

# THE FIRST RITUXIMAB BIOSIMILAR APPROVED BY THE EMA AND FDA<sup>1-4</sup>

**TRUXIMA**<sup>®</sup> offers potential pharmacoeconomic benefits for healthcare systems, which translate to improved patient access to biologic treatments and combination therapies and facilitate treatment innovations<sup>4</sup>

**79+**  
countries

**Truxima**<sup>®</sup> is approved in more than 79 countries and is available in 59 countries<sup>5</sup>



**Truxima**<sup>®</sup> has received authorisation for use in below indications:



More than **1,600 Truxima**<sup>®</sup> prescription cases have been reported<sup>6,4</sup>



**Non-Hodgkin's Lymphoma**<sup>1,6,7</sup>



**Diffuse Large B Cell Lymphoma**<sup>1,6</sup>



**Chronic Lymphocytic Leukemia**<sup>1,7</sup>

<sup>1</sup> A phase III, randomized, and double-blind study in 140 patients with previously untreated advanced follicular lymphoma. Patients treated with Truxima<sup>®</sup> (n=70) showed comparable PFS, TTP and OS compared to originator rituximab (n=70). Truxima<sup>®</sup> was consistently well tolerated and showed comparable safety profiles, including immunogenicity, over the entire study period without any unexpected toxicities.  
<sup>2</sup> A study collecting real-world safety and effectiveness data on rapid infusion (RI)-Truxima<sup>®</sup> from the medical records of 196 patients with non-Hodgkin's lymphoma or chronic lymphocytic leukemia in 10 European centers, 6 months after the date of the first RI (index date), the infusion-related reaction rate was compared to previously published data. Ten percent of patients experienced an infusion-related reaction on day 1-2 post-index, which was not significantly different to the rate for rituximab described previously (8.8%). Complete response and partial response to Truxima<sup>®</sup> was observed in 74% and 22% of patients, respectively. This real-world study demonstrates that the safety and effectiveness profile of RI-Truxima<sup>®</sup> is similar to RI of reference rituximab.  
<sup>3</sup> A study collecting real-world data relating to the effectiveness and safety of Truxima<sup>®</sup> treatment from the medical records of 389 patients with diffuse large B cell lymphoma (24 centers, five European countries). For the primary outcome (clinical effectiveness), OS, PFS and best response (BR) were assessed. The percentage (95% confidence interval [95% CI]) of patients alive at 12-, 18-, and 30 months postindex (initiation of Truxima<sup>®</sup>) was 86% (82.4%-89.4%), 81% (76.0%-84.9%), and 76% (71.2%-80.1%), respectively. The PFS rate (percent, [95% CI]) at 12-, 18-, and 30 months postindex was 78% (74.2%-82.5%), 72% (67.9%-76.9%), and 67% (61.9%-71.7%), respectively. For 82% (n=312) of patients, the BR to Truxima<sup>®</sup> was a complete response. Adverse events were consistent with known effects of chemotherapy.  
<sup>4</sup> Estimated total number of patients receiving Truxima<sup>®</sup> in real-world evidence studies listed in Choi D, et al. 2022.<sup>4</sup>

EMA=European Medicine Agency; FDA=Food and Drug Administration; OS=overall survival; PFS=progression-free survival; RI=rapid infusion; TTP=time to progression.

