



EUROPEAN MEDICINES AGENCY
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Committee for Orphan Medicinal Products

Public summary of opinion on orphan designation

Vascular endothelial growth factor-D gene in an adenoviral vector for use with a collagen collar for the prevention of stenosis in synthetic grafts used in haemodialysis

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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.	

On 8 June 2004, orphan designation (EU/3/04/201) was granted by the European Commission to Ark Therapeutics Limited, United Kingdom, for vascular endothelial growth factor-D gene in an adenoviral vector for use with a collagen collar for the prevention of stenosis in synthetic grafts used in haemodialysis.

In February 2014, Ark Therapeutics Limited changed name to Finvector Vision Therapies Limited.

What is stenosis in synthetic grafts used in haemodialysis?

In haemodialysis, the blood is allowed to flow through a machine with a special filter that removes wastes and extra fluids. The clean blood is then returned to the body. Removing the harmful wastes, extra salt and fluids helps control the blood pressure and keeps the proper balance of chemicals, like potassium and sodium, in the body. One important step before starting haemodialysis is preparing a vascular access, a site on the body from which blood is removed and returned.

A synthetic graft is a synthetic tube implanted under the skin of the arm, which connects one artery to one vein. The tube becomes a sort of artificial "robust" vein that can be used repeatedly for needle placement and blood access during haemodialysis. Such grafts are used in a minority of patients with



chronic kidney failure and are meant to give a reliable access to haemodialysis. However, narrowing (stenosis) and loss of patency (the “openness”) at the vessel-graft junction is a common complication associated with these synthetic grafts. This results in reduced dialysis efficiency.

Stenosis in synthetic grafts used in haemodialysis requires a revision of this graft and is associated with a negative impact on quality of life.

What is the estimated number of patients at risk of developing the condition?

At the time of designation, haemodialysis affected approximately 0.4 in 10,000 people in the European Union (EU). This was equivalent to a total of around 26,000 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 methods of prevention are available?

No satisfactory methods exist that were authorised at the time of application for orphan drug designation.

How is this medicine expected to work?

Vascular endothelial growth factor-D gene in an adenoviral vector for use with a collagen collar is a gene medicine injected in a degradable cuff, which is placed around the junction of the vessel and the synthetic graft. It acts by trying to prevent narrowing of the blood vessel, ensuring a good flow of blood through the vessel.

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 synthetic grafts used in haemodialysis were ongoing.

The medicinal product was not marketed anywhere worldwide for prevention of stenosis in synthetic grafts used in haemodialysis, at the time of submission.

In accordance with Regulation (EC) No 141/2000 of 16 December 1999, the COMP adopted a positive opinion on 14 April 2004 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.

*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 464,200,000 (Eurostat 2004).

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 languages¹, Norwegian and Icelandic

