

Rituximab

Rituximab was originally approved as a cancer drug in 1998 (and is still used in this way today). It was approved for use in RA in 2006. As with methotrexate, the dose is much lower when used to treat RA.

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Original Biologic drug	Biosimilars (up-to-date at time of writing)	Method of administration
Rituximab (Mabthera)	Truxima, Rixathon and Ruxience	Infusion (Mabthera is also available by injection)

How does it work?

How does it work? As with other biologic drugs, rituximab works by targeting proteins called cytokines, which are responsible for the inflammation caused by the immune system's response. In the case of rituximab, the cytokines being targeted are called 'B cells'. Rituximab only affects B cells at a mature stage of their development, and it is partly for this reason that infusions of rituximab must be 6 months or longer apart, in order for the remaining B cells to replenish and mature before the drug can be given again.

Most commonly reported side effects

As with any medication, rituximab has a number of possible side effects, although it is important to remember that these are only potential side effects. They may not occur at all.

Common side effects may include:

- Reactions to the infusion (particularly the first infusion), which can occur during or within the first 2 hours of the infusion, present with symptoms such as fever, chills and shivering. If you experience any side effects during the infusion, you must tell a member of staff. Infusion reactions can often be managed by slowing the infusion or in some cases the infusion may be stopped.
- Infections such as pneumonia and urinary tract infection
- Allergic reactions that are most likely to occur during an infusion, but can occur up to 24 hours after
- Changes in blood pressure

Progressive Multifocal Leukoencephalopathy (PML)

Progressive Multifocal Leukoencephalopathy (PML) In very rare cases, there have been reports of people taking rituximab developing a serious brain infection called PML. Your rheumatology nurse may discuss this with you in more detail. Symptoms of this infection include memory loss, trouble thinking, difficulty walking or loss of vision. Due to the seriousness of this side effect, it is important to be aware of the symptoms of PML, so that you would know to contact your rheumatology team urgently if you developed them. However, it is also important to stress that this side effect is incredibly rare. To give you some idea of the rarity of this side effect, data in 2011 suggested that of the approximately 129,000 patients to have taken this drug for RA, only 4 cases of PML had ever been reported.

More information on side effects can be found in the patient information leaflet for rituximab. Remember to report any concerns about possible side effects to the doctors and nurses.

Rituximab with other medicines

Some biologic drugs are known to interact poorly with other biologics. You may therefore be asked to leave a gap between stopping one biologic drug and starting another, so that the first drug has time to start coming out of your system.

Rituximab is known to interact poorly with the anti-psychotic drug 'clozapine'.

Rituximab during pregnancy and breastfeeding

Depletion of B-cells has been reported in some infants born to mothers exposed to rituximab during pregnancy, and there is only limited data to support its use in pregnancy. It is therefore not recommend that the drug be administered to pregnant women or women trying to conceive.

Men whose partners are trying to conceive may be able to continue on this drug. However, this is based on limited data.

Women are advised not to breastfeed while being treated with rituximab and for 12 months following treatment with the drug.

Pregnancy information in this booklet is based on British Society for Rheumatology (BSR) guidelines on prescribing drugs in pregnancy and breastfeeding.

Before starting a family it is recommended that you get advice from the consultant or clinical nurse specialist about when to start a pregnancy.

B cell inhibitors and alcohol

You can drink alcohol on these medications. However, it is not uncommon when taking a biologic drug to be on other medications, where different guidance applies. Methotrexate, for example, can affect the liver, so for those taking methotrexate alongside their biologic, moderate intake of alcohol is recommended in line with government guidelines.

Rituximab and immunisations/vaccinations

Live vaccines (measles, mumps, rubella, i.e. MMR, chickenpox, oral polio (NOT injectable Live vaccines (measles, mumps, rubella i.e. MMR, chickenpox, oral polio (NOT injectable polio), BCG, oral typhoid and yellow fever) cannot be given to anyone already taking rituximab. If the treatment has not yet been started, it is important to seek advice on how long a gap to leave after having a live vaccine.

Medicines in rheumatoid arthritis

We believe it is essential that people living with RA understand why certain medicines are used, when they are used and how they work to manage the condition.

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