



European Medicines Agency
Pre-authorisation Evaluation of Medicines for Human Use

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Committee for Orphan Medicinal Products

Public summary of positive opinion for orphan designation of topotecan hydrochloride (liposomal) for the treatment of glioma

On 5 September 2008, orphan designation (EU/3/08/562) was granted by the European Commission to Dr Matthias Luz, Germany, for topotecan hydrochloride (liposomal) for the treatment of glioma.

What is glioma?

Glioma is a type of brain cancer that starts in the glial cells (the cells that support the nerve cells). Patients with glioma can have severe symptoms affecting the nervous system, but the types of symptom depend on where the tumour develops in the brain. Glioma is life-threatening.

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

At the time of designation glioma affected approximately 1 in 10,000 people in the European Union (EU) *. This is based on the information provided by the sponsor and knowledge of the Committee for Orphan Medicinal Products (COMP). This is below the threshold for orphan designation which is 5 in 10,000. This is equivalent to a total of around 50,000 people.

What treatments are available?

Treatment for glioma includes surgery, radiotherapy (using radiation to kill the cancer cells) and chemotherapy (medicines used to kill cancer cells). Patients may also receive treatments for the symptoms of glioma, including corticosteroids to reduce pressure within the skull, and medicines to prevent seizures. At the time of submission of the application for orphan designation, several medicines were authorised for the treatment of glioma in the Community.

Satisfactory argumentation has been submitted by the sponsor to justify the assumption that topotecan hydrochloride (liposomal) might be of potential significant benefit for the treatment of glioma because it has a new delivery method. This assumption will have to be confirmed at the time of marketing authorisation. This will be necessary to maintain the orphan status.

How is this medicine expected to work?

Topotecan is a medicine that is already used in chemotherapy, although it has not been authorised for the treatment of glioma. Topotecan belongs to the group 'topoisomerase inhibitors'. It blocks an enzyme called topoisomerase I, which is involved in the division of DNA (the genetic material). When the enzyme is blocked, the DNA strands break. This prevents the cancer cells from dividing and they eventually die. In this medicine, topotecan is included in small fatty particles called 'liposomes'. This is expected to improve the way the medicine works compared with the conventional form of the

*Disclaimer: For the purpose of the designation, the number of patients affected by the condition is estimated and assessed based on data from the European Union (EU 27), Norway, Iceland and Liechtenstein. This represents a population of 502,282,000 (Eurostat 2008).

medicine, since it can be injected directly into the brain, concentrating the medicine at the site of the tumour and reducing side effects by reducing the amount of the medicine in the blood.

What is the stage of development of this medicine?

The effects of topotecan hydrochloride (liposomal) have been evaluated in experimental models.

At the time of submission of the application for orphan designation, no clinical trials in patients with glioma had been initiated.

Topotecan hydrochloride (liposomal) was not authorised anywhere worldwide for the treatment of glioma or designated as orphan medicinal product elsewhere for this condition, at the time of submission.

According to Regulation (EC) No 141/2000 of 16 December 1999, the Committee for Orphan Medicinal Products (COMP) adopted a positive opinion on 11 June 2008 recommending the granting of the above-mentioned 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;
- and either the rarity of the condition (affecting not more than five in 10,000 people in the Community) or the 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 the quality, safety and efficacy is necessary before a product can be granted a marketing authorisation.

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**Translations of the active ingredient and indication in all EU languages
and Norwegian and Icelandic**

Language	Active ingredient	Indication
English	Topotecan hydrochloride (liposomal)	Treatment of glioma
Bulgarian	Топотекан хидрохлорид (липозомален)	Лечение на глиома
Czech	Topotecan hydrochlorid (liposomální)	Léčba gliomů
Danish	Topotecan hydrochlorid (liposomal)	Behandling af gliom
Dutch	Topotecan hydrochloride (liposomaal)	Behandeling van glioma
Estonian	Topotekaanvesinikkloriid (liposomaalne)	Glioomi ravi
Finnish	Topotekaanihydrokloridi (liposomaalinen)	Gliooman hoito
French	Chlorhydrate de topotécan (liposomal)	Traitement des gliomes
German	Topotecan Hydrochlorid (liposomal)	Behandlung von Gliomen
Greek	Τοποτεκάνη υδροχλωρική (Λιποσωμική)	Θεραπεία του γλοιώματος
Hungarian	Topotekán-hidroklorid (liposzómában)	Glioma kezelése
Italian	Topotecan cloridrato (liposomiale)	Trattamento del glioma
Latvian	Topotekāna hidrohlorīds (liposomu)	Gliomas ārstēšana
Lithuanian	Topotekano hidrochloridas (liposominis)	Gliomos gydymas
Maltese	Topotecan hydrochloride (liposomal)	Kura tal-glioma
Polish	Topotekanu chlorowodorek (liposomalny)	Leczenie glejaka
Portuguese	Cloridrato de topotecan (lipossomal)	Tratamento do glioma
Romanian	Clorhidrat de topotecan (inclus în lipozomi)	Tratamentul gliomului
Slovak	Topotekánchlorid (lipozomálny)	Liečba gliómu
Slovenian	Topotekan hidroklorid (liposomski)	Zdravljenje glioma
Spanish	Clorhidrato de topotecán (liposomal)	Tratamiento del glioma
Swedish	Topotekanhydroklorid (liposomal)	Behandling av gliom
Norwegian	Topotekanhydroklorid (liposomalt)	Behandling av gliom
Icelandic	Tópótekan hýdróklóríð í lípósómunum	Meðferð á glíóma