HIGHLIGHTS OF PRESCRIBING INFORMATION

EMERGENCY USE AUTHORIZATION OF BARICITINIB : Factsheets for Health Care Providers; and, Patients, Parents and Caregivers are located after the Medication Guide

These highlights do not include all the information needed to use OLUMIANT safely and effectively. See full prescribing information for OLUMIANT.

OLUMIANT (baricitinib) tablets, for oral use
Initial U.S. Approval: 2018

WARNING: SERIOUS INFECTIONS, MALIGNANCY, AND THROMBOSIS

See full prescribing information for complete boxed warning.

- Serious infections leading to hospitalization or death, including tuberculosis and bacterial, invasive fungal, viral, and other opportunistic infections, have occurred in patients receiving OLUMIANT. If a serious infection develops, interrupt OLUMIANT until the infection is controlled. (5.1)
- Prior to starting OLUMIANT, test for latent tuberculosis; if positive, start treatment for tuberculosis prior to starting OLUMIANT. Monitor all patients for active tuberculosis during treatment, even if initial tuberculosis test is negative. (5.1)
- Lymphoma and other malignancies have been observed in patients treated with OLUMIANT. (5.2)
- Thrombosis, including deep venous thrombosis, pulmonary embolism, and arterial thrombosis, some fatal, have occurred in patients treated with OLUMIANT. Patients with symptoms of thrombosis should be evaluated promptly. (5.3)

RECENT MAJOR CHANGES

Dosage and Administration: Dose Modifications in Patients with Renal or Hepatic Impairment, Dose Modifications Due to Drug Interactions (2.4, 2.5) Warnings and Precautions, Hypersensitivity (5.7) 07/2020

INDICATIONS AND USAGE

OLUMIANT® is a Janus kinase (JAK) inhibitor indicated for the treatment of adult patients with moderately to severely active rheumatoid arthritis who have had an inadequate response to one or more TNF antagonist therapies. (1.1)

Limitation of Use: Not recommended for use in combination with other JAK inhibitors, biologic DMARDs, or with potent immunosuppressants such as azathioprine and cyclosporine. (1.1)

DOSAGE AND ADMINISTRATION

- The recommended dose of OLUMIANT is 2 mg once daily. (2.1)
- OLUMIANT may be used as monotherapy or in combination with methotrexate or other DMARDs. (2.1)
- Cytopenias: Avoid initiation or interrupt OLUMIANT in patients with anemia (hemoglobin <8 g/dL), lymphopenia (ALC <500 cells/mm³) and neutropenia (ANC <1000 cells/mm³). (2.2, 2.3, 5.5)
- Moderate Renal Impairment: Reduce dose to 1 mg once daily. (2.4)

DOSAGE FORMS AND STRENGTHS

Tablets: 2 mg, 1 mg (3)

CONTRAINDICATIONS

None. (4)

WARNINGS AND PRECAUTIONS

- Gastrointestinal Perforations: Use with caution in patients at risk. (5.4)
- Laboratory Assessment: Monitor for changes in lymphocytes, neutrophils, hemoglobin, liver enzymes, and lipids. (5.5)
- **Vaccinations**: Avoid use with live vaccines. (5.6)
- **Hypersensitivity**: Serious reactions have been reported. (5.7)

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**ADVERSE REACTIONS**

Adverse reactions (≥1%) include: upper respiratory tract infections, nausea, herpes simplex, and herpes zoster. (6.1)

**To report SUSPECTED ADVERSE REACTIONS, contact Eli Lilly and Company at 1-800-LillyRx (1-800-545-5979) or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.**

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**DRUG INTERACTIONS**

The recommended dose of OLUMIANT in patients taking strong Organic Anion Transporter 3 (OAT3) inhibitors (e.g., probenecid) is 1 mg once daily. (2.5, 7.1)

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**USE IN SPECIFIC POPULATIONS**

- **Hepatic Impairment**: OLUMIANT is not recommended in patients with severe hepatic impairment. (2.4, 8.6)
- **Renal Impairment**: OLUMIANT is not recommended in patients with severe renal impairment. (2.4, 8.7)

See 17 for PATIENT COUNSELING INFORMATION and Medication Guide. Revised: 7/2020
8.5 Geriatric Use
8.6 Hepatic Impairment
8.7 Renal Impairment

10 OVERDOSAGE

11 DESCRIPTION

12 CLINICAL PHARMACOLOGY
   12.1 Mechanism of Action
   12.2 Pharmacodynamics
   12.3 Pharmacokinetics

13 NONCLINICAL TOXICOLOGY
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14 CLINICAL STUDIES

16 HOW SUPPLIED/STORAGE AND HANDLING
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17 PATIENT COUNSELING INFORMATION
* Sections or subsections omitted from the full prescribing information are not listed.

FULL PRESCRIBING INFORMATION
WARNING: SERIOUS INFECTIONS, MALIGNANCY, AND THROMBOSIS

SERIOUS INFECTIONS

Patients treated with OLUMIANT are at risk for developing serious infections that may lead to hospitalization or death [see Warnings and Precautions (5.1) and Adverse Reactions (6.1)]. Most patients who developed these infections were taking concomitant immunosuppressants such as methotrexate or corticosteroids.

If a serious infection develops, interrupt OLUMIANT until the infection is controlled.

Reported infections include:
- Active tuberculosis, which may present with pulmonary or extrapulmonary disease. Patients should be tested for latent tuberculosis before initiating OLUMIANT and during therapy. If positive, start treatment for latent infection prior to OLUMIANT use.
- Invasive fungal infections, including candidiasis and pneumocystosis. Patients with invasive fungal infections may present with disseminated, rather than localized, disease.
- Bacterial, viral, and other infections due to opportunistic pathogens.

The risks and benefits of treatment with OLUMIANT should be carefully considered prior to initiating therapy in patients with chronic or recurrent infection.

Patients should be closely monitored for the development of signs and symptoms of infection during and after treatment with OLUMIANT including the possible development of tuberculosis in patients who tested negative for latent tuberculosis infection prior to initiating therapy [see Warnings and Precautions (5.1)].

MALIGNANCIES

Lymphoma and other malignancies have been observed in patients treated with OLUMIANT [see Warnings and Precautions (5.2)].

THROMBOSIS

Thrombosis, including deep venous thrombosis and pulmonary embolism, has been observed at an increased incidence in patients treated with OLUMIANT compared to placebo. In addition, there were cases of arterial thrombosis. Many of these adverse events were serious and some resulted in death. Patients with symptoms of thrombosis should be promptly evaluated. [see Warnings and Precautions (5.3)].

1 INDICATIONS AND USAGE

1.1 Rheumatoid Arthritis

OLUMIANT® (baricitinib) is indicated for the treatment of adult patients with moderately to severely active rheumatoid arthritis who have had an inadequate response to one or
more tumor necrosis factor (TNF) antagonist therapies.

Limitation of Use: Not recommended for use in combination with other JAK inhibitors, biologic disease-modifying antirheumatic drugs (DMARDs), or with potent immunosuppressants such as azathioprine and cyclosporine.

