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Public summary of opinion on orphan designation

Chimeric fibril-reactive IgG1k monoclonal antibody 11-1F4 for the treatment of AL amyloidosis

On 13 November 2019, orphan designation EU/3/19/2222 was granted by the European Commission to Real Regulatory Limited, Ireland, for chimeric fibril-reactive IgG1k monoclonal antibody 11-1F4 (also known as NSC-711516 and CAEL-101) for the treatment of AL amyloidosis.

What is AL amyloidosis?

AL amyloidosis belongs to a group of diseases in which deposits of proteins (called amyloids) accumulate and cause damage in body organs. In AL amyloidosis, the deposits are made of abnormal proteins (called immunoglobulin light chains) produced in excess by malfunctioning white blood cells in the bone marrow.

In patients with AL amyloidosis, the amyloids can accumulate and cause damage in the kidneys, heart, liver, spleen, nerves, or digestive system. Symptoms of the condition vary widely depending on which organs are affected by the deposits and how much deposits have accumulated in them.

AL amyloidosis is a life-threatening and long-term debilitating condition because of the damage to organs, particularly the heart and kidneys.

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

At the time of designation, AL amyloidosis affected approximately 1 in 10,000 people in the European Union (EU). This was equivalent to a total of around 52,000 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, no medicines were authorised in the EU for the treatment of AL amyloidosis. Patients often received treatment with medicines (chemotherapy) originally designed to treat cancers of white blood cells, in order to target the malfunctioning white blood cells. Stem cell

*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 518,400,000 (Eurostat 2019).

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transplantation (a procedure where the patient's bone marrow is cleared of cells and replaced by stem cells from a donor to form new bone marrow) was used in a small group of newly diagnosed patients.

How is this medicine expected to work?

This medicine is an antibody (a type of protein) which has been designed to attach to the abnormal protein in amyloid deposits and thereby stimulate the immune system to attack the deposits. This action is expected to help reduce the deposits of amyloid, thereby preventing organ damage and improving the patient's symptoms.

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 AL amyloidosis were ongoing.

At the time of submission, the medicine was not authorised anywhere in the EU for AL amyloidosis. Orphan designation of the medicine had been granted in the United States for this condition.

In accordance with Regulation (EC) No 141/2000, the COMP adopted a positive opinion on 10 October 2019, 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.

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	Chimeric fibril-reactive IgG1k monoclonal antibody 11-1F4	Treatment of AL amyloidosis
Bulgarian	Химерно фибрил-реактивно IgG1k моноклонално антитяло 11-1F4	Лечение на лековерижна (AL) амилоидоза
Croatian	Himerno fibril-reaktivno IgGlk monoklonsko protutijelo 11-1F4	Liječenje AL amiloidoze
Czech	Chimerická fibrilně-reaktivní IgG1k monoklonální protilátka 11-1F4	Léčba AL amyloidózy
Danish	Kimærisk fibril-reaktiv IgG1k monoklonalt antistof 11-1F4	Behandling af AL (amyloid let-kæde) amyloidose
Dutch	Chimerisch fibril-reactief IgG1k monoclonaal antilichaam 11-1F4	Behandeling van AL amyloïdose
Estonian	Kimäärne fibrill-reaktiivne monoklonaalne IgG1k antikeha 11-1F4	AL-amüloidoosi ravi
Finnish	Kimeerinen, säikeisiin reagoiva IgG1k-luokan monoklonaalinen vasta-aine 11-1F4	AL-amyloidoosin hoito
French	Anticorps monoclonal 11-1F4 chimérique IgG1k fibrille-réactif	Traitement de l'amyloïdose de type AL
German	Chimerer Fibril-reaktiver IgG1k monoklonaler Anitkörper 11-1F4	Behandlung der AL Amyloidose
Greek	Χιμαιρικό IgG1k μονοκλωνικό αντίσωμα 11-1F4 αντιδρόν έναντι ινιδίων	Θεραπεία της AL-αμυλοειδωσης
Hungarian	11-1F4 típusú kimérás fibril-reaktív IgG1k monoklonális antitest	Amiotrófiás laterális amiloidózis kezelése
Italian	Anticorpo monoclonale IgG1k chimerico 11-1F4 reattivo a fibrilla.	Trattamento dell'amiloidosi di tipo AL
Latvian	Himēriska fibril-reaktīva IgG1k monoklonālā antiviela 11-1F4	Vieglo ķēžu (AL) amiloidozes ārstēšana
Lithuanian	Chimerinis, fibrilėms jautrus IgG1k monokloninis antikūnas 11-1F4	AL amiloidozės gydymas
Maltese	Antikorp monoklonali 11–1F4 reattiv għall-fibril kimeriku IgG1k	Kura tal-amilojdosi tat-tip AL
Polish	Chimeryczne reagujace na włókienka IgG1k monoklonalne przeciwciało 11-1F4	Leczenie układowej amyloidozy łańcuchów lekkich (AL)
Portuguese	Anticorpo monoclonal IgG1k quimérico (11-1F4) reativo à fibrila	Tratamento da Amilóidose primária
Romanian	Anticorp monoclonal imonoglobulinic G1κ (IgG1κ) chimeric (11-1F4) reactiv la fibrină	Tratamentul amiloidozei de tip AL

[1] At the time of designation

Language	Active ingredient	Indication
Slovak	Chimerická fibril-reaktívna IgG1k monoklonálna protilátka 11-1F4	Liečba AL amyloidózy
Slovenian	Himerno, na fibrile reaktivno IgG1k monoklonsko protitelo 11-1F4	Zdravljenje AL amiloidoze
Spanish	Anticuerpo monoclonal IfG1k quimerico (11-1F) reactive a la fibrila	Tratamiento del AL amiloidosis
Swedish	Kimär fibrilreaktiv IgG1k monoklonal antikropp 11-1F4	Behandling av AL amyloidos
Norwegian	Kimært fibrilreaktivt IgG1k monoklonalt antistoff 11-1F4	Behandling av AL amyloidose
Icelandic	IgG1k einstofna blendingsmótefni 11-1F4 með verkun á trefjur	Meðferð við AL mýlildi