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Xbryk (*denosumab*)

An overview of Xbryk and why it is authorised in the EU

What is Xbryk and what is it used for?

Xbryk is a medicine used to prevent bone complications in adults with advanced cancer that has spread to the bones. These complications include fractures (broken bones), spinal compression (pressure on the spinal cord caused by damage to surrounding bones), or bone problems requiring radiotherapy (treatment with radiation) or bone surgery.

Xbryk is also used to treat a type of bone cancer called giant cell tumour of bone in adults, and in adolescents whose bones have fully developed. It is used in patients who cannot be treated by surgery or in whom surgery is likely to cause serious complications.

Xbryk contains the active substance denosumab and is a biological medicine. It is a 'biosimilar medicine'; this means that Xbryk is highly similar to another biological medicine (the 'reference medicine') that is already authorised in the EU. The reference medicine for Xbryk is Xgeva. For more information on biosimilar medicines, see here.

How is Xbryk used?

Xbryk can only be obtained with a prescription.

To prevent bone complications in patients with cancer that has spread to the bones, Xbryk is given once every 4 weeks as an injection under the skin in the thigh, belly or upper arm.

In patients with giant cell tumour of bone, the medicine is given once every 4 weeks, with an additional dose given 1 week and 2 weeks after the first dose.

Patients should take calcium and vitamin D supplements while being treated with Xbryk.

For more information about using Xbryk, see the package leaflet or contact your doctor or pharmacist.

How does Xbryk work?

The active substance in Xbryk, denosumab, is a monoclonal antibody which has been designed to recognise and attach to a protein called RANKL. This protein activates osteoclasts, the cells in the body that are involved in breaking down bone tissue. By attaching to and blocking RANKL, denosumab reduces the formation and activity of osteoclasts. This reduces bone loss, making fractures and other

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serious bone complications less likely. RANKL is also involved in activating the osteoclast-like cells in giant cell tumour of bone. Treatment with denosumab therefore prevents these cells from growing and breaking down bone, allowing normal bone to replace the tumour.

What benefits of Xbryk have been shown in studies?

Laboratory studies comparing Xbryk with Xgeva have shown that the active substance in Xbryk is highly similar to that in Xgeva in terms of structure, purity and biological activity. Studies have also shown that giving Xbryk produces similar levels of the active substance in the body to those seen with Xgeva.

In addition, a study compared the effectiveness of denosumab in Xbryk with that of Prolia (another medicine containing denosumab) in 457 women with osteoporosis (a disease that makes bones fragile) who have been through the menopause. After a year of treatment, bone mineral density (a measure of how strong the bones are) in the spine increased by around 5.7% in women who received Xbryk and 5.3% in those who received Prolia.

Because denosumab works in a similar way in osteoporosis and in the conditions Xbryk is intended to treat, a specific study on the effectiveness of denosumab in these conditions is not needed.

What are the risks associated with Xbryk?

The safety of denosumab in Xbryk has been evaluated and on the basis of all the studies carried out, the side effects of the medicine are considered to be comparable to those of the reference medicine, Xgeva.

For the complete list of side effects and restrictions with Xbryk, see the package leaflet.

The most common side effects with Xbryk (which may affect more than 1 in 10 people) include hypocalcaemia (low levels of calcium in the blood), pain in the muscles and bones, dyspnoea (difficulty breathing) and diarrhoea. Other common side effects (which may affect up to 1 in 10 people) are development of another form of cancer in patients with advanced cancer, hypophosphataemia (low levels of phosphate in the blood), excessive sweating, tooth loss and osteonecrosis in the jaw (damage to the bones of the jaw, which could lead to pain, sores in the mouth and loose teeth).

Hypocalcaemia mostly occurs within the first 2 weeks of starting treatment and can be severe; however, it can be managed with calcium and vitamin D supplementation.

Xbryk must not be used in patients with wounds from dental or mouth surgery that have not yet healed, or in people with severe, untreated hypocalcaemia.

Why is Xbryk authorised in the EU?

The European Medicines Agency decided that, in accordance with EU requirements for biosimilar medicines, Xbryk has a highly similar structure, purity and biological activity to Xgeva and is distributed in the body in the same way. In addition, studies in osteoporosis have shown that Xbryk and Xgeva are equivalent in terms of safety and effectiveness in this indication.

All these data were considered sufficient to conclude that Xbryk will have the same effects as Xgeva in its authorised uses. Therefore, the Agency’s view was that, as for Xgeva, the benefits of Xbryk outweigh the identified risks and it can be authorised for use in the EU.

What measures are being taken to ensure the safe and effective use of Xbryk?

The company that markets Xbryk will provide a card to inform patients about the risk of osteonecrosis of the jaw and instruct them to contact their doctor if they have symptoms.

Recommendations and precautions to be followed by healthcare professionals and patients for the safe and effective use of Xbryk have been included in the summary of product characteristics and the package leaflet.

As for all medicines, data on the use of Xbryk are continuously monitored. Suspected side effects reported with Xbryk are carefully evaluated and any necessary action taken to protect patients.

Other information about Xbryk

Xbryk received a marketing authorisation valid throughout the EU on 12 February 2025.

Further information on Xbryk can be found on the Agency's website: ema.europa.eu/medicines/human/EPAR/xbryk

This overview was last updated in 02-2025.