**Package leaflet: Information for the patient**

**Truxima<sup>®</sup> 100mg / 500 mg concentrate for solution for infusion**

**Read this leaflet carefully before you start taking this medicine because it contains important information for you.** Keep this leaflet. You may need to read it again. If you have any further questions, ask your doctor, pharmacist or nurse. If you get any side effects talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4. **What is in this leaflet:** 1. What Truxima<sup>®</sup> is and what it is used for 2. What you need to know before you use Truxima<sup>®</sup> 3. How to use Truxima<sup>®</sup> 4. Possible side effects 5. How to store Truxima<sup>®</sup> 6. Contents of the pack and other information 7. What Truxima<sup>®</sup> is and what it is used for 8. What Truxima<sup>®</sup> contains the active substance (rituximab). This is a type of protein called a "monoclonal antibody". It is designed to stick to a type of white blood cell called "B-lymphocyte". When sticking to the surface of this cell, rituximab causes the cell to die. **What Truxima<sup>®</sup> is used for** Truxima<sup>®</sup> may be used for the treatment of several different conditions in adults. Your doctor may prescribe Truxima<sup>®</sup> for the treatment of: **a) Non-Hodgkin's Lymphoma** This is a disease of the lymph tissue (part of the immune system) that affects a type of white blood cell called B-lymphocytes. In adults, Truxima<sup>®</sup> can be given alone or with other medicines called "chemotherapy". In adult patients where the treatment is working, Truxima<sup>®</sup> may be used as a maintenance treatment every 2 years after completing the initial treatment. **b) Chronic lymphocytic leukemia** Chronic lymphocytic leukemia (CLL) is the most common form of adult leukemia. CLL affects a particular lymphocyte, the B cell, which originates from the bone marrow and develop in the lymph nodes. Patients with CLL have too many abnormal lymphocytes, which accumulate mainly in the bone marrow and blood. The proliferation of these abnormal B-lymphocytes is the cause of symptoms you may have. Truxima<sup>®</sup> in combination with chemotherapy destroys these cells which are gradually removed from the body by biological processes. **2. What you need to know before you use Truxima<sup>®</sup>** **Do not take Truxima<sup>®</sup> if:** you are allergic to rituximab, other proteins which are like rituximab, or any of the other ingredients of this medicine (listed in section 6) you have a severe active infection at the moment you have a weak immune system you have severe heart failure or severe uncontrolled heart disease and have rheumatoid arthritis, granulomatosis with polyangiitis or microscopic polyangiitis. Do not have Truxima<sup>®</sup> if any of the above apply to you. If you are not sure, talk to your doctor, pharmacist or nurse before you are given Truxima<sup>®</sup>. **Warnings and precautions:** Talk to your doctor, pharmacist or nurse before you are given Truxima<sup>®</sup> if: you have ever had or might now have a hepatitis infection. This is because in a few cases, Truxima<sup>®</sup> could cause hepatitis B to become active again, which can be fatal in very rare cases. Patients who have ever had hepatitis B infection will be carefully checked by their doctor for signs of this infection - you have ever had heart problems (such as angina, palpitations or heart failure) or breathing problems. If any of the above apply to you (or you are not sure), talk to your doctor, pharmacist or nurse before you are given Truxima<sup>®</sup>. Your doctor may need to take special care during your treatment with Truxima<sup>®</sup>. **Children and adolescents:** Talk to your doctor, pharmacist or nurse before you are given this medicine if you, or your child, are under 18 years of age. This is because there is not much information about the use of Truxima<sup>®</sup> in children and young people. **Other medicines and Truxima<sup>®</sup>** Tell your doctor, pharmacist or nurse if you are taking, have recently taken or might take any other medicines. This includes medicines obtained without a prescription and herbal medicines. This is because Truxima<sup>®</sup> can affect the way some other medicines work. Also some other medicines can affect the way Truxima<sup>®</sup> works. **In particular, tell your doctor if:** you are taking medicines for high blood pressure. You may be asked not to take these other medicines 12 hours before you are given Truxima<sup>®</sup>. You will be given other medicines (pre-medication) to prevent or reduce possible side effects. **How much and how often you will receive your treatment a) If you are being treated for non-Hodgkin's Lymphoma - if you are having Truxima<sup>®</sup> alone** Truxima<sup>®</sup> will be given to you once a week for 4 weeks. Repeated treatment courses with Truxima<sup>®</sup> are possible. **b) If you are having Truxima<sup>®</sup> with chemotherapy** Truxima<sup>®</sup> will be given to you on the same day as your chemotherapy. This is usually given every 3 weeks up to 8 times. **c) If you respond well to treatment, you may be given Truxima<sup>®</sup> as a maintenance treatment every 2 or 3 months for two years.** Your doctor may change this, depending on how you respond to the medicine. **d) If you are being treated for chronic lymphocytic leukemia** When you are treated with Truxima<sup>®</sup> in combination with chemotherapy, you will receive Truxima<sup>®</sup> infusions on day 0 cycle 1, then day 1 of each cycle for 6 cycles in total. Each cycle has a duration of 28 days. The chemotherapy should be given after the Truxima<sup>®</sup> infusion. Your doctor will decide if you should receive concomitant supportive therapy. If you have any further questions on the use of this medicine, ask your doctor, pharmacist or nurse. **4. Possible side effects** Like all medicines, this medicine can cause side effects, although not everybody gets them. Most side effects are mild to moderate but some may be serious and require treatment. Rarely, some of these reactions have been fatal. **Infusion reactions** During or within the first 24 hours of the first infusion you may develop fever, chills and shivering. Less frequently, some patients may experience pain at the infusion site, blisters, itching, sickness (nausea), tiredness, headache, breathing difficulties, blood pressure raised, wheezing, throat discomfort, tongue or throat swelling or throat narrowing, fainting or dizziness, heart attack or low number of platelets. If you have heart disease or angina, these infusion reactions might get worse. **Tell the person giving you the infusion immediately if you develop any of these symptoms, as the infusion may need to be slowed down or stopped.