

Zoledronic acid in early breast cancer

Zoledronic acid is a bisphosphonate. This is treatment which works by slowing down the rate of bone change. In the bone there are two types of bone cells: osteoclasts, which break down old bone and osteoblasts which build up new bone. Zoledronic acid stops osteoclast bone resorption and reduces bone mineral loss. This treatment helps to ensure the balance of these cells is correct and bone stays healthy.

Bisphosphonates are used in the treatment of osteoporosis. They have also been used for many years in patients with advanced or secondary breast cancer to treat breast cancer that has spread to the bones. Because of this, several clinical trials were done in patients with early breast cancer to see if bisphosphonates can *prevent* the development of cancer to the bones in the first place. Although these trials did not individually show any clear benefit, in 2015 a study was published in which combined the individual patient data from all the trials were combined showed a statistically and clinically meaningful improvement in breast cancer survival for post-menopausal women.

Your treatment

Your doctor or non-medical prescriber has prescribed this treatment zoledronic acid. It involves giving the treatment into a vein via an infusion (drip). The treatment is given over 15 minutes.

You will have a total of 6 infusions at approximately 6 monthly intervals. The first infusion will be given with chemotherapy (if applicable). The treatment will last for 3 years in total. You will have a routine blood test before the start of each treatment.

If you are receiving chemotherapy you will receive the first infusion during one of your chemotherapy administration visits. A proposed service development is for all further infusions to be delivered by a designated local IV community team. However, infusions may continue to be delivered at The Christie in the meantime.

This treatment can have serious side effects. It is very important that you report side effects straight away. Don't delay, if you feel unwell, please ring The Christie Hotline on 0161 446 3658. The lines are open 24 hours a day.

Possible side effects

This treatment can cause many different side effects. Some are more likely to occur than others. Everyone is different and not everyone gets all the side effects. Most side effects are usually temporary, but in some rare cases they can be life-threatening. It is important to tell your hospital doctor or nurse about any side effects so they can be monitored and, where possible, treated.

Common side effects (more than 1 in 10)

- **Flu-like symptoms**

Zoledronic acid may cause flu like symptoms such as fever, fatigue, weakness, drowsiness, headache, chills and aches in your muscles, joints and bones. In most cases you do not need any specific treatment and the symptoms should improve after a short time. However, taking paracetamol can be helpful with these symptoms. A dose pre-infusion and regular paracetamol 2 days post infusion may benefit you.

- **Low calcium levels in the blood**

Please contact the Christie Hotline on **0161 446 3658** immediately if you have spasms, twitches, or cramps in your muscles, and/or numbness or tingling in your fingers, toes or around your mouth. You may have low levels of calcium in your blood. Your doctor will monitor this and can offer you treatment if this happens. However, you may be given calcium and vitamin D combination supplements as a preventative measure (after your baseline bloods have been checked) to ensure your calcium remains in the normal range. These will continue for the entire time you are on zoledronic acid.

Uncommon side effects (less than 1 in 10)

- **Nausea and vomiting, loss of appetite**

The severity of this varies from person to person but most people do not have a problem with nausea and vomiting. If you do have these symptoms please contact the Christie adjuvant bisphosphonate service. You may be given anti-sickness medication to take at home.

- **Skin reactions**

A skin reaction is not very common. However, sometimes the skin around the infusion site can become red and swollen. Some people may develop a rash and itching. If this happens please tell your doctor or nurse.

- **Conjunctivitis**

If you develop red, sore and itchy eyes, please speak to your doctor.

- **Changes in renal function**

You will have a blood test each time you have an infusion of zoledronic acid. This test is to ensure your corrected calcium and kidney function are within the normal range.

Rare side effects (less than 1 in 100)



- **Osteonecrosis of the jaw**

Very occasionally, a rare side effect can occur with zoledronic acid, when there is necrosis (a loss of bone) or a breakdown of the jaw bone. It is called osteonecrosis of the jaw (ONJ) and can be a serious condition. Some of the symptoms are:

- pain, swelling or infection of the gums
- loosening of the teeth
- poor healing of the gums
- numbness or feeling of heaviness in the jaw

Dental Guidance

What to do before commencing zoledronic acid

It is essential that you have a dental examination with a dentist before you start treatment with zoledronic acid. If you need any dental work, this must be done **before** you start this treatment with zoledronic acid. Please refer to the 'Dental letter' for correspondence with a dentist.

How to access an NHS dentist

There is no need to register with a dentist in the same way as with a GP because you are not bound to a catchment area. Simply find a dental practice that's convenient for you, whether it's near your home or work, and phone them to see if there are any appointments available. If you do not have a regular dental practice or are new to the area, you can search for an NHS dentist near you on the [NHS choices website](#).

If you need any dental treatment while taking zoledronic acid

While you are having treatment with zoledronic acid, you should try to avoid invasive dental procedures for example having teeth removed. For non-invasive procedures such as tooth fillings, please speak to your dentist or Christie contact.

If you do have to have teeth removed **while you are having treatment** with zoledronic acid or **soon after finishing treatment** with zoledronic acid, it is important to discuss this with the Christie adjuvant bisphosphonate service contact first. They may be able to offer advice on the most appropriate way to proceed.

Dental health and check ups

Try to keep your mouth clean and healthy at all times. You can continue to see your dentist for your normal, regular check ups and cleaning (but not treatment). You can also see your dental hygienist. Show them this leaflet and the dental letter, as it is important that the dentist and dental hygienist know that you are receiving zoledronic acid.

If you have any of the symptoms listed above or any other dental problems tell your Christie contact immediately

Very rare side effects (less than 1 in 10,000)

- **Atypical fractures**

Unusual fractures of the hip bone have been reported in patients receiving bisphosphonates. This usually occurs after very long term treatment with a bisphosphonate for osteoporosis. Such fractures are not usually the result of trauma. Please report any unusual hip, groin or thigh pain developed whilst on treatment.

Late side effects

With prolonged use of bisphosphonates some side effects may become evident only after a number of years. In reaching any decision with you about treatment, the potential benefit you receive from treatment will be weighed against the risks of serious long term side effects. If any of these problems specifically applies to you, the doctor will discuss these with you and note this on your consent form.

Contacts

If you have any general questions or concerns about your treatment, please contact the area where you are having treatment:

- Administration enquiries **0161 918 7606/7610**
- Chemotherapy nurse **0161 918 7171**
- Clinical Trials Unit **0161 918 7663**

For advice ring The Christie Hotline on **0161 446 3658** (24 hours)

Your Christie contact is:

Your hospital number is:

Your IV community team are:

If you need information in a different format, such as easy read, large print, BSL, braille, email, SMS text or other communication support, please tell your Christie contact.

We try to ensure that all our information given to patients is accurate, balanced and based on the most up-to-date scientific evidence. If you would like to have details about the sources used please contact **patient.information@christie.nhs.uk**

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Contact The Christie Hotline for
urgent support and specialist advice

**The Christie Hotline:
0161 446 3658**

Open 24 hours a day, 7 days a week

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