Actemra

**Description**

**Actemra (tocilizumab)**

**Background**
Actemra is an agent in the class of drugs known as biologic disease modifiers. It is used to treat adult onset rheumatoid (RA) arthritis, polyarticular juvenile idiopathic arthritis (PJIA), systemic juvenile idiopathic arthritis (SJIA), giant cell arteritis, and cytokine release syndrome (CRS). Biologic disease modifiers are genetically engineered drugs that are used to modify imbalances of the immune system in autoimmune disease. Some of these agents block, or modify, the activity of selected cells in the immune system, while others (including Actemra) work by blocking certain messenger proteins, known as cytokines, that send signals between those cells (1).

Actemra works by blocking a cytokine known as interleukin 6, or IL-6, which is believed to be one of the factors that cause inflammation in rheumatoid arthritis. Actemra is an antibody that blocks the spot where IL-6 attaches to the surface of cells. When IL-6 is unable to attach to these cells, it is unable to activate them or turn them on. As a result, the cells are unable to drive inflammation in rheumatoid arthritis (1).

**Regulatory Status**

**FDA-approved indication:** Actemra is an interleukin-6 (IL-6) receptor antagonist indicated for:

(2)
1. Adult patients with moderately to severely active rheumatoid arthritis who have had an inadequate response to one or more Disease-Modifying Anti-Rheumatic Drugs (DMARDs).
2. Adult patients with giant cell arteritis
3. Patients 2 years of age and older with active polyarticular juvenile idiopathic arthritis.
4. Patients 2 years of age and older with active systemic juvenile idiopathic arthritis.
5. Adults and pediatric patients 2 years of age and older with chimeric antigen receptor (CAR) T cell-induced severe or life-threatening cytokine release syndrome.

Off Label Indications:
Per the NCCN compendium, Actemra has been found to be effective in the following disease states: (3-5)

1. Unicentric Castleman’s Disease: Second-line therapy as a single agent for relapsed or refractory unicentric CD for patients who are human immunodeficiency virus-negative and human herpesvirus-8-negative at a dose of 8mg/kg every 2 weeks
2. Multicentric Castleman’s Disease: Subsequent therapy as a single agent for multicentric CD that has progressed following treatment of relapsed/refractory or progressive disease at a dose of 8mg/kg every 2 weeks

Actemra should not be administered in patients with an active infection, including localized infections. Serious infections leading to hospitalization or death including tuberculosis (TB), bacterial, invasive fungal, viral, and other opportunistic infections have occurred in patients receiving Actemra. If a serious infection develops, interrupt Actemra until the infection is controlled. Patients have presented with disseminated rather than localized disease, and were often taking concomitant immunosuppressants such as methotrexate or corticosteroids which in addition to rheumatoid arthritis may predispose them to infections (2).

Patients should be tested for latent TB infection prior to initiating Actemra. Anti-tuberculosis therapy should also be considered prior to initiation of Actemra in patients with a past history of latent or active tuberculosis in whom an adequate course of treatment cannot be confirmed, and for patients with a negative test for latent tuberculosis but having risk factors for tuberculosis infection. Patients should be closely monitored for the development of signs and symptoms of tuberculosis including patients who tested negative for latent tuberculosis infection prior to initiating therapy (2).
Gastrointestinal (GI) perforation may occur, primarily as complications of diverticulitis in RA patients. Actemra should be used with caution in patients who may be at increased risk for gastrointestinal perforation (2).

Laboratory monitoring is recommended prior to and monitored every 4 to 8 weeks due to potential consequences of treatment-related changes in neutrophils, platelets, lipids, and liver function tests (2).

Treatment with Actemra was associated with a higher incidence of neutropenia. Initiation of Actemra treatment is not recommended in patients with an absolute neutrophil count (ANC) below 2000 per mm³. Actemra treatment must be withheld if the ANC is 500-1000 cells per mm³ and resumed at a decreased dose when the ANC is >1000 mm³. Actemra treatment must be discontinued if the ANC is less than 500 cells per mm³ (2).

Treatment with Actemra was associated with a reduction in platelet counts. Actemra treatment is not recommended in patients with a platelet count below 100,000 per mm³ (2).

Treatment with Actemra was associated with a higher incidence of transaminase elevations. Increased frequency and magnitude of these elevations was observed when potentially hepatotoxic drugs (e.g., MTX) were used in combination with Actemra (2).