2 DOSAGE AND ADMINISTRATION

2.1 Dosage in Rheumatoid Arthritis

The recommended dose of OLUMIANT is 2 mg once daily.

OLUMIANT may be used as monotherapy or in combination with methotrexate or other DMARDs.

OLUMIANT is given orally with or without food [see Clinical Pharmacology (12.3)].

2.2 General Considerations for Administration

- OLUMIANT initiation is not recommended in patients with an absolute lymphocyte count (ALC) less than 500 cells/mm$^3$, absolute neutrophil count (ANC) less than 1000 cells/mm$^3$, or hemoglobin level less than 8 g/dL [see Warnings and Precautions (5.5)].
- Avoid use of OLUMIANT in patients with active, serious infection, including localized infections [see Warnings and Precautions (5.1)].

Prior to initiating OLUMIANT, test patients for latent tuberculosis (TB). If positive, start treatment for TB prior to OLUMIANT use [see Warnings and Precautions (5.1)].

2.3 Dose Modifications Due to Serious Infections and Cytopenias

If a patient develops a serious infection, hold treatment with OLUMIANT until the infection is controlled.

Modify dosage in cases of lymphopenia, neutropenia or anemia (Tables 1, 2, and 3). For treatment initiation criteria [see Dosage and Administration (2.2)].

<table>
<thead>
<tr>
<th>Table 1: Dose Adjustments for Lymphopenia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Absolute Lymphocyte Count (ALC)</td>
</tr>
<tr>
<td>Lab Value (cells/mm$^3$)</td>
</tr>
<tr>
<td>ALC greater than or equal to 500</td>
</tr>
<tr>
<td>ALC less than 500</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2: Dose Adjustments for Neutropenia</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Absolute Neutrophil Count (ANC)</td>
</tr>
<tr>
<td>Lab Value (cells/mm$^3$)</td>
</tr>
<tr>
<td>ANC greater than or equal to 1000</td>
</tr>
<tr>
<td>ANC less than 1000</td>
</tr>
</tbody>
</table>
Table 3: Dose Adjustments for Anemia

<table>
<thead>
<tr>
<th>Low Hemoglobin Value</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lab Value (g/dL)</td>
<td></td>
</tr>
<tr>
<td>Greater than or equal to 8</td>
<td>Maintain dose</td>
</tr>
<tr>
<td>Less than 8</td>
<td>Interrupt OLUMIANT until hemoglobin greater than or equal to 8</td>
</tr>
</tbody>
</table>

2.4 Dose Modifications in Patients with Renal or Hepatic Impairment

- The recommended dose of OLUMIANT in patients with moderate renal impairment (estimated glomerular filtration rate (GFR) between 30 and 60 mL/min/1.73 m²) is 1 mg once daily. OLUMIANT is not recommended for use in patients with severe renal impairment (estimated GFR of less than 30 mL/min/1.73 m²) [see Use in Specific Populations (8.7) and Clinical Pharmacology (12.3)].
- OLUMIANT is not recommended for use in patients with severe hepatic impairment.

2.5 Dose Modifications Due to Drug Interactions

The recommended dose of OLUMIANT in patients taking strong Organic Anion Transporter 3 (OAT3) inhibitors, such as probenecid, is 1 mg once daily [see Drug Interactions (7.1) and Clinical Pharmacology (12.3)].

3 DOSAGE FORMS AND STRENGTHS

OLUMIANT for oral administration is available as debossed, film-coated, immediate-release tablets:
- 1 mg tablet contains a recessed area on each face of the tablet surface, is very light pink, round, debossed with “Lilly” on one side and “1” on the other.
- 2 mg tablet contains a recessed area on each face of the tablet surface, is light pink, oblong, debossed with “Lilly” on one side and “2” on the other.

4 CONTRAINDICATIONS

None.

5 WARNINGS AND PRECAUTIONS

5.1 Serious Infections

Serious and sometimes fatal infections due to bacterial, mycobacterial, invasive fungal, viral, or other opportunistic pathogens have been reported in rheumatoid arthritis patients receiving OLUMIANT. The most common serious infections reported with OLUMIANT included pneumonia, herpes zoster, and urinary tract infection [see Adverse Reactions (6.1)]. Among opportunistic infections, tuberculosis, multidermatomal herpes zoster, esophageal candidiasis, pneumocystosis, acute histoplasmosis, cryptococcosis, cytomegalovirus, and BK virus were reported with OLUMIANT. Some patients have presented with disseminated rather than localized disease, and were often taking concomitant immunosuppressants such as methotrexate or corticosteroids.
Avoid use of OLUMIANT in patients with an active, serious infection, including localized infections. Consider the risks and benefits of treatment prior to initiating OLUMIANT in patients:
- with chronic or recurrent infection
- who have been exposed to tuberculosis
- with a history of a serious or an opportunistic infection
- who have resided or traveled in areas of endemic tuberculosis or endemic mycoses; or
- with underlying conditions that may predispose them to infection.

Closely monitor patients for the development of signs and symptoms of infection during and after treatment with OLUMIANT. Interrupt OLUMIANT if a patient develops a serious infection, an opportunistic infection, or sepsis. A patient who develops a new infection during treatment with OLUMIANT should undergo prompt and complete diagnostic testing appropriate for an immunocompromised patient; appropriate antimicrobial therapy should be initiated, the patient should be closely monitored, and OLUMIANT should be interrupted if the patient is not responding to therapy. Do not resume OLUMIANT until the infection is controlled.

Tuberculosis

Evaluate and test patients for latent or active infection prior to administration of OLUMIANT. Patients with latent tuberculosis (TB) should be treated with standard antimycobacterial therapy before initiating OLUMIANT.

OLUMIANT should not be given to patients with active TB. Consider anti-TB therapy prior to initiation of OLUMIANT in patients with a history of latent or active TB in whom an adequate course of treatment cannot be confirmed, and for patients with a negative test for latent TB but who have risk factors for TB infection. Consultation with a physician with expertise in the treatment of TB is recommended to aid in the decision about whether initiating anti-TB therapy is appropriate for an individual patient.

Monitor patients for the development of signs and symptoms of TB, including patients who tested negative for latent TB infection prior to initiating therapy.

Viral Reactivation

Viral reactivation, including cases of herpes virus reactivation (e.g., herpes zoster), were reported in clinical studies with OLUMIANT. If a patient develops herpes zoster, interrupt OLUMIANT treatment until the episode resolves.

The impact of OLUMIANT on chronic viral hepatitis reactivation is unknown. Patients with evidence of active hepatitis B or C infection were excluded from clinical trials. Patients who were positive for hepatitis C antibody but negative for hepatitis C virus RNA were permitted to enroll. Patients with positive hepatitis B surface antibody and hepatitis B core antibody, without hepatitis B surface antigen, were permitted to enroll; such patients should be monitored for expression of hepatitis B virus (HBV) DNA. Should HBV DNA be detected, consult with a hepatologist. Perform screening for viral hepatitis in accordance with clinical guidelines before starting therapy with OLUMIANT.