Language	Active ingredient	Indication
English	Vascular endothelial growth factor-D gene in an adenoviral vector for use with a collagen collar	Prevention of stenosis in synthetic grafts used in haemodialysis
Bulgarian	Gen vaskulárniho endoteliálního rústového fakturo-D navázaného na adenovirový nosič	Prevenca stenózy syntetického štěpu zajišťující cévní přístup u hemodialyzovaných pacientů
Czech	Gen vaskulárniho endoteliálního rústového fakturo-D navázaného na adenovirový nosič	Prevenca stenózy syntetického štěpu zajišťující cévní přístup u hemodialyzovaných pacientů
Danish	Vaskulær endothelial vækstfaktor D-gen i en adenoviral vektor til brug sammen med en kollagen krave	Forebyggelse af stenose i forbindelse med syntetiske grefter anvendt i forbindelse med hæmodialyse
Dutch	Endotheliaal vasculair groeifactor-D-gen in een adenovirale vector voor gebruik met een collageen kraag	Preventie van stenose in synthetische transplantaten gebruikt bij hemodialyse
Estonian	Adenoviiruse vektorisse viidud vaskulaarse endoteeli kasvufaktori D geen kasutamiseks kollageeni rõngas	Stenoosi ennetamine hemodialüsil kasutatavatel sünteetilistel implantaatidel
Finnish	Kollageenikauluksessa käytettävän vaskulaarisen endoteliaalisen kasvutekijän D geenin adenovirusvektorissa	Ahtauman esto hemodialyysissä käytettävissä synteettisissä siirteissä
French	Vecteur adénoviral contenant le gène du facteur de croissance de l'endothélium vasculaire D pour utilisation avec un manchon de collagène	Prévention de la sténose des greffes synthétiques, utilisées en hémodialyse
German	Vaskulärer endothelialer Wachstumsfaktor-D-Gen in einem adenoviralen Vektor zur Anwendung mit einem Kollagenkragen	Prävention von Stenose an synthetischen Transplantaten welche bei Hämodialyse verwendet werden
Greek	Γονίδιο αγγειακού ενδοθηλιακού αυξητικού παράγοντα D σε φορέα αδενοϊού για χρήση σε δακτύλιο κολλαγόνου	Πρόληψη της στένωσης σε συνθετικά μοσχεύματα που χρησιμοποιούνται σε αιμοκάθαρση
Hungarian	Ér endothel növekedési faktor-D gén adenovírusvektorban kollagén gyu"ru"ben alkalmazva.	A vaszkuláris hozzáférhető"ség biztosítására beültetett szintetikus érben kialakuló stenosis megelő"zésére haemodializált betegekben
Italian	Gene D del fattore di crescita endoteliale in un vettore adenovirale da utilizzare con un manicotto di collagene	Prevenzione della stenosi in innesti sintetici per emodialisi

¹ At the time of designation

Language	Active ingredient	Indication
Latvian	Vaskulārā endotēlija augšanas faktora D-gēns adenovirālā vektorā lietošanai ar kolagēna gredzenu	Hemodialīzē lietojamo sintētisko implantu stenozes profilaksei
Lithuanian	Kraujagyslių endotelio augimo faktoriaus D geno, esančio adenovirusiniame vektoriuje, naudojimas su kolageno žiedu	Sintetinio implanto, naudojamo hemodializėje, stenozės profilaktika
Maltese	Vascular endothelial growth factor-D gene in an adenoviral vector for use with a collagen collar	Prevention of stenosis in synthetic grafts used in haemodialysis
Polish	Gen czynnika D wzrostu śródbłonka naczyń w wektorze adenowirusowym do stosowania z pierścieniem kolagenowym	Zapobieganie zwężeniu syntetycznego wszczepu stosowanego w dostępie naczyniowym u hemodializowanych pacjentów
Portuguese	Gene do factor D de crescimento endotelial vascular num vector adenoviral para utilização com uma gola de colagénio	Prevenção da estenose em enxertos sintéticos utilizados em hemodiálise
Romanian	Gen rastnega faktorja D žilnega endotelija v adenovirusnem vektorju	Preprečevanje nastanka stenoze na anastomozi umetnega žilnega vsadka pri hemodializnih bolnikih
Slovak	Gén vaskulárneho endoteliálneho rastového faktora D v adenovírusovom vektore pre použitie s kolagénovým prstencom	Prevenia stenózy syntetických štepov použitých pri hemodialýze
Slovenian	Gen rastnega faktorja D žilnega endotelija v adenovirusnem vektorju	Preprečevanje nastanka stenoze na anastomozi umetnega žilnega vsadka pri hemodializnih bolnikih
Spanish	Gen del factor D de crecimiento endotelial vascular en un vector adenovírico para utilización con un manguito de colágeno	Prevención de la estenosis en injertos sintéticos para hemodiálisis
Swedish	Tillväxtfaktor D-gen för kärlendotel i en adenovirusbärare för användning med en kollagen krage	Förebyggande av stenos i syntetiska transplantat vid hemodialys
Norwegian	Vaskulær endotelial vekstfaktor-D gen i en adenoviral vektor som gis ved bruk av en kollagenkrage	Forebygging av stenose i graft-veanastomosene for syntetiske graft brukt ved hemodialyse
Icelandic	Æðapels vaxtarþáttar-D gen í adenóveirufurju gefi ð í kollagen kraga	Til að koma í veg fyrir endurþrengingu í gervíæðafistili hjá sjúklingum í blóðskilun