Treatment with Actemra was associated with increases in lipid parameters such as total cholesterol, triglycerides, LDL cholesterol, and/or HDL cholesterol. Patients should be managed according to clinical guidelines [e.g., National Cholesterol Educational Program (NCEP) for the management of hyperlipidemia (2).

Actemra has not been studied and its use should be avoided in combination with biological DMARDs such as TNF antagonists, IL-1R antagonists, anti-CD20 monoclonal antibodies and selective co-stimulation modulators because of the possibility of increased immunosuppression and increased risk of infection. Actemra may be used as monotherapy or concomitantly with methotrexate or other non-biological DMARDs such as hydroxychloroquine, leflunomide, azathioprine, and cyclosporine (2).

Treatment with Actemra is not recommended in patients with active hepatic disease or hepatic impairment, including patients with positive hepatitis B virus (HBV) and hepatitis C virus (HCV) (2).
Safety and effectiveness of Actemra in pediatric patients with conditions other than PJIA, SJIA, or cytokine release syndrome have not been established. Children under the age of two have not been studied (2).

Actemra doses exceeding 800 mg per infusion are not recommended in RA or CRS patients (2).

Related policies
Cimzia, Enbrel, Humira, Infliximab, Kevzara, Kineret, Olumiant, Ocrenica, Rinvoq, Rituximab, Simponi, Xeljanz

Policy
This policy statement applies to clinical review performed for pre-service (Prior Approval, Precertification, Advanced Benefit Determination, etc.) and/or post-service claims.

Actemra may be considered medically necessary for patients 18 years of age or older for the treatment of moderately to severely active rheumatoid arthritis (RA), and giant cell arteritis; in patients 2 years of age or older with active polyarticular juvenile idiopathic arthritis (PJIA), systemic juvenile idiopathic arthritis (SJIA), and cytokine release syndrome (CRS) and if the conditions indicated below are met.

Actemra may be considered medically necessary in patients with Unicentric Castleman’s Disease whose disease is relapsed or refractory, or in patients with Multicentric Castleman’s Disease whose disease has progressed and if the conditions indicated below are met.

Actemra may be considered investigational for all other indications.

Prior-Approval Requirements

Diagnoses

Patient must have ONE of the following:

1. Active Polyarticular Juvenile Idiopathic Arthritis (PJIA)
   a. 2 years of age or older
   b. Patient has an intolerance or has experienced an inadequate treatment response to a 3-month trial of a biologic DMARD or targeted synthetic DMARD (see Appendix 1)
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c. Prescriber will be dosing the patient within the FDA labeled maintenance dose of **ONE** of the following:

   i. **IV infusion:**
      1) Patients less than 30 kg weight – 10 mg/kg every 4 weeks
      2) Patients at or above 30 kg weight – 8 mg/kg every 4 weeks

   ii. **Subcutaneous administration:**
      1) Patients less than 30 kg weight – 162 mg once every three weeks
      2) Patients at or above 30 kg weight – 162 mg once every two weeks

d. **Patient MUST** have tried **ONE** of the preferred products (Enbrel or Humira) unless the patient has a valid medical exception (e.g. inadequate treatment response, intolerance, contraindication)

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2. **Active Systemic Juvenile Idiopathic Arthritis (SJIA)**
   
a. 2 years of age or older

   b. Prescriber will be dosing the patient within the FDA labeled maintenance dose of **ONE** of the following:

      i. **IV infusion:**
         1) Patients less than 30 kg weight – 12 mg/kg every 2 weeks
         2) Patients at or above 30 kg weight – 8 mg/kg every 2 weeks

      ii. **Subcutaneous administration:**
         1) Patients less than 30 kg weight – 162 mg once every 2 weeks
         2) Patients at or above 30 kg weight – 162 mg once every week

**AND ONE** of the following for SJIA:

   a. Inadequate treatment response to at least a 2 week trial of corticosteroids
   b. Inadequate treatment response to at least a 3 month trial of methotrexate or leflunomide

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3. **Moderately to severely active Rheumatoid Arthritis (RA)**

   a. 18 years of age and older

   b. Inadequate response, intolerance, or contraindication to a 3-month trial of at least **ONE** conventional disease-modifying antirheumatic drugs (DMARDs) (See Appendix 2)

   c. Prescriber will be dosing the patient within the FDA labeled maintenance dose of **ONE** of the following:

      i. **IV infusion:** 8 mg/kg every 4 weeks
      ii. **Subcutaneous administration:** 162 mg every week
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d. Patient **MUST** have tried **ONE** of the preferred products (Enbrel or Humira) unless the patient has a valid medical exception (e.g. inadequate treatment response, intolerance, contraindication)