5.2 Malignancy and Lymphoproliferative Disorders

Consider the risks and benefits of OLUMIANT treatment prior to initiating therapy in patients with a known malignancy other than a successfully treated non-melanoma skin
cancer (NMSC) or when considering continuing OLUMIANT in patients who develop a malignancy. Malignancies were observed in clinical studies of OLUMIANT [see Adverse Reactions (6.1)].

Non-melanoma skin cancers

Non-melanoma skin cancers (NMSCs) have been reported in patients treated with OLUMIANT. Periodic skin examination is recommended for patients who are at increased risk for skin cancer.

5.3 Thrombosis

Thrombosis, including deep venous thrombosis (DVT) and pulmonary embolism (PE), has been observed at an increased incidence in patients treated with OLUMIANT compared to placebo. In addition, arterial thrombosis events in the extremities have been reported in clinical studies with OLUMIANT. Many of these adverse events were serious and some resulted in death. There was no clear relationship between platelet count elevations and thrombotic events. OLUMIANT should be used with caution in patients who may be at increased risk of thrombosis. If clinical features of DVT/PE or arterial thrombosis occur, patients should be evaluated promptly and treated appropriately.

5.4 Gastrointestinal Perforations

Events of gastrointestinal perforation have been reported in clinical studies with OLUMIANT, although the role of JAK inhibition in these events is not known.

OLUMIANT should be used with caution in patients who may be at increased risk for gastrointestinal perforation (e.g., patients with a history of diverticulitis). Patients presenting with new onset abdominal symptoms should be evaluated promptly for early identification of gastrointestinal perforation.

5.5 Laboratory Abnormalities

**Neutropenia** - Treatment with OLUMIANT was associated with an increased incidence of neutropenia (ANC less than 1000 cells/mm$^3$) compared to placebo. Avoid initiation or interrupt OLUMIANT treatment in patients with an ANC less than 1000 cells/mm$^3$. Evaluate at baseline and thereafter according to routine patient management. Adjust dosing based on ANC [see Dosage and Administration (2.3) and Adverse Reactions (6.1)].

**Lymphopenia** - ALC less than 500 cells/mm$^3$ were reported in OLUMIANT clinical trials. Lymphocyte counts less than the lower limit of normal were associated with infection in patients treated with OLUMIANT, but not placebo.

Avoid initiation or interrupt OLUMIANT treatment in patients with an ALC less than 500 cells/mm$^3$. Evaluate at baseline and thereafter according to routine patient management. Adjust dosing based on ALC [see Dosage and Administration (2.3)].

**Anemia** - Decreases in hemoglobin levels to less than 8 g/dL were reported in OLUMIANT clinical trials. Avoid initiation or interrupt OLUMIANT treatment in patients with hemoglobin less than 8 g/dL. Evaluate at baseline and thereafter according to routine patient management. Adjust dosing based on hemoglobin levels [see Dosage and Administration (2.3)].
Liver Enzyme Elevations - Treatment with OLUMIANT was associated with increased incidence of liver enzyme elevation compared to placebo. Increases of ALT ≥5 times the upper limit of normal (ULN) and increases of AST ≥10 times the ULN were observed in patients in OLUMIANT clinical trials.

Evaluate at baseline and thereafter according to routine patient management. Prompt investigation of the cause of liver enzyme elevation is recommended to identify potential cases of drug-induced liver injury. If increases in ALT or AST are observed and drug-induced liver injury is suspected, interrupt OLUMIANT until this diagnosis is excluded [see Adverse Reactions (6.1)].

Lipid Elevations - Treatment with OLUMIANT was associated with increases in lipid parameters, including total cholesterol, low-density lipoprotein (LDL) cholesterol, and high-density lipoprotein (HDL) cholesterol. Assessment of lipid parameters should be performed approximately 12 weeks following OLUMIANT initiation [see Adverse Reactions (6.1)].

Manage patients according to clinical guidelines for the management of hyperlipidemia.

5.6 Vaccinations
Avoid use of live vaccines with OLUMIANT.

Update immunizations in agreement with current immunization guidelines prior to initiating OLUMIANT therapy.

5.7 Hypersensitivity
Reactions such as angioedema, urticaria, and rash that may reflect drug hypersensitivity have been observed in patients receiving OLUMIANT, including serious reactions. If a serious hypersensitivity reaction occurs, promptly discontinue OLUMIANT while evaluating the potential causes of the reaction [see Adverse Reactions (6.2)].

6 ADVERSE REACTIONS

6.1 Clinical Trials Experience
Because clinical studies are conducted under widely varying conditions, adverse reaction rates observed in the clinical studies of a drug cannot be directly compared to rates in the clinical studies of another drug and may not predict the rates observed in a broader patient population in clinical practice.

The following data include six randomized double-blind placebo-controlled studies (three Phase 2, three Phase 3) and a long-term extension study. All patients had moderately to severely active RA. Patients were randomized to placebo (1070 patients), OLUMIANT 2 mg (479 patients), or baricitinib 4 mg (997 patients).

Patients could be switched to baricitinib 4 mg from placebo or OLUMIANT 2 mg from as early as Week 12 depending on the study design. All patients initially randomized to placebo were switched to baricitinib 4 mg by Week 24.

During the 16-week treatment period, adverse events leading to discontinuation of treatment were reported by 35 patients (11.4 events per 100 patient-years) treated with placebo, 17 patients (12.1 events per 100 patient-years) with OLUMIANT 2 mg, and 40
patients (13.4 events per 100 patient-years) treated with baricitinib 4 mg.

During 0 to 52-week exposure, adverse events leading to discontinuation of treatment were reported by 31 patients (9.2 events per 100 patient-years) with OLUMIANT 2 mg, and 92 patients (10.2 events per 100 patient-years) treated with baricitinib 4 mg.

**Overall Infections** – During the 16-week treatment period, infections were reported by 253 patients (82.1 events per 100 patient-years) treated with placebo, 139 patients (99.1 events per 100 patient-years) treated with OLUMIANT 2 mg, and 298 patients (100.1 events per 100 patient-years) treated with baricitinib 4 mg.

During 0 to 52 week exposure, infections were reported by 200 patients (59.6 events per 100 patient-years) treated with OLUMIANT 2 mg, and 500 patients (55.3 events per 100 patient-years) treated with baricitinib 4 mg.

In the 0 to 52 week exposure population, the most commonly reported infections with OLUMIANT were viral upper respiratory tract infection, upper respiratory tract infection, urinary tract infection, and bronchitis.

**Serious Infections** – During the 16-week treatment period, serious infections were reported in 13 patients (4.2 events per 100 patient-years) treated with placebo, 5 patients (3.6 events per 100 patient-years) treated with OLUMIANT 2 mg, and 11 patients (3.7 events per 100 patient-years) treated with baricitinib 4 mg.

During 0 to 52 week exposure, serious infections were reported in 14 patients (4.2 events per 100 patient-years) treated with OLUMIANT 2 mg and 32 patients (3.5 events per 100 patient-years) treated with baricitinib 4 mg.

