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Withdrawal of application to change the marketing authorisation for Lutathera (lutetium (^{177}Lu) oxodotreotide)

Advanced Accelerator Applications withdrew its application for the use of Lutathera in the treatment of adults with newly diagnosed tumours in the gut, known as gastro-entero-pancreatic neuroendocrine tumours (GEP-NETs).

The company withdrew the application on 9 May 2025.

What is Lutathera and what is it used for?

Lutathera is a cancer medicine used to treat adults with GEP-NETs that are unresectable (cannot be removed by surgery) or metastatic (have spread to other parts of the body) and are not responding to treatment. It is used when the cancer cells have receptors (proteins) on their surface that bind to a hormone called somatostatin (somatostatin-receptor positive). Lutathera is a radiopharmaceutical (a medicine that emits a small amount of radioactivity).

Lutathera has been authorised in the EU since September 2017. It contains the active substance lutetium (^{177}Lu) oxodotreotide and is available as a solution to be given by infusion (drip) into a vein.

Further information on Lutathera's current uses can be found on the Agency's website: ema.europa.eu/en/medicines/human/EPAR/lutathera.

What change had the company applied for?

The company applied to extend the use of Lutathera to treat adults with newly diagnosed unresectable or metastatic, well-differentiated high grade (grade (G)2 and G3), somatostatin receptor-positive GEP-NETs. Well-differentiated means that the cancer cells look similar to normal cells under a microscope.

Lutathera was designated an 'orphan medicine' (a medicine used in rare diseases) on 31 January 2008 for GEP-NETs. Further information on the orphan designation can be found on the Agency's website: ema.europa.eu/medicines/human/orphan-designations/eu-3-07-523.

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How does Lutathera work?

The active substance in Lutathera, lutetium (^{177}Lu) oxodotreotide, is a somatostatin analogue (a man-made version of the hormone somatostatin) combined with lutetium, a component which emits a small amount of radioactivity. It works by attaching to somatostatin receptors, which are found in high numbers in some GEP-NETs. The radioactivity it emits then kills the tumour cells it is attached to but has little effect on neighbouring cells.

What did the company present to support its application?

The company submitted data from a main study involving 226 patients with somatostatin-receptor positive GEP-NETs that are newly diagnosed, unresectable, locally advanced (have spread nearby) or metastatic. In this study treatment with Lutathera plus octreotide (another somatostatin analogue) was compared with treatment with high dose octreotide alone. The main measure of effectiveness in the study was how long patients lived without their cancer getting worse (progression-free survival). The study also looked at how long patients lived (overall survival).

How far into the evaluation was the application when it was withdrawn?

The application was withdrawn after the European Medicines Agency had evaluated the information from the company and had prepared questions for the company. After the Agency had assessed the company's responses to the questions, there were still some unresolved issues.

What did the Agency recommend at that time?

Based on the review of the information and the company's response to the Agency's questions, at the time of the withdrawal the Agency had some concerns and its provisional opinion was that Lutathera could not have been authorised for the treatment of adult patients with newly diagnosed unresectable or metastatic, well-differentiated high grade (G2 and G3), somatostatin-receptor positive GEP-NETs.

Although the main study found that Lutathera increased the amount of time patients lived without their cancer getting worse, its impact on extending patients' lives had not been established. The Agency considered that the benefits seen with Lutathera in these patients did not outweigh its potential risks. These included side effects affecting the blood and blood forming tissues, as well as the kidneys, secondary malignancies (cancers caused by treatment with radiation or chemotherapy) and progression of the cancer.

Therefore, at the time of the withdrawal, the Agency's opinion was that the company had not provided enough information to support the application for a change to the marketing authorisation of Lutathera.

What were the reasons given by the company for withdrawing the application?

In its letter notifying the Agency of the withdrawal of application, the company stated that it withdrew its application based on a company decision that is not related to the quality, efficacy or safety of the medicine.

Does this withdrawal affect patients in clinical trials?

The company informed the Agency that there are no consequences for patients in clinical trials using Lutathera.

If you are in a clinical trial and need more information about your treatment, speak with your clinical trial doctor.

What is happening with Lutathera for the treatment of progressive GEP-NETs with somatostatin receptors on their cell surfaces?

Lutathera continues to be authorised in adults with unresectable or metastatic GEP-NETs that are not responding to treatment.