4. Giant Cell Arteritis
   a. 18 years of age and older
   b. Inadequate treatment response to at least a 3 month trial corticosteroids
   c. **NO** IV administration
   d. Prescriber will be dosing the patient within the FDA labeled maintenance dose of the following:
      i. Subcutaneous administration: 162 mg every week

5. Cytokine release syndrome (CRS)
   a. 2 years of age and older
   b. Chimeric antigen receptor (CAR) T cell-induced CRS
   c. Syndrome is severe or life-threatening
   d. **NO** subcutaneous administration
   e. Prescriber will be dosing the patient within the FDA labeled maintenance dose of **ONE** of the following:
      i. IV infusion: Patients less than 30 kg weight – 12 mg/kg with up to 3 additional doses administered at least 8 hours apart
      ii. IV infusion: Patients at or above 30 kg weight – 8 mg/kg with up to 3 additional doses administered at least 8 hours apart

6. Unicentric Castleman’s Disease
   a. Disease is relapsed or refractory
   b. Actemra is prescribed as a single agent therapy
   c. Patient is HIV negative
   d. Patient is human herpesvirus-8 negative
   e. **NO** subcutaneous administration
   f. Prescriber will be dosing the patient within the FDA labeled maintenance dose of the following:
      i. IV infusion: 8 mg/kg every 4 weeks

7. Multicentric Castleman’s Disease
   a. Disease has progressed following treatment of relapsed/refractory or progressive disease
   b. Actemra is prescribed as a single agent therapy
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**c. NO subcutaneous administration**

**d. Prescriber will be dosing the patient within the FDA labeled maintenance dose of the following:**

i. **IV infusion**: 8 mg/kg every 2 weeks

**AND ALL** of the following:

1. Result for latent TB infection is negative **OR** result was positive for latent TB and patient completed treatment (or is receiving treatment) for latent TB
2. Patient is not at risk for HBV infection **OR** patient is at risk for HBV infection and HBV infection has been ruled out or treatment for HBV infection has been initiated.
3. Absence of active infection (including tuberculosis and hepatitis B virus (HBV))
4. **NOT** to be used in combination with any other biologic DMARD or targeted synthetic DMARD (See Appendix 1)
5. **NOT** given concurrently with live vaccines

**Prior – Approval Renewal Requirements**

**Diagnoses**

Patient must have **ONE** of the following:

1. Polyarticular Juvenile Idiopathic Arthritis (PJIA)
   a. 2 years of age or older
   b. Prescriber will be dosing the patient within the FDA labeled maintenance dose of **ONE** of the following:
      i. **IV infusion**:
         1) Patients less than 30 kg weight – 10 mg/kg every 4 weeks
         2) Patients at or above 30 kg weight – 8 mg/kg every 4 weeks
      ii. **Subcutaneous administration**
         1) Patients less than 30 kg weight – 162 mg once every 3 weeks
         2) Patients at or above 30 kg weight – 162 mg once every 2 weeks
   b. Patient **MUST** have tried **ONE** of the preferred products (Enbrel or Humira) unless the patient has a valid medical exception (e.g. inadequate treatment response, intolerance, contraindication)

2. Systemic Juvenile Idiopathic Arthritis (SJIA)
a. 2 years of age or older
  b. Prescriber will be dosing the patient within the FDA labeled maintenance
dose of ONE of the following:
    i. IV infusion:
      1) Patients less than 30 kg weight – 12 mg/kg every 2 weeks
      2) Patients at or above 30 kg weight – 8 mg/kg every 2 weeks
    iii. Subcutaneous administration:
      1) Patients less than 30 kg weight – 162 mg once every 2 weeks
      2) Patients at or above 30 kg weight – 162 mg once every week

3. Rheumatoid Arthritis (RA)
  a. 18 years of age and older
  b. Prescriber will be dosing the patient within the FDA labeled maintenance
dose of ONE of the following:
    i. IV infusion: 8 mg/kg every 4 weeks
  c. Patient MUST have tried ONE of the preferred products (Enbrel or Humira)
  unless the patient has a valid medical exception (e.g. inadequate treatment
response, intolerance, contraindication)