In the 0 to 52 week exposure population, the most commonly reported serious infections with OLUMIANT were pneumonia, herpes zoster, and urinary tract infection [see Warnings and Precautions (5.1)].

**Tuberculosis** – During the 16-week treatment period, no events of tuberculosis were reported.

During 0 to 52 week exposure, events of tuberculosis were reported in 0 patients treated with OLUMIANT 2 mg and 1 patient (0.1 per 100 patient-years) treated with baricitinib 4 mg [see Warnings and Precautions (5.1)].

Cases of disseminated tuberculosis were also reported.

**Opportunistic Infections (excluding tuberculosis)** – During the 16-week treatment period, opportunistic infections were reported in 2 patients (0.6 per 100 patient-years) treated with placebo, 0 patients treated with OLUMIANT 2 mg and 2 patients (0.7 per 100 patient-years) treated with baricitinib 4 mg.

During 0 to 52 week exposure, opportunistic infections were reported in 1 patient (0.3 per 100 patient-years) treated with OLUMIANT 2 mg and 5 patients (0.6 per 100 patient-years) treated with baricitinib 4 mg [see Warnings and Precautions (5.1)].

**Malignancy** – During the 16-week treatment period, malignancies excluding non-melanoma skin cancers (NMSC) were reported in 0 patients treated with placebo, 1 patient (0.7 per 100 patient-years) treated with OLUMIANT 2 mg, and 1 patient (0.3 per 100 patient-years) treated with baricitinib 4 mg.

During the 0 to 52 week treatment period, malignancies excluding NMSC were reported in 2 patients (0.6 per 100 patient-years) treated with OLUMIANT 2 mg and 6 patients
(0.7 per 100 patient-years) treated with baricitinib 4 mg [see Warnings and Precautions (5.2)].

**Venous Thrombosis** - During the 16-week treatment period, venous thromboses (deep vein thrombosis or pulmonary embolism) were reported in 0 patients treated with placebo, 0 patients treated with OLUMIANT 2 mg, and 5 patients (1.7 per 100 patient-years) treated with baricitinib 4 mg.

During the 0 to 52 week treatment period, venous thromboses were reported in 2 patients (0.6 per 100 patient-years) treated with OLUMIANT 2 mg and 7 patients (0.8 per 100 patient-years) treated with baricitinib 4 mg.

**Arterial Thrombosis** - During the 16-week treatment period, arterial thromboses were reported in 1 patient treated with placebo (0.3 per 100 patient-years), 2 patients (1.4 per 100 patient-years) treated with OLUMIANT 2 mg, and 2 patients (0.7 per 100 patient-years) treated with baricitinib 4 mg.

During the 0 to 52 week treatment period, arterial thromboses were reported in 3 patients (0.9 per 100 patient-years) treated with OLUMIANT 2 mg and 3 patients (0.3 per 100 patient-years) treated with baricitinib 4 mg.

**Laboratory Abnormalities**

**Neutropenia** - During the 16-week treatment period, neutrophil counts below 1000 cells/mm\(^3\) occurred in 0% of patients treated with placebo, 0.6% of patients treated with OLUMIANT 2 mg, and 0.3% of patients treated with baricitinib 4 mg. There were no neutrophil counts below 500 cells/mm\(^3\) observed in any treatment group [see Warnings and Precautions (5.1, 5.5)].

**Platelet Elevations** - During the 16-week treatment period, increases in platelet counts above 600,000 cells/mm\(^3\) occurred in 1.1% of patients treated with placebo, 1.1% of patients treated with OLUMIANT 2 mg, and 2.0% of patients treated with baricitinib 4 mg. Mean platelet count increased by 3000 cells/mm\(^3\) at 16 weeks in patients treated with placebo, by 15,000 cells/mm\(^3\) at 16 weeks in patients treated with OLUMIANT 2 mg and by 23,000 cells/mm\(^3\) in patients treated with baricitinib 4 mg.

**Liver Enzyme Elevations** - Events of increases in liver enzymes ≥3 times the ULN were observed in patients treated with OLUMIANT [see Warnings and Precautions (5.5)].

- During the 16-week treatment period, ALT elevations ≥3 times the ULN occurred in 1.0% of patients treated with placebo, 1.7% of patients treated with OLUMIANT 2 mg, and 1.4% of patients treated with baricitinib 4 mg.
- During the 16-week treatment period, AST elevations ≥3 times the ULN occurred in 0.8% of patients treated with placebo, 1.3% of patients treated with OLUMIANT 2 mg, and 0.8% of patients treated with baricitinib 4 mg.
- In a phase 3 study of DMARD naïve patients, during the 24-week treatment period, ALT and AST elevations ≥3 times the ULN occurred in 1.9% and 0% of patients treated with methotrexate monotherapy, 1.9% and 1.3% of patients treated with baricitinib 4 mg monotherapy, and 4.7% and 1.9% of patients treated with baricitinib 4 mg plus methotrexate.

**Lipid Elevations** - In controlled clinical trials, OLUMIANT treatment was associated with dose-related increases in lipid parameters including total cholesterol, triglycerides, LDL cholesterol, and HDL cholesterol. Elevations were observed at 12 weeks and remained stable thereafter. During the 12-week treatment period, changes in lipid parameters are
Mean LDL cholesterol increased by 8 mg/dL in patients treated with OLUMIANT 2 mg and by 14 mg/dL in patients treated with baricitinib 4 mg.

Mean HDL cholesterol increased by 7 mg/dL in patients treated with OLUMIANT 2 mg and by 9 mg/dL in patients treated with baricitinib 4 mg.

The mean LDL/HDL ratio remained stable.

Mean triglycerides increased by 7 mg/dL in patients treated with OLUMIANT 2 mg and by 15 mg/dL in patients treated with baricitinib 4 mg.

[See Warnings and Precautions (5.5)].

Creatine Phosphokinase (CPK) – OLUMIANT treatment was associated with increases in CPK within one week of starting OLUMIANT and plateauing after 8 to 12 weeks. At 16 weeks, the mean change in CPK for OLUMIANT 2 mg and baricitinib 4 mg was 37 IU/L and 52 IU/L, respectively.

Creatinine – In controlled clinical trials, dose-related increases in serum creatinine were observed with OLUMIANT treatment. At 52 weeks, the mean increase in serum creatinine was less than 0.1 mg/dL with baricitinib 4 mg. The clinical significance of the observed serum creatinine increases is unknown.

Other Adverse Reactions

Other adverse reactions are summarized in Table 4.