** You may require additional treatment such as an antihistamine or paracetamol. When these symptoms go away, or improve, the infusion can be continued. These reactions are less likely to happen after the second infusion. Your doctor may decide to stop your Truxima<sup>®</sup> treatment if these reactions are serious. **Infections** Tell your doctor immediately if you get signs of an infection including: fever, cough, sore throat, burning pain when passing urine or feeling weak or generally unwell - memory loss, trouble thinking, difficulty walking or sight loss - these may be due to a very rare, serious brain infection, which has been fatal (progressive multifocal leukoencephalopathy or PML). You might get infections more easily during your treatment with Truxima<sup>®</sup>. These are often colds, but there have been cases of pneumonia or urinary infections. These are listed below under "Other side effects". **Skin reactions** Very rarely, severe blistering skin conditions that can be life-threatening may occur. Redness, often associated with blisters, may appear on the skin or on mucous membranes, such as inside the mouth, the genital area or the eyelids, and fever may be present. **Tell your doctor immediately if you have any of these symptoms.** **Other side effects include: a) If you are being treated for non-Hodgkin's Lymphoma or chronic lymphocytic leukemia** Very common side effects (may affect more than 1 in 10 people) - bacterial or viral infections, leucopenia - low number of white blood cells, with or without fever or blood cells called "platelets" - feeling sick (nausea), cold spots on the skin, chills, headache - lower immunity - because of lower levels of anti-bodies called "immunoglobulin (IgG) in the blood which help protect against infection. Common side effects (may affect up to 1 in 10 people) - infections of the face (sepsis), pneumonia, shingles, cold, bronchial tube infections, kidney infections, infections of unknown origin, sinus inflammation, hepatitis B - low number of red blood cells (anaemia), low number of all blood cells - allergic reactions (hypersensitivity) - high blood sugar level, weight loss, swelling in the face and body, high levels of the enzyme "lactate dehydrogenase (LDH)" in the blood, low calcium levels in the blood - unusual feelings of the skin - such as numbness, tingling, prickling, burning, a creeping skin feeling, reduced sense of touch - feeling restless, problems falling asleep - becoming very red in the face and other areas of the skin as a consequence of dilation of the blood vessels - feeling dizzy or anxious - producing more tears, tear duct problems, inflamed eye (conjunctivitis) - ringing sound in the ears, ear pain - heart problems - such as heart attack and uneven or fast heart rate - high or low blood pressure (low blood pressure especially when standing upright) - tightening of the muscles in the airways which causes wheezing (bronchospasm), inflammation, irritation in the lungs, throat or sinuses being short of breath, runny nose - being sick (vomiting), diarrhoea, pain in the stomach, irritation or ulcers in the throat and mouth, problems swallowing, constipation, indigestion - eating disorders not eating enough, leading to weight loss - heavy increased sweating, night sweats - muscle problems - such as tight muscles, joint or muscle pain, back and neck pain - general discomfort or feeling uneasy or tired, shakiness, signs of flu - multiple organ failure. Uncommon side effects (may affect up to 1 in 100 people) - blood clotting problems, decrease of red blood cell production and increase of red blood cell destruction (aplastic haemolytic anaemia), swollen or enlarged lymph nodes - low mood and loss of interest or enjoyment in doing things, feeling nervous - taste problems - such as changes in the way things taste - heart problems - such as reduced heart rate or chest pain (angina) - asthma, too little oxygen reaching the body organs - swelling of the stomach. Very rare side effects (may affect up to 1 in 10,000 people) - short term increase in the amount of some types of anti-bodies in the blood (called immunoglobulins - IgM), chemical disturbances in the blood caused by break-down of dying cancer cells - nerve damage in arms and legs, paralysed face - heart failure - inflammation of blood vessels including those leading to skin symptoms - respiratory failure - damage to the intestinal wall (perforation) - severe skin problems causing blisters that can be life-threatening. Redness, often associated with blisters, may appear on the skin or on mucous membranes, such as inside the mouth, the genital area or the eyelids, and fever may be present. - kidney failure - severe vision loss. **Not known (it is not known how often these side effects happen) - a reduction in white blood cells which does not happen straight away - reduced platelets number just after the infusion - this can be reversed, but can be fatal in rare cases - hearing loss, loss of other senses** Truxima<sup>®</sup> may also cause changes in laboratory tests carried out by your doctor. If you are having Truxima<sup>®</sup> with other medicines, some of the side effects you may get may be due to the other medicines. **Reporting of side effects** If you get any side effects talk to your doctor, pharmacist or nurse. This includes any side effects not listed in this leaflet. By reporting side effects you can help provide more information on the safety of this medicine. **5. How to store Truxima<sup>®</sup>** Keep this medicine out of the sight and reach of children. Do not use this medicine after the expiry date which is stated on the carton and the vial after EXP. The expiry date refers to the last day of that month. Store in a refrigerator (2°C - 8°C). Keep the container in the outer carton in order to protect from light. Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines that you no longer use. These measures will help protect the environment. **6. Contents of the pack and other information** **What Truxima<sup>®</sup> contains** The active ingredient in Truxima<sup>®</sup> is called rituximab. The 10 mL vial contains 100 mg of rituximab (10 mg/mL). The 50 mL vial contains 500 mg of rituximab (10 mg/mL). The other ingredients are sodium chloride, sodium citrate dihydrate, polyoxate 80 and water for injections. **What Truxima<sup>®</sup> looks like and contents of the pack** Truxima<sup>®</sup> is a clear, colourless solution, supplied as a concentrate for solution for infusion. 10mL vial - Pack of 2 vials. 50mL vial - Pack of 1 vial. **Marketing Authorisation Holder** Celltrion Healthcare Hong Kong Limited, Suite 3305, 33rd Floor, Tower 5, The Gateway, Harbour City, 15 Canton Road, Tsim Sha Tsui, Kowloon. **Manufacturer:** CELLTRION, INC. 20, Academy-ro 51 beon-gil, Yeosu-gu, Jeonhon, 22014, Korea. **This leaflet was last revised in July 2022.**