4. Giant Cell Arteritis
  a. 18 years of age and older
  b. Prescriber will be dosing the patient within the FDA labeled maintenance
dose of the following:
    iii. Subcutaneous administration: 162 mg every week

5. Unicentric Castleman's Disease
  a. Prescriber will be dosing the patient within the FDA labeled maintenance
dose of the following:
    i. IV infusion: 8 mg/kg every 4 weeks

6. Multicentric Castleman's Disease
  a. Prescriber will be dosing the patient within the FDA labeled maintenance
dose of the following:
    i. IV infusion: 8 mg/kg every 2 weeks

AND ALL of the following:
1. Condition has improved or stabilized with Actemra
2. Absence of active infection (including tuberculosis and hepatitis B virus (HBV))
3. **NOT** to be used in combination with any other biologic DMARD or targeted synthetic DMARD (See Appendix 1)
4. **NOT** given concurrently with live vaccines

### Policy Guidelines

**Pre - PA Allowance**
None

**Prior - Approval Limits**

| Cytokine release syndrome (CRS) only | 8 single dose vials per Lifetime |

**All other Indications**

| Duration | 12 months |

**Prior – Approval Renewal Limits**

| Duration | 18 months |

### Rationale

**Summary**
Actemra is an interleukin-6 (IL-6) receptor antagonist indicated for the treatment of moderately to severely active rheumatoid arthritis in adults who have had an inadequate response to one or more disease-modifying anti-rheumatic drugs (DMARDs); in patients 2 years of age or older with active polyarticular juvenile idiopathic arthritis (PJIA), active systemic juvenile idiopathic arthritis (SJIA), giant cell arteritis, or cytokine release syndrome (CRS). Actemra should not be administered in patients with an active infection, including localized infections. Laboratory monitoring is recommended prior to and monitored every 4 to 8 weeks due to potential consequences of treatment-related changes in neutrophils, platelets, lipids, and liver function tests. Treatment with Actemra is not recommended in patients with active hepatic disease or hepatic impairment. Actemra has not been studied and its use should be avoided in combination with biological DMARDs. Actemra may be used as monotherapy or concomitantly with
methotrexate or other non-biological DMARDs (1-3). Additionally, Actemra has shown efficacy in the off-label treatment of Unicentric and Multicentric Castleman’s Disease (4).

Prior authorization is required to ensure the safe, clinically appropriate and cost effective use of Actemra while maintaining optimal therapeutic outcomes.

References
December 2016  
Annual editorial review and reference update.
Additional diagnoses added to criteria: Unicentric Castleman’s Disease in patients whose disease is relapsed or refractory, Actemra is being prescribed as a single agent therapy, who are HIV and HHV-8 negative; or in patients with Multicentric Castleman’s Disease whose disease has progressed following treatment of relapsed/refractory or progressive disease, and where Actemra is being used as single agent therapy.
Additional criteria added to initiation RA: Inadequate treatment response, intolerance, or contraindication to at least a 3-month trial of methotrexate despite adequate dosing
Additional criteria added to initiation PJIA; patient must have intolerance or has experienced an inadequate treatment response to at least a 3-month trial of a TNF inhibitor
Additional criteria added to initiation SJIA, patient must have ONE of the following: Inadequate treatment response to at least a 2 week trial of corticosteroids OR Inadequate treatment response to at least a 3 month trial of methotrexate or leflunomide

March 2017  
Annual review

June 2017  
Addition of new indication – Giant Cell Arteritis and dosing requirements for all indications

September 2017  
Annual review
Addition of new indication – Cytokine release syndrome

December 2017  
Annual review

March 2018  
Annual editorial review
Addition of Appendix 1 - List of DMARDs

June 2018  
Update Appendix 1 - List of DMARDs, added Appendix 2 - Examples of Contraindications to Methotrexate and Active Polyarticular Juvenile Idiopathic Arthritis (PJIA) requirement for T/F to Biological DMARDs
Updated the RA requirements to inadequate response, intolerance, or contraindication to a 3-month trial of at least one conventional DMARDs
Addition of quantity limits to renewal section
Change SJIA dosing frequency to 2 weeks

July 2018  
Addition of subcutaneous administration to initiation and renewal section for diagnosis of Polyarticular Juvenile Idiopathic Arthritis (PJIA)
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September 2018    Annual editorial review
Addition of subcutaneous administration to initiation and renewal section for diagnosis of Systemic Juvenile Idiopathic Arthritis (SJIA)

