenje sarkoma mekih tkiva
Czech	Propranolol	Léčba sarkomu měkkých tkání
Danish	Propranolol	Behandling af bløddelssarkom
Dutch	Propranolol	Behandeling weke delen sarcoom
Estonian	Propranolool	Pehmete kudede sarkoomi ravi
Finnish	Propranololi	Pehmytkudossarkooman hoito
French	Propranolol	Traitement des sarcomes des tissus mous
German	Propranolol	Behandlung des Weichteilsarkoms
Greek	Προπρανολόλη	Θεραπεία του σαρκώματος των μαλακών ιστών
Hungarian	Propranolol	Lágy szöveti sarcoma kezelése
Italian	Propranololo	Trattamento dei sarcomi dei tessuti molli
Latvian	Propranolols	Mīksto audu sarkomas ārstēšana
Lithuanian	Propranololis	Minkštųjų audinių sarkomos gydymas
Maltese	Propranolol	Kura tas-sarkoma tat-tessuti rotob
Polish	Propranolol	Leczenie mięsaków tkanek miękkich
Portuguese	Propranolol	Tratamento do sarcoma dos tecidos moles
Romanian	Propranolol	Tratamentul sarcomului ţesuturilor moi
Slovak	Propranolol	Liečba sarkómu mäkkých tkanív
Slovenian	Propranolol	Zdravljenje sarkoma mehkih tkiv
Spanish	Propranolol	Tratamiento del sarcoma de tejidos blandos
Swedish	Propranolol	Behandling av mjukdelssarkom
Norwegian	Propranolol	Behandling av bløtvevssarkom
Icelandic	Própranólól	Meðferð við mjúkvefjasarkmeini

[1] At the time of designation