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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Allogenic cytomegalovirus-specific cytotoxic T lymphocytes for the treatment of cytomegalovirus infections in patients with impaired cell-mediated immunity

On 18 November 2016, orphan designation (EU/3/16/1773) was granted by the European Commission to PharmaLex UK Services Limited, United Kingdom, for allogenic cytomegalovirus-specific cytotoxic T lymphocytes for the treatment of cytomegalovirus infection in patients with impaired cell-mediated immunity.

What is cytomegalovirus infection?

Cytomegalovirus is a common virus that usually only causes mild infection such as a sore throat. Most people get infected at some stage during their lifetime but are very often unaware of it. After infection, the virus usually remains in the body in a 'latent' (inactive) state and only becomes active if the body's immunity, specifically its cell-mediated immunity, is weakened.

Cell-mediated immunity is a defence mechanism where specialised cells of the immune (defence) system called T lymphocytes or T cells directly neutralise viruses. In people with weakened cell-mediated immunity, such as transplant patients receiving immunosuppressant treatment (medicines that reduce the activity of the immune system), cytomegalovirus is not neutralised and causes severe infection.

Cytomegalovirus infection in patients with impaired cell-mediated immunity is long-term debilitating and life-threatening because of the complications it causes, such as inflammation of the eyes, lungs, liver and digestive tract, as well as reduced survival of transplanted organs or tissues in transplant patients.

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

At the time of designation, cytomegalovirus infection in patients with impaired cell-mediated immunity affected approximately 1.6 in 10,000 people in the European Union (EU). This was equivalent to a total

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of around 82,000 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, several antiviral medicines were authorised in the EU for the treatment of cytomegalovirus disease in patients with impaired cell-mediated immunity (foscarnet, ganciclovir, valaciclovir and valganciclovir).

The sponsor has provided sufficient information to show that the medicine might be of significant benefit for the treatment of cytomegalovirus infection in patients with impaired cell-mediated immunity. This is because early studies indicate that it may be effective in patients with cytomegalovirus infection not responding to existing antiviral medicines. 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?

This medicine is made of cells of the immune system called T cells taken from a donor who had been previously infected with cytomegalovirus. The T cells are mixed with other cells that have a cytomegalovirus protein on their surface. As a result, the T cells learn to recognise cytomegalovirus as 'foreign'. The T cells are then grown to increase their numbers. When given to the patient, these T cells are expected to attack the cytomegalovirus in the patient and thereby help cure the infection.

What is the stage of development of this medicine?

The effects of the medicine 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 cytomegalovirus infection in patients with impaired cell-mediated immunity were ongoing.

At the time of submission, the medicine was not authorised anywhere in the EU for cytomegalovirus infection in patients with impaired cell-mediated immunity 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 6 October 2016 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;

*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).