### Table 4: Adverse Reactions occurring in greater than or equal to 1% of OLUMIANT 2 mg and Baricitinib 4 mg Treated Patients in Placebo-Controlled Trials

<table>
<thead>
<tr>
<th>Events</th>
<th>Weeks 0-16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Placebo n=1070 (%)</td>
</tr>
<tr>
<td>Upper respiratory tract infections&lt;sup&gt;a&lt;/sup&gt;</td>
<td>11.7</td>
</tr>
<tr>
<td>Nausea</td>
<td>1.6</td>
</tr>
<tr>
<td>Herpes simplex&lt;sup&gt;b&lt;/sup&gt;</td>
<td>0.7</td>
</tr>
<tr>
<td>Herpes zoster</td>
<td>0.4</td>
</tr>
</tbody>
</table>

<sup>a</sup> Includes acute sinusitis, acute tonsillitis, chronic tonsillitis, epiglottitis, laryngitis, nasopharyngitis, oropharyngeal pain, pharyngitis, pharyngotonsillitis, rhinitis, sinobronchitis, sinusitis, tonsillitis, tracheitis, and upper respiratory tract infection.

<sup>b</sup> Includes eczema herpeticum, genital herpes, herpes simplex, ophthalmic herpes simplex, and oral herpes.

Additional adverse drug reactions occurring in fewer than 1% of patients: acne.

### 6.2 Postmarketing Experience

The following adverse reactions have been identified during post-approval use of OLUMIANT. Because these reactions are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a
causal relationship to drug exposure.

**Immune System Disorders:** Drug hypersensitivity (events such as rash, urticaria, and angioedema have been observed) [see Warnings and Precautions (5.7)].

### 7 DRUG INTERACTIONS

#### 7.1 Strong OAT3 Inhibitors

Baricitinib exposure is increased when OLUMIANT is co-administered with strong OAT3 inhibitors (such as probenecid) [see Dosage and Administration (2.5) and Clinical Pharmacology (12.3)].

#### 7.2 Other JAK Inhibitors or Biologic DMARDs

OLUMIANT has not been studied in combination with other JAK inhibitors or with biologic DMARDs [see Indications and Usage (1.1)].

### 8 USE IN SPECIFIC POPULATIONS

#### 8.1 Pregnancy

**Risk Summary**

The limited human data on use of OLUMIANT in pregnant women are not sufficient to inform a drug-associated risk for major birth defects or miscarriage. In animal embryofetal development studies, oral baricitinib administration to pregnant rats and rabbits at exposures equal to and greater than approximately 20 and 84 times the maximum recommended human dose (MRHD), respectively, resulted in reduced fetal body weights, increased embryolethality (rabbits only), and dose-related increases in skeletal malformations. No developmental toxicity was observed in pregnant rats and rabbits treated with oral baricitinib during organogenesis at approximately 5 and 13 times the exposure at the MRHD, respectively. In a pre- and post-natal development study in pregnant female rats, oral baricitinib administration at exposures approximately 43 times the MRHD resulted in reduction in pup viability (increased incidence of stillborn pups and early neonatal deaths), decreased fetal birth weight, reduced fetal body weight gain, decreased cytotoxic T cells on post-natal day (PND) 35 with evidence of recovery by PND 65, and developmental delays that might be attributable to decreased body weight gain. No developmental toxicity was observed at an exposure approximately 9 times the exposure at the MRHD [see Animal Data].

The estimated background risk of major birth defects and miscarriage for the indicated population(s) are unknown. All pregnancies have a background risk of birth defect, loss, or other adverse outcomes. In the U.S. general population, the estimated background risk of major birth defects and miscarriage in clinically recognized pregnancies is 2-4% and 15-20%, respectively.

**Data**

**Animal Data**

In an embryofetal development study in pregnant rats, dosed orally during the period of organogenesis from gestation days 6 to 17, baricitinib was teratogenic (skeletal
malformations that consisted of bent limb bones and rib anomalies) at exposures equal to or greater than approximately 20 times the MRHD (on an AUC basis at maternal oral doses of 10 mg/kg/day and higher). No developmental toxicity was observed in rats at an exposure approximately 5 times the MRHD (on an AUC basis at a maternal oral dose of 2 mg/kg/day).

In an embryofetal development study in pregnant rabbits, dosed orally during the period of organogenesis from gestation days 7 to 20, embryolethality, decreased fetal body weights, and skeletal malformations (rib anomalies) were observed in the presence of maternal toxicity at an exposure approximately 84 times the MRHD (on an AUC basis at a maternal oral dose of 30 mg/kg/day). Embryolethality consisted of increased post-implantation loss that was due to elevated incidences of both early and late resorptions. No developmental toxicity was observed in rabbits at an exposure approximately 12 times the MRHD (on an AUC basis at a maternal oral dose of 10 mg/kg/day).

In a pre- and post-natal development study in pregnant female rats dosed orally from gestation day 6 through lactation day 20, adverse findings observed in pups included decreased survival from birth to post-natal day 4 (due to increased stillbirths and early neonatal deaths), decreased birth weight, decreased body weight gain during the pre-weaning phase, increased incidence of malrotated forelimbs during the pre-weaning phase, and decreased cytotoxic T cells on PND 35 with recovery by PND 65 at exposures approximately 43 times the MRHD (on an AUC basis at a maternal oral dose of 25 mg/kg/day). Developmental delays (that may be secondary to decreased body weight gain) were observed in males and females at exposures approximately 43 times the MRHD (on an AUC basis at a maternal oral dose of 25 mg/kg/day). These findings included decreased forelimb and hindlimb grip strengths, and delayed mean age of sexual maturity. No developmental toxicity was observed in rats at an exposure approximately 9 times the MRHD (on an AUC basis at a maternal oral dose of 5 mg/kg/day).

8.2 Lactation

Risk Summary

No information is available on the presence of OLUMIANT in human milk, the effects of the drug on the breastfed infant, or the effects of the drug on milk production. Baricitinib is present in the milk of lactating rats. Due to species-specific differences in lactation physiology, the clinical relevance of these data are not clear. Because of the potential for serious adverse reactions in nursing infants, advise an OLUMIANT-treated woman not to breastfeed.

Data

A single oral dose of 25 mg/kg radiolabeled baricitinib was administered to lactating female Sprague-Dawley rats on post-partum day 13. Drug exposure was approximately 45-fold greater in milk than in plasma based on AUC\textsubscript{0-t} values.

8.4 Pediatric Use

The safety and effectiveness of OLUMIANT in pediatric patients have not been established.

8.5 Geriatric Use
Of the 3100 patients treated in the four phase 3 studies, a total of 537 rheumatoid arthritis patients were 65 years of age and older, including 71 patients 75 years and older. No overall differences in safety or effectiveness were observed between these subjects and younger subjects, and other reported clinical experience has not identified differences in responses between the elderly and younger patients, but greater sensitivity of some older individuals cannot be ruled out [see Clinical Pharmacology (12.3)].

OLUMIANT is known to be substantially excreted by the kidney, and the risk of adverse reactions to this drug may be greater in patients with impaired renal function. Because elderly patients are more likely to have decreased renal function, care should be taken in dose selection, and it may be useful to monitor renal function. [See Dosing and Administration (2.4)].

8.6 Hepatic Impairment

No dose adjustment is necessary in patients with mild or moderate hepatic impairment. The use of OLUMIANT has not been studied in patients with severe hepatic impairment and is therefore not recommended [see Dosage and Administration (2.4) and Clinical Pharmacology (12.3)].