**References:** 1. Henry D, et al. Pharmacoeconomics of Cancer Therapies: Considerations With the Introduction of Biosimilars. Semin Oncol. 2014;41(5):513-520. 2. European Medicines Agency. Truxima Summary of Product Characteristics. Available at: [https://www.ema.europa.eu/en/documents/product-information/truxima-epar-product-information\\_en.pdf](https://www.ema.europa.eu/en/documents/product-information/truxima-epar-product-information_en.pdf). Accessed Feb 2023. 3. U.S. Food and Drug Administration. Highlights of Prescribing Information. Available at: [https://www.accessdata.fda.gov/drugsatfda\\_docs/label/2018/761088Orig1s01.pdf](https://www.accessdata.fda.gov/drugsatfda_docs/label/2018/761088Orig1s01.pdf). Accessed Feb 2023. 4. Choi D, Lee S, Kim S, Yoon S. A Developer's Perspective on Clinical Evidence and Benefits for Rituximab Biosimilar Uptake, with a Focus on CT-P10. Clin Drug Investig. 2022;42(4):285-300. 5. Data on File. Celltrion Healthcare. 6. Christian Buske, et al. Long-Term Efficacy and Safety Results of CT-P10 and Reference Rituximab in Patients with Newly Diagnosed Advanced Stage Follicular Lymphoma: Phase III Updated Study Results with Median Follow-up of 40 Months. Blood 2019; 134 (Supplement\_1): 1528. 7. Bishon M, et al. The safety and clinical effectiveness of rapid infusion with CT-P10 in patients with non-Hodgkin's lymphoma or chronic lymphocytic leukemia: A retrospective non-interventional post-authorization safety study in Europe. Hematol Oncol. 2022;40(3):370-380. 8. Bishon M, et al. Real-world clinical effectiveness and safety of CT-P10 in patients with diffuse large B-cell lymphoma: An observational study in Europe. eJHaem. 2022; 1-10.

This material is for healthcare professionals only.