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# Zirabev (*bevacizumab*)

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

## What is Zirabev and what is it used for?

Zirabev is a cancer medicine that is used to treat adults with the following cancers:

- cancer of the colon (large bowel) or the rectum (the last section of the bowel), when it has spread to other parts of the body;
- breast cancer that has spread to other parts of the body;
- a lung cancer called non-small cell lung cancer when it is advanced or has spread or come back, and cannot be treated with surgery. Zirabev can be used unless the cancer originates in particular cells called squamous cells;
- cancer of the kidney (renal cell carcinoma) that is advanced or has spread elsewhere;
- epithelial cancer of the ovary, cancer of the fallopian tube (that connect the ovaries to the womb) or the peritoneum (the membrane lining the abdomen) when the cancer is advanced, or in previously treated patients whose cancer has come back (recurrent);
- cancer of the cervix (the neck of the womb) that has persisted or come back after treatment, or spread to other parts of the body.

Zirabev is used in combination with other cancer medicines, depending on previous treatments or the presence of mutations (genetic changes) in the cancer that affect how well particular medicines work.

Zirabev contains the active substance bevacizumab and it is a 'biosimilar medicine'. This means that Zirabev is highly similar to another biological medicine (the 'reference medicine') that is already authorised in the EU. The reference medicine for Zirabev is Avastin. For more information on biosimilar medicines, see here.

## How is Zirabev used?

Zirabev can only be obtained with a prescription and treatment should be supervised by a doctor who has experience in the use of cancer medicines.

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Zirabev is given by infusion (drip) into a vein. The first infusion of Zirabev should last 90 minutes, but subsequent infusions may be given more quickly if the first infusion does not cause troublesome side effects. The dose, which is given every 2 or 3 weeks, depends on the patient's weight, the type of cancer being treated and what other cancer medicines are being used. Treatment is continued until the cancer is no longer controlled. The doctor may decide to interrupt or stop treatment if the patient develops certain side effects.

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

## How does Zirabev work?

The active substance in Zirabev, bevacizumab, is a monoclonal antibody (a type of protein) that has been designed to attach to vascular endothelial growth factor (VEGF), a protein that circulates in the blood and encourages the growth of new blood vessels. By attaching to VEGF, Zirabev stops its effect. As a result, the cancer cannot develop its own blood supply and cancer cells are starved of oxygen and nutrients, helping to slow down the growth of tumours.

## What benefits of Zirabev have been shown in studies?

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

In addition, a study involving 719 patients with advanced non-small cell lung cancer showed that Zirabev was as effective as Avastin when given with the cancer medicines carboplatin and paclitaxel. The cancer improved in 45% of those given Zirabev (162 of 358 patients) and in 45% of those given Avastin (161 of 361).

Because Zirabev is a biosimilar medicine, the studies on effectiveness and safety of bevacizumab carried out with Avastin do not all need to be repeated for Zirabev.

## What are the risks associated with Zirabev?

The safety of Zirabev 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 Avastin.

The most common side effects with bevacizumab (which may affect more than 1 in 10 people) are hypertension (high blood pressure), tiredness or weakness, diarrhoea and abdominal (belly) pain. The most serious side effects are gastrointestinal perforation (hole in the gut wall), bleeding and arterial thromboembolism (blood clots in the arteries). For the full list of side effects with Zirabev, see the package leaflet.

Zirabev must not be used in people who are hypersensitive (allergic) to bevacizumab or any of the other ingredients, to Chinese hamster ovary cell products or other recombinant antibodies. It must not be given to pregnant women.

## Why is Zirabev authorised in the EU?

The European Medicines Agency decided that, in accordance with EU requirements for biosimilar medicines, Zirabev has a highly similar structure, purity and biological activity to Avastin and is

distributed in the body in the same way. In addition, a study in non-small cell lung cancer has shown that Zirabev's safety and effectiveness are equivalent to those of Avastin in this condition.

All these data were considered sufficient to conclude that Zirabev will behave in the same way as Avastin in terms of effectiveness and safety in its authorised uses. Therefore, the Agency's view was that, as for Avastin, the benefits of Zirabev outweigh the identified risks and it can be authorised in the EU.

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

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

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

## Other information about Zirabev

Zirabev received a marketing authorisation valid throughout the EU on 14 February 2019

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

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