8.7 Renal Impairment

Renal function was found to significantly affect baricitinib exposure. The recommended dose of OLUMIANT in patients with moderate renal impairment (estimated glomerular filtration rate (GFR) between 30 and 60 mL/min/1.73 m²) is 1 mg once daily. OLUMIANT is not recommended for use in patients with severe renal impairment (estimated GFR of less than 30 mL/min/1.73 m²) [see Dosage and Administration (2.4) and Clinical Pharmacology (12.3)].

10 OVERDOSAGE

Single doses up to 40 mg and multiple doses of up to 20 mg daily for 10 days have been administered in clinical trials without dose-limiting toxicity. Pharmacokinetic data of a single dose of 40 mg in healthy volunteers indicate that more than 90% of the administered dose is expected to be eliminated within 24 hours.

In case of an overdose, it is recommended that the patient should be monitored for signs and symptoms of adverse reactions. Patients who develop adverse reactions should receive appropriate treatment.

11 DESCRIPTION

OLUMIANT (baricitinib) is a Janus kinase (JAK) inhibitor with the chemical name {1-(ethylsulfonyl)-3-[4-(7H-pyrrolo[2,3-d]pyrimidin-4-yl)-1H-pyrazol-1-yl]azetidin-3-yl}acetonitrile. Baricitinib has an empirical formula of C₁₆H₁₇N₇O₂S and a molecular weight of 371.42. Baricitinib has the following structural formula:
OLUMIANT tablets contain a recessed area on each face of the tablet surface and are available for oral administration as debossed, film-coated, immediate-release tablets. The 1 mg tablet is very light pink, round, debossed with “Lilly” on one side and “1” on the other. The 2 mg tablet is light pink, oblong, debossed with "Lilly" on one side and “2” on the other.

Each tablet contains 1 or 2 mg of baricitinib and the following inactive ingredients: croscarmellose sodium, magnesium stearate, mannitol, microcrystalline cellulose, ferric oxide, lecithin (soya), polyethylene glycol, polyvinyl alcohol, talc and titanium dioxide.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Baricitinib is a Janus kinase (JAK) inhibitor. JAKs are intracellular enzymes which transmit signals arising from cytokine or growth factor-receptor interactions on the cellular membrane to influence cellular processes of hematopoiesis and immune cell function. Within the signaling pathway, JAKs phosphorylate and activate Signal Transducers and Activators of Transcription (STATs) which modulate intracellular activity including gene expression. Baricitinib modulates the signaling pathway at the point of JAKs, preventing the phosphorylation and activation of STATs.

JAK enzymes transmit cytokine signaling through their pairing (e.g., JAK1/JAK2, JAK1/JAK3, JAK1/TYK2, JAK2/JAK2, JAK2/TYK2). In cell-free isolated enzyme assays, baricitinib had greater inhibitory potency at JAK1, JAK2 and TYK2 relative to JAK3. In human leukocytes, baricitinib inhibited cytokine induced STAT phosphorylation mediated by JAK1/JAK2, JAK1/JAK3, JAK1/TYK2, or JAK2/TYK2 with comparable potencies. However, the relevance of inhibition of specific JAK enzymes to therapeutic effectiveness is not currently known.

12.2 Pharmacodynamics

Baricitinib inhibition of IL-6 induced STAT3 phosphorylation – Baricitinib administration resulted in a dose dependent inhibition of IL-6 induced STAT3 phosphorylation in whole
blood from healthy subjects with maximal inhibition observed approximately 1 hour after dosing, which returned to near baseline by 24 hours. Similar levels of inhibition were observed using either IL-6 or TPO as the stimulus.

**Immunoglobulins** – Mean serum IgG, IgM, and IgA values decreased by 12 weeks after starting treatment with OLUMIANT, and remained stable through at least 52 weeks. For most patients, changes in immunoglobulins occurred within the normal reference range.

**C-reactive protein** – In patients with rheumatoid arthritis, decreases in serum C-reactive protein (CRP) were observed as early as one week after starting treatment with OLUMIANT and were maintained throughout dosing.

**Cardiac Electrophysiology** – At a dose 10 times the maximum recommended dose, baricitinib does not prolong the QT interval to any clinically relevant extent.

### 12.3 Pharmacokinetics

Following oral administration of OLUMIANT, peak plasma concentrations are reached approximately at 1 hour. A dose-proportional increase in systemic exposure was observed in the therapeutic dose range. The pharmacokinetics of baricitinib do not change over time. Steady-state concentrations are achieved in 2 to 3 days with minimal accumulation after once-daily administration.

**Absorption** – The absolute bioavailability of baricitinib is approximately 80%. An assessment of food effects in healthy subjects showed that a high-fat meal decreased the mean AUC and $C_{max}$ of baricitinib by approximately 11% and 18%, respectively, and delayed the $t_{max}$ by 0.5 hours. Administration with meals is not associated with a clinically relevant effect on exposure. In clinical studies, OLUMIANT was administered without regard to meals.

**Distribution** – After intravenous administration, the volume of distribution is 76 L, indicating distribution of baricitinib into tissues. Baricitinib is approximately 50% bound to plasma proteins and 45% bound to serum proteins. Baricitinib is a substrate of the Pgp, BCRP, OAT3 and MATE2-K transporters, which play roles in drug distribution.

**Elimination** – The total body clearance of baricitinib is 8.9 L/h in patients with RA. Elimination half-life in patients with rheumatoid arthritis is approximately 12 hours.

**Metabolism** – Approximately 6% of the orally administered baricitinib dose is identified as metabolites (three from urine and one from feces), with CYP3A4 identified as the main metabolizing enzyme. No metabolites of baricitinib were quantifiable in plasma.

**Excretion** – Renal elimination is the principal clearance mechanism for baricitinib through filtration and active secretion as baricitinib is identified as a substrate of OAT3, Pgp, BCRP and MATE2-K from *in vitro* studies. In a clinical pharmacology study, approximately 75% of the administered dose was eliminated in the urine, while about 20% of the dose was eliminated in the feces. Baricitinib was excreted predominately as unchanged drug in urine (69%) and feces (15%).

**Specific Populations**

**Effects of Body Weight, Gender, Race, and Age**

Body weight, gender, race, ethnicity, and age did not have a clinically relevant effect on the PK (AUC and $C_{max}$) of baricitinib (Figure 1). The mean effects of intrinsic factors on PK parameters (AUC and $C_{max}$) were generally within the inter-subject PK variability of
baricitinib. The inter-subject variabilities (% coefficients of variation) in AUC and $C_{\text{max}}$ of baricitinib are approximately 41% and 22%, respectively. [See Use in Specific Populations (8.5)].

**Renal Impairment**

Baricitinib systemic exposure in AUC was increased by 1.41-, 2.22-, 4.05- and 2.41-fold for mild, moderate, severe, and ESRD (with hemodialysis) renal impairment sub-groups, respectively, compared to subjects with normal renal function. The corresponding values for increase in $C_{\text{max}}$ were 1.16-, 1.46-, 1.40- and 0.88-fold, respectively (Figure 1) [see Use in Specific Populations (8.7)].