March 2019    Annual review and reference update

December 2019    Annual review. Addition of requirement to trial preferred product

Keywords

This policy was approved by the FEP® Pharmacy and Medical Policy Committee on December 6, 2019 and is effective on January 1, 2020.
### Appendix 1 - List of DMARDs

#### Conventional disease-modifying antirheumatic drugs (DMARDs)

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>azathioprine</td>
<td>Azasan, Imuran</td>
</tr>
<tr>
<td>cyclophosphamide</td>
<td>Cytoxan</td>
</tr>
<tr>
<td>cyclosporine</td>
<td>Neoral, Gengraf, Sandimmune</td>
</tr>
<tr>
<td>hydroxychloroquine</td>
<td>Plaquenil</td>
</tr>
<tr>
<td>leflunomide</td>
<td>Arava</td>
</tr>
<tr>
<td>methotrexate</td>
<td>Rheumatrex, Trexall</td>
</tr>
<tr>
<td>mycophenolate</td>
<td>Cellcept</td>
</tr>
<tr>
<td>sulfasalazine</td>
<td>Azulfidine, Sulfazine</td>
</tr>
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</table>

#### Biological disease-modifying antirheumatic drugs (DMARDs)

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
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</thead>
<tbody>
<tr>
<td>abatacept</td>
<td>Orencia</td>
</tr>
<tr>
<td>adalimumab</td>
<td>Humira</td>
</tr>
<tr>
<td>anakinra</td>
<td>Kineret</td>
</tr>
<tr>
<td>brodalumab</td>
<td>Siliq</td>
</tr>
<tr>
<td>certolizumab</td>
<td>Cimzia</td>
</tr>
<tr>
<td>etanercept</td>
<td>Enbrel</td>
</tr>
<tr>
<td>golimumab</td>
<td>Simponi/Simponi Aria</td>
</tr>
<tr>
<td>guselkumab</td>
<td>Tremfya</td>
</tr>
<tr>
<td>infliximab</td>
<td>Remicade/Renflexis/Inflectra</td>
</tr>
<tr>
<td>ixekizumab</td>
<td>Taltz</td>
</tr>
<tr>
<td>risankizumab-rzaa</td>
<td>Skyrizi</td>
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<tr>
<td>rituximab</td>
<td>Rituxan</td>
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<tr>
<td>sarilumab</td>
<td>Kevzara</td>
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<tr>
<td>secukinumab</td>
<td>Cosentyx</td>
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<tr>
<td>tildrakizumab-asmn</td>
<td>Ilumya</td>
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<tr>
<td>tocilizumab</td>
<td>Actemra</td>
</tr>
<tr>
<td>ustekinumab</td>
<td>Stelara</td>
</tr>
<tr>
<td>vedolizumab</td>
<td>Entyvio</td>
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</table>

#### Targeted synthetic disease-modifying antirheumatic drugs (DMARDs)

<table>
<thead>
<tr>
<th>Generic Name</th>
<th>Brand Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>apremilast</td>
<td>Otezla</td>
</tr>
<tr>
<td>baricitinib</td>
<td>Olumiant</td>
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</tbody>
</table>
Appendix 2 – Examples of Contraindications to Methotrexate

<table>
<thead>
<tr>
<th>Contraindications to Methotrexate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Alcoholism, alcoholic liver disease or other chronic liver disease</td>
</tr>
<tr>
<td>2. Breastfeeding</td>
</tr>
<tr>
<td>3. Blood dyscrasias (e.g., thrombocytopenia, leukopenia, significant</td>
</tr>
<tr>
<td>anemia)</td>
</tr>
<tr>
<td>4. Elevated liver transaminases</td>
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<tr>
<td>5. History of intolerance or adverse event</td>
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<tr>
<td>6. Hypersensitivity</td>
</tr>
<tr>
<td>7. Interstitial pneumonitis or clinically significant pulmonary</td>
</tr>
<tr>
<td>fibrosis</td>
</tr>
<tr>
<td>8. Myelodysplasia</td>
</tr>
<tr>
<td>9. Pregnancy or planning pregnancy (male or female)</td>
</tr>
<tr>
<td>10. Renal impairment</td>
</tr>
<tr>
<td>11. Significant drug interaction</td>
</tr>
</tbody>
</table>