- 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	Allogeneic cytomegalovirus-specific cytotoxic T lymphocytes	Treatment of cytomegalovirus infection in patients with impaired cell-mediated immunity
Bulgarian	Алогенни цитотоксични Т лимфоцити специфични за цитомегаловирус	Лечение на цитомегаловирусна (CMV) болест при пациенти с увреден клетъчно-медииран имунитет
Croatian	Alogenični citotoksični limfociti T specifični za citomegalovirus	Liječenje citomegalovirusne infekcije u bolesnika s narušenom staničnom imunošću
Czech	Alogenní cytotoxické T-lymfocyty specifické pro cytomegalovirus	Léčba cytomegalovirové choroby u pacientů s poruchou buněčné imunity
Danish	Allogene cytomegalovirus-specifikke cytotoksiske T-lymfocytter	Behandling af cytomegalovirus-sygdom hos patienter med svækket cellemedieret immunitet
Dutch	Allogene cytomegalovirusspecifieke cytotoxische T-lymfocyten	Behandeling van cytomegalievirusinfectie bij patiënten met verzwakte cellulaire immuniteit
Estonian	Allogeensed tsütomegaloviiruse suhtes spetsiifilised tsütotoksilised T-lümfotsüüdid	Tsütomegaloviiruse haiguse ravi patsientidel, kellel on rakuvahendatud immunsuse häire
Finnish	Allogeeniset sytomegalovirus-spesifiset sytotoksiset T-lymfosyytit	Sytomegalovirussairauden hoito, kun potilaan soluvälitteinen immuniteetti on heikentynyt
French	Lymphocytes T cytotoxiques allogéniques spécifiques au cytomégalovirus	Traitement de la maladie due au CMV chez les patients présentant une altération de l'immunité cellulaire
German	Allogene Cytomegalovirus-spezifische zytotoxische T-Lymphozyten	Behandlung der CMV-Erkrankung bei Patienten mit gestörter zellvermittelter Immunität
Greek	Αλλογενή κυτταροτοξικά Τ λεμφοκύτταρα ειδικά για τον κυτταρομεγαλοϊό	Θεραπεία της λοίμωξης από μεγαλοκυτταροϊό (CMV) σε ασθενείς με διαταραχή της κυτταροεξαρτώμενης ανοσίας
Hungarian	Allogén cytomegalovírus-specifikus citotoxikus T-lymphocyták	Cytomegalovirus (CMV) okozta betegség kezelése csökkent celluláris immunitással rendelkező betegeknél
Italian	Linfociti T citotossici allogenici specifici per il citomegalovirus	Trattamento della malattia da citomegalovirus (CMV) nei pazienti con deficit dell'immunità cellulo-mediata
Latvian	Alogēni pret citomegalovīrusu specifiski citotoksiskie T limfocīti	Citomegalovīrusa (CMV) infekcijas ārstēšana pacientiem ar šūnu imunitātes traucējumiem
Lithuanian	Alogeniniai specifiniai citomegalovirusui citotoksiniai T limfocitai	Citomegaloviruso (CMV) sukeltos ligos gydymas, pacientams su sutrikusiu ląsteliniu imunitetu
Maltese	Limfoċiti T ċitotossiċi alloġeniċi u speċifiċi għal ċitomegalovirus	Kura ta' mard ikkawżat minn ċitomegalovirus (CMV) f'pazjenti b'dgħjufija fl-immunità medjata miċ-ċelluli

[1] At the time of designation

Language	Active ingredient	Indication
Polish	Limfocyty T cytotoksyczne wobec komórek zakażonych cytomegalowirusem	Leczenie choroby wywołanej przez wirusa cytomegalii (CMV) u pacjentów z zaburzeniami odporności komórkowej
Portuguese	Linfócitos T citotóxicos alogénicos específicos para o citomegalovírus	Tratamento da doença por citomegalovírus (CMV) em doentes com alteração da imunidade celular
Romanian	Limfocite T citotoxice alogene specifice pentru citomegalovirus	Tratamentul bolii produsă de citomegalovirus (CMV) la pacienţii cu imunitate mediată celular deficitară
Slovak	Alogénne cytotoxické T-lymfocyty špecifické pre cytomegalovírus	Liečba cytomegalovírusovej choroby u pacientov s poruchou bunkami sprostredkovanej imunity
Slovenian	Alogeni citomegalovirusno-specifični citotoksični limfociti T	Zdravljenje citomegalovirusne (CMV) okužbe pri bolnikih z oslabljeno celično imunsko odportnostjo
Spanish	Linfocitos T citotóxicos alogénicos específicos contra el citomegalovirus	Tratamiento de la enfermedad por citomegalovirus (CMV) en pacientes con deterioro de la inmunidad mediada por células
Swedish	Allogena cytomegalovirusspecifika cytotoxiska T-lymfocyter	Behandling av cytomegalovirus (CMV) sjukdom hos patienter med nedsatt cellmedierad immunitet
Norwegian	Allogene cytomegalovirusspesifikke cytotoksiske T-lymfocytter	Behandling av cytomegalovirus (CMV)-sykdom hos pasienter med nedsatt cellemediert immunitet
Icelandic	Ósamgena cýtómegalóveirusértækar frumudrepandi T-eitilfrumur	Til meðferðar við cýtómegalóveiru (CMV) sjúkdómi hjá sjúklingum með skert frumubundið ónæmi