**Hepatic Impairment**

Baricitinib systemic exposure and $C_{\text{max}}$ increased by 1.19- and 1.08-fold for the moderate hepatic impairment group, respectively, compared to subjects with normal hepatic function (Figure 1) [see Use in Specific Populations (8.6)].

*Figure 1: Impact of Intrinsic Factors on Baricitinib Pharmacokinetics$^a,b$*
**Drug Interactions**

**Potential for Baricitinib to Influence the PK of Other Drugs**

*In vitro*, baricitinib did not significantly inhibit or induce the activity of cytochrome P450 enzymes (CYPs 3A, 1A2, 2B6, 2C8, 2C9, 2C19, and 2D6). In clinical pharmacology studies, there were no clinically meaningful changes in the pharmacokinetics (PK) of simvastatin, ethinyl estradiol, or levonorgestrel (CYP3A substrates) when co-administered with baricitinib.
In vitro studies suggest that baricitinib is not an inhibitor of the transporters, P-glycoprotein (Pgp) or Organic Anion Transporting Polypeptide (OATP) 1B1. In vitro data indicate baricitinib does inhibit organic anionic transporter (OAT) 1, OAT2, OAT3, organic cationic transporter (OCT) 1, OCT2, OATP1B3, Breast Cancer Resistance Protein (BCRP) and Multidrug and Toxic Extrusion Protein (MATE) 1 and MATE2-K, but clinically meaningful changes in the pharmacokinetics of drugs that are substrates for these transporters are unlikely. In clinical pharmacology studies there were no clinically meaningful effects on the PK of digoxin (Pgp substrate) or methotrexate (substrate of several transporters) when co-administered with baricitinib.

Exposure changes of drugs following co-administration with baricitinib are shown in Figure 2.

**Figure 2: Impact of Baricitinib on the Pharmacokinetics of Other Drugs**

- Methotrexate
- CYP3A Substrate
  - Simvastatin
- Oral Contraceptives
  - Ethinyl Estradiol
- Levonorgestrel
- Pgp Substrate
  - Digoxin

**Potential for Other Drugs to Influence the PK of Baricitinib**

In vitro studies suggest that baricitinib is a CYP3A4 substrate. In clinical pharmacology studies there was no effect on the PK of baricitinib when co-administered with ketoconazole (CYP3A inhibitor). There were no clinically meaningful changes in the PK of

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a Reference group is administration of concomitant drug alone.
Baricitinib when co-administered with fluconazole (CYP3A/CYP2C19/CYP2C9 inhibitor) or rifampicin (CYP3A inducer).

*In vitro* studies suggest that baricitinib is a substrate for OAT3, Pgp, BCRP and MATE2-K. In a clinical study, probenecid administration (strong OAT3 inhibitor) resulted in an approximately 2-fold increase in baricitinib AUC$_{0-\infty}$ with no effect on C$_{max}$ and t$_{max}$ [see Dosage and Administration (2.5) and Drug Interactions (7.1)]. However, simulations with diclofenac and ibuprofen (OAT3 inhibitors with less inhibition potential) predicted minimal effect on the PK of baricitinib. In clinical pharmacology studies there was no clinically meaningful effect on the PK of baricitinib when co-administered with cyclosporine (Pgp and BCRP inhibitor). Co-administration with methotrexate (substrate of several transporters) did not have a clinically meaningful effect on the PK of baricitinib.

Exposure changes of baricitinib following co-administration with CYP inhibitors or inducers, transporter inhibitors, as well as methotrexate and the proton pump inhibitor, omeprazole, are shown in Figure 3.

**Figure 3: Impact of Other Drugs on the Pharmacokinetics of Baricitinib**

<table>
<thead>
<tr>
<th>Coadministered Drug</th>
<th>PK</th>
<th>Ratio and 90%CI</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYP3A Inhibitor Fluconazole</td>
<td>AUC</td>
<td>0.5</td>
<td>No Adjustment</td>
</tr>
<tr>
<td></td>
<td>C$_{max}$</td>
<td>1.0</td>
<td>No Adjustment</td>
</tr>
<tr>
<td>CYP3A/CYP2C19 Inhibitor</td>
<td>AUC</td>
<td>0.5</td>
<td>No Adjustment</td>
</tr>
<tr>
<td></td>
<td>C$_{max}$</td>
<td>1.0</td>
<td>No Adjustment</td>
</tr>
<tr>
<td>CYP Inducer Rifampicin</td>
<td>AUC</td>
<td>0.5</td>
<td>No Adjustment</td>
</tr>
<tr>
<td></td>
<td>C$_{max}$</td>
<td>1.0</td>
<td>No Adjustment</td>
</tr>
<tr>
<td>OAT3 Inhibitor Probenecid</td>
<td>AUC</td>
<td>0.5</td>
<td>1 mg once daily</td>
</tr>
<tr>
<td></td>
<td>C$_{max}$</td>
<td>1.0</td>
<td>No Adjustment</td>
</tr>
<tr>
<td>Simulated Ibuprofen$^a$</td>
<td>AUC</td>
<td>0.5</td>
<td>No Adjustment</td>
</tr>
<tr>
<td></td>
<td>C$_{max}$</td>
<td>1.0</td>
<td>No Adjustment</td>
</tr>
<tr>
<td>Simulated Diclofenac$^a$</td>
<td>AUC</td>
<td>0.5</td>
<td>No Adjustment</td>
</tr>
<tr>
<td></td>
<td>C$_{max}$</td>
<td>1.0</td>
<td>No Adjustment</td>
</tr>
<tr>
<td>Methotrexate</td>
<td>AUC</td>
<td>0.5</td>
<td>No Adjustment</td>
</tr>
<tr>
<td></td>
<td>C$_{max}$</td>
<td>1.0</td>
<td>No Adjustment</td>
</tr>
<tr>
<td>Pgp Inhibitor Cyclosporine</td>
<td>AUC</td>
<td>0.5</td>
<td>No Adjustment</td>
</tr>
<tr>
<td></td>
<td>C$_{max}$</td>
<td>1.0</td>
<td>No Adjustment</td>
</tr>
<tr>
<td>Gastric pH Omeprazole</td>
<td>AUC</td>
<td>0.5</td>
<td>No Adjustment</td>
</tr>
<tr>
<td></td>
<td>C$_{max}$</td>
<td>1.0</td>
<td>No Adjustment</td>
</tr>
</tbody>
</table>
Values are based on simulated studies.

Reference group is administration of baricitinib alone.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

The carcinogenic potential of baricitinib was evaluated in Sprague-Dawley rats and Tg.rasH2 mice. No evidence of tumorigenicity was observed in male or female rats that received baricitinib for 91 to 94 weeks at oral doses up to 8 or 25 mg/kg/day, respectively (approximately 12 and 55 times the MRHD on an AUC basis). No evidence of tumorigenicity was observed in Tg.rasH2 mice that received baricitinib for 26 weeks at oral doses up to 300 and 150 mg/kg/day in male and female mice, respectively.

