

## Golimumab for rheumatoid arthritis

### Product:

GOLIMUMAB (Simponi®)

### Class of drugs:

biologic response modifiers; tumor necrosis factor (TNF) alpha inhibitors

### Indication:

rheumatoid arthritis

### Manufacturer:

Schering Plough Inc.

## CED Recommendation

The CED recommended that golimumab (Simponi®) not be funded, on the basis that this drug has not been shown to provide added clinical benefits compared with available treatment alternatives and it is uncertain whether it offers an economic advantage.

## Executive Officer Decision

Taking into consideration the CED's recommendation and based on a cost agreement with the manufacturer, the Executive Officer decided to fund golimumab (Simponi®) for the treatment of rheumatoid arthritis through the Exceptional Access Program according to specific criteria.

## Status

Funded through the Exceptional Access Program.

### Highlights of Recommendation:

- ♦ Golimumab belongs to a class of drugs called biologic response modifiers or biologics. More specifically, it belongs to a subgroup of biologics called tumor necrosis factor (TNF) inhibitors. Golimumab is licensed for use in several different indications. This review considered the use of golimumab for the treatment of rheumatoid arthritis.
- ♦ Clinical trial evidence supports that golimumab plus methotrexate is more effective than placebo plus methotrexate in treating the signs and symptoms of rheumatoid arthritis (e.g. disease activity and physical function).
- ♦ Two different doses of golimumab, 50mg and 100mg every four weeks, were assessed in clinical studies. The higher 100mg dose was not shown to be significantly more effective than the 50mg dose.
- ♦ There are no direct comparison studies evaluating the efficacy and safety of golimumab versus other biologic agents. The Ontario Public Drug Programs already fund six other biologic therapies for rheumatoid arthritis; there is no evidence that golimumab is therapeutically superior to these alternatives.
- ♦ Golimumab costs approximately \$17,300 per patient per year when administered at the Health Canada recommended dose of 50mg once a month. At this dosing regimen, it may provide some cost savings relative to other biologic agents. However, the cost advantage is small and would not be realized if the drug was administered more frequently at every four weeks (the dosing schedule used in the clinical studies).
- ♦ **Overall, the Committee noted that while golimumab is efficacious in the treatment of rheumatoid arthritis, multiple biologic therapies are already funded for this indication. Golimumab has not demonstrated clinical superiority to other available treatment options and the suggested cost savings may not be realized.**

### Background:

Rheumatoid arthritis is a disease in which the body's immune system inappropriately attacks the joints and surrounding tissues. This leads to swelling, pain, and stiffness in the joints. Left untreated, patients develop permanent joint damage and deformity. The disease can also affect other organs, such as the skin, heart, lungs, blood vessels, and muscles.

The cause of rheumatoid arthritis is unknown. The disease usually requires lifelong treatment, including medications, physical therapy, exercise, education, and possibly surgery. No drug therapy has been shown in clinical studies to significantly alter the progression of this disease. Anti-inflammatory medications are typically used to help with symptoms of pain and swelling. Standard therapies consist of disease modifying anti-rheumatic drugs (DMARDs). Methotrexate, leflunomide and sulfasalazine are traditional DMARDs that are usually effective as first-line treatment. Biologic response modifiers are a group of drugs designed to target specific components of the immune system that play an important role in rheumatoid arthritis. Due to safety and cost-effectiveness reasons, biologic therapies are considered after traditional DMARDs have failed.

Golimumab (Simponi®) is a biologic agent that belongs to a subclass of drugs called tumor necrosis factor (TNF) alpha inhibitors. Golimumab is indicated for use in combination with methotrexate for the treatment of moderate to severe active rheumatoid arthritis.

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## Detailed Discussion:

- ◆ This review took into consideration four randomized controlled studies evaluating the efficacy and safety of golimumab in the treatment of rheumatoid arthritis. The four trials combined enrolled a total of 1,700 patients with moderate to severe active rheumatoid arthritis.
- ◆ The studies found that patients treated with methotrexate plus golimumab, versus those treated with methotrexate plus placebo, were much more likely to achieve disease response, as measured by the American College of Rheumatology (ACR) response criteria. (The ACR criteria consist of swollen and tender joint counts, patient and physician assessment of disease activity, pain, physical function, as well as other markers of disease activity.)
- ◆ Patients treated with methotrexate plus golimumab also experienced greater improvements in Health Assessment Questionnaire (HAQ) scores, which measure functional abilities.
- ◆ However, treatment with golimumab was not consistently shown to improve quality of life or work productivity across the four studies and varied among patient populations.
- ◆ The trials evaluated various dosing regimens of golimumab. Efficacy appeared similar between golimumab 50mg and 100mg every four weeks. Among patients who had their golimumab dose escalated from 50mg to 100mg due to lack of treatment response, limited benefit was observed from this dose escalation strategy.
- ◆ No significant differences were noted in the clinical studies between golimumab and placebo with respect to serious adverse events, infections, tuberculosis, cancer, and withdrawals due to adverse events. However, these trials were too short in duration to detect these kinds of events, considering that rheumatoid arthritis is a chronic condition and long-term therapy would be required. Moreover, patients susceptible to harms associated with TNF inhibitors were excluded from the studies. As such, the ability to generalize these safety results is limited.
- ◆ Direct head-to-head studies comparing golimumab to other biologic therapies have not been conducted. There is no evidence that golimumab offers any clinical advantage relative to comparator products.
- ◆ If administered at the Health Canada recommended dose of 50mg monthly (i.e. 12 doses per year), golimumab costs slightly less than other TNF inhibitors. However, if golimumab was given at 50mg every four weeks or 13 doses per year (the dosing regimen used in the clinical trials), its treatment cost would be similar to that of alternative TNF inhibitors.
- ◆ **Overall, the CED noted that while golimumab is efficacious in the treatment of rheumatoid arthritis, this drug has not been proven to provide therapeutic superiority or clear value for money relative to existing treatment options.**

## EAP Funding:

Taking into consideration the CED's recommendation and based on a cost agreement with the manufacturer, the Executive Officer decided to fund golimumab (Simponi®) for the treatment of rheumatoid arthritis through the Exceptional Access Program (EAP).

The EAP reimbursement criteria can be found at:

[http://www.health.gov.on.ca/english/providers/program/drugs/pdf/frequently\\_requested\\_drugs.pdf](http://www.health.gov.on.ca/english/providers/program/drugs/pdf/frequently_requested_drugs.pdf)



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### For more information, please contact:

#### Ministry of Health and Long-Term Care

Ontario Public Drug Programs  
Hepburn Block, 9th Floor  
80 Grosvenor Street, Queen's Park  
Toronto, Ontario M7A 1R3

or click: [http://www.health.gov.on.ca/english/providers/program/drugs/ced\\_rec\\_table.html](http://www.health.gov.on.ca/english/providers/program/drugs/ced_rec_table.html)