



## FAQ – Ocrelizumab (OCREVUS\*)

Updated August 2017

### 1. What is ocrelizumab?

Ocrelizumab is a [monoclonal antibody](#) that specifically targets CD20, a protein that is found on the surface of white blood cells called B lymphocytes or B cells. Because of this property, ocrelizumab acts as an [immunomodulatory](#) drug by targeting and removing potentially harmful B cells in people living with multiple sclerosis (MS). Ocrelizumab is developed by Hoffmann–La Roche's subsidiary [Genentech](#) and is marketed under the brand name Ocrevus.

### 2. Has ocrelizumab been approved for use in multiple sclerosis (MS)?

On March 28, 2017 ocrelizumab was approved by the U.S. Food and Drug Administration (FDA) for the treatment of individuals in the U.S. who are diagnosed with primary progressive and relapsing forms of MS. On July 17, the Australian Therapeutic Goods Administration (TGA) approved ocrelizumab for both indications as well. On August 14, 2017, Health Canada approved ocrelizumab for the treatment of individuals in Canada who are diagnosed with relapsing-remitting MS. Ocrelizumab is currently under review by Health Canada for the treatment of primary progressive MS.

### 3. What data did Health Canada use to form the basis of their approval of ocrelizumab for relapsing-remitting MS?

Genentech sponsored two phase III clinical trials called [OPERA I and OPERA II](#), the data from which were submitted to Health Canada for review. OPERA I and II were randomized, double-blind, crossover, global multi-centre studies evaluating the efficacy and safety of ocrelizumab compared to [interferon beta-1a](#) or Rebif in people with relapsing-remitting MS. Clinical outcomes from 1,656 participants enrolled in both trials showed a 46% reduction in the annualized relapse rates for ocrelizumab compared to interferon beta-1a in the first two years after treatment, thus meeting the trial's primary endpoint. The trial also showed that the percentage of patients with disability progression was significantly lower at 12 and 24 weeks, and the number of lesions was also significantly lower in the ocrelizumab group versus the interferon group. The results from these trials were published in the [New England Journal of Medicine](#).

### 4. What is the process for the approval of a drug by Health Canada?

Following a successful clinical trial, a New Drug Submission (NDS) is filed by the company that produces the drug, which is reviewed by the Health Products and Food Branch (HPFB) of Health Canada. This NDS contains information on safety, efficacy and quality of the drug, which is collected from preclinical studies and clinical trials. Furthermore, the NDS has information on drug production, packaging, labelling details, and side effects. HPFB conducts a thorough review of the information submitted in the NDS to determine if the drug can be sold in Canada based on its

benefits and risks. If the reviewers find that the benefits of the drug outweigh the risks, the drug is issued a notice of compliance, which permits the marketing of the drug. Health Canada may also request additional information, analysis, and clarification on the safety and efficacy of the drug, which can prolong the process. On average, Health Canada takes approximately 300 days to evaluate a NDS. Visit the [Health Canada website](#) for more information on this process.

**5. How can I access ocrelizumab now that it has been approved?**

Individuals living in Canada with private insurance may have access to ocrelizumab. Individuals are encouraged to check with their benefit providers. Decisions around government reimbursement will depend on a number of factors, and will be informed by the [Common Drug Review](#) conducted by the Canadian Agency for Drugs and Technologies in Health (CADTH). Quebec conducts an independent review through the Institut national d'excellence en sante et en services sociaux (INESS). The Common Drug Review for ocrelizumab has been initiated by CADTH and the MS Society is monitoring its status. As part of its advocacy platform, the MS Society urges governments to provide people with MS equitable and timely access to treatments based on their health needs rather than their ability to pay. They also emphasize that Canadians living with MS should have access to all Health Canada approved treatments for MS through public drug programs.

**6. What data is Health Canada using to review ocrelizumab for progressive forms of MS?**

Genentech sponsored a phase III clinical trial called ORATORIO, in which 732 primary progressive MS patients were randomly selected to receive either ocrelizumab or a mock drug (placebo). The trial looked at sustained disability progression as the primary endpoint, as determined by an increase in [EDSS score](#). The results of the trial, published in the [New England Journal of Medicine](#), found that treatment with ocrelizumab significantly reduced the risk of disability progression by 24% compared with placebo. Treatment with ocrelizumab also resulted in improvements in a number of secondary outcomes, such as the Timed 25-foot Walk which looks at mobility, and imaging measures like lesion volume and brain volume loss. This data is currently under review by Health Canada.

**7. Why is Health Canada approval of ocrelizumab for primary progressive MS taking longer compared to the U.S. Food and Drug Administration (FDA) and Australian Therapeutic Goods Administration (TGA)?**

The process and timelines by which regulators like the FDA, TGA, Health Canada and others evaluate new drugs is different for each country/region. Health Canada uses a highly stringent, thorough evaluation that requires heavy scrutiny of the scientific evidence from clinical trials. This scrutiny is required to ensure that the treatment is effective and safe for Canadians. The MS Society cannot intervene in the regulatory process through which Health Canada makes decisions on new treatments, but can represent the voices of people with MS in terms of the impact of treatments on quality of life.

**8. What side effects have been reported for ocrelizumab?**

The most common adverse events reported in the ocrelizumab group in OPERA I and II were infusion-related adverse events, primarily relating to itchy skin, rash, throat irritation, and flushing. The most common adverse events reported in the ocrelizumab group in the ORATORIO were infusion-related reactions and infections. Other serious side effects and medical events may occur as a result of treatment with ocrelizumab. For a comprehensive list of all possible side effects of ocrelizumab please see the Ocrevus [product monograph](#). Three deaths were reported in the OPERA

I and II trials (one in the ocrelizumab group and two in the interferon group) and five deaths were reported in the ORATORIO trial (four in the ocrelizumab group and one in the placebo group), which did not occur as a result of the treatment.

**9. Can I get progressive multifocal leukoencephalopathy (PML) if I take ocrelizumab?**

Although no cases of PML were reported in the clinical trials of ocrelizumab, risk cannot be ruled out. Genentech reported [one case of PML](#) in an individual in Europe who was taking ocrelizumab. The company confirmed that this person received one dose of ocrelizumab, and had previously taken natalizumab (Tysabri) for several years. The case is still being investigated to determine the cause of PML.

**10. Can I switch from my current therapy to ocrelizumab?**

Any decisions regarding treatments should be made in collaboration with your health care team, as it depends on a variety of personal health and lifestyle-related factors, potential risks and benefits, as well as cost and reimbursement. There are no studies to date which have looked at the safety and efficacy of switching to ocrelizumab from another therapy in individuals with MS.

**11. How much does ocrelizumab cost?**

It is not known what the cost of ocrelizumab will be in Canada.