Baricitinib tested negative in the following genotoxicity assays: the in vitro bacterial mutagenicity assay (Ames assay), in vitro chromosome aberration assay in human peripheral blood lymphocytes, and in vivo rat bone marrow micronucleus assay.

Fertility (achievement of pregnancy) was reduced in male and female rats that received baricitinib at oral doses of 50 and 100 mg/kg/day respectively (approximately 113 and 169 times the MRHD in males and females, respectively, on an AUC basis) based upon findings that 7 of 19 (36.8%) drug-treated females with evidence of mating were not gravid compared to 1 of 19 (5.3%) control females. It could not be determined from the study design if these findings were attributable to toxicities in one sex or both. Fertility was unaffected in male and female rats at oral doses of 15 mg/kg and 25 mg/kg, respectively (approximately 25 and 48 times the MRHD on an AUC basis). However, maintenance of pregnancy was adversely affected at these doses based upon findings of increased post-implantation losses (early resorptions) and decreased numbers of mean viable embryos per litter. The number of viable embryos was unaffected in female rats that received baricitinib at an oral dose of 5 mg/kg/day and were mated to males that received the same dose (approximately 8 times the MRHD on an AUC basis). Reproductive performance was unaffected in male and female rats that received baricitinib at oral doses up to 50 and 100 mg/kg/day respectively (approximately 113 and 169 times the MRHD in males and females, respectively, on an AUC basis).

14 CLINICAL STUDIES

The OLUMIANT clinical development program included two dose-ranging trials and four confirmatory phase 3 trials. Although other doses have been studied, the recommended dose of OLUMIANT is 2 mg once daily.

Dose-Ranging Studies

The dose-ranging studies I (NCT01185353) and II (NCT01469013) included a 12-week randomized comparison of baricitinib 1, 2, 4, and 8 mg versus placebo in 301 and 145 patients, respectively.

The results from the dose-ranging studies are shown in Table 5. In dose-ranging Study I, the observed ACR response was similar for baricitinib 1 and 2 mg daily and for baricitinib 4 and 8 mg daily, with the highest response for baricitinib 8 mg daily. In dose-ranging
Study II, there was not a clear trend of dose response, with similar response rates for 1 mg and 4 mg and 2 mg and 8 mg.

Table 5: Proportion of Patients with ACR20 Response at Week 12 in Dose-Ranging Studies

<table>
<thead>
<tr>
<th>Dose-Ranging Study</th>
<th>Placebo</th>
<th>Baricitinib 1 mg daily</th>
<th>Baricitinib 2 mg daily</th>
<th>Baricitinib 4 mg daily</th>
<th>Baricitinib 8 mg daily</th>
</tr>
</thead>
<tbody>
<tr>
<td>I (N=301)</td>
<td>41</td>
<td>57</td>
<td>54</td>
<td>75</td>
<td>78</td>
</tr>
<tr>
<td>II (N=145)</td>
<td>31</td>
<td>67</td>
<td>83</td>
<td>67</td>
<td>88</td>
</tr>
</tbody>
</table>

Confirmatory Studies

The efficacy and safety of OLUMIANT 2 mg once daily was assessed in two confirmatory phase 3 trials. These trials were randomized, double-blind, multicenter studies in patients with active rheumatoid arthritis diagnosed according to American College of Rheumatology (ACR)/European League Against Rheumatism 2010 criteria. Patients over 18 years of age were eligible if at least 6 tender and 6 swollen joints were present at baseline. The two studies (Studies III and IV) evaluated OLUMIANT 2 mg and baricitinib 4 mg.

Study III (NCT01721057) was a 24-week trial in 684 patients with moderately to severely active rheumatoid arthritis who had an inadequate response or intolerance to conventional DMARDs (cDMARDs). Patients received OLUMIANT 2 mg or 4 mg once daily or placebo added to existing background cDMARD treatment. From Week 16, non-responding patients could be rescued to receive baricitinib 4 mg once daily. The primary endpoint was the proportion of patients who achieved an ACR20 response at Week 12.

Study IV (NCT01721044) was a 24-week trial in 527 patients with moderately to severely active rheumatoid arthritis who had an inadequate response or intolerance to 1 or more TNF inhibitor therapies with or without other biologic DMARDs (TNFi-IR). Patients received OLUMIANT 2 mg or baricitinib 4 mg once daily or placebo added to background cDMARD treatment. From Week 16, non-responding patients could be rescued to receive baricitinib 4 mg once daily. The primary endpoint was the proportion of patients who achieved an ACR20 response at Week 12.

Clinical Response

The percentages of OLUMIANT-treated patients achieving ACR20, ACR50, and ACR70 responses, and Disease Activity Score (DAS28-CRP) <2.6 in Studies III and IV are shown in Table 6.

Patients treated with OLUMIANT had higher rates of ACR response and DAS28-CRP <2.6 versus placebo-treated patients at Week 12 (Studies III and IV) (Table 6).

In Study IV, higher ACR20 response rates (Figure 4) were observed as early as 1 week with OLUMIANT 2 mg versus placebo.

In Study IV, the proportions of patients achieving DAS28-CRP <2.6 who had at least 3 active joints at the end of Week 24 were 18.2% and 10.5%, in the placebo and OLUMIANT 2 mg arms, respectively.
### Table 6: Clinical Response

<table>
<thead>
<tr>
<th>Percent of Patients</th>
<th>cDMARD-IR</th>
<th>TNFi-IR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Study III</td>
<td>Study IV</td>
</tr>
<tr>
<td></td>
<td>Placebo + cDMARDs</td>
<td>OLUMIANT 2 mg/day + cDMARDs</td>
</tr>
<tr>
<td>N</td>
<td>228</td>
<td>229</td>
</tr>
</tbody>
</table>

#### ACR 20

<table>
<thead>
<tr>
<th></th>
<th>Study III</th>
<th>Study IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 12 %</td>
<td>39</td>
<td>66 (18, 35)</td>
</tr>
<tr>
<td>Week 24 %</td>
<td>42</td>
<td>61 (10, 28)</td>
</tr>
</tbody>
</table>

#### ACR 50

<table>
<thead>
<tr>
<th></th>
<th>Study III</th>
<th>Study IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 12 %</td>
<td>13</td>
<td>34 (13, 28)</td>
</tr>
<tr>
<td>Week 24 %</td>
<td>21</td>
<td>41 (12, 28)</td>
</tr>
</tbody>
</table>

#### ACR 70

<table>
<thead>
<tr>
<th></th>
<th>Study III</th>
<th>Study IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 12 %</td>
<td>3</td>
<td>18 (9, 20)</td>
</tr>
<tr>
<td>Week 24 %</td>
<td>8</td>
<td>25 (11, 24)</td>
</tr>
</tbody>
</table>

#### DAS28-CRP<2.6

<table>
<thead>
<tr>
<th></th>
<th>Study III</th>
<th>Study IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 12 %</td>
<td>9</td>
<td>26 (10, 24)</td>
</tr>
<tr>
<td>Week 24 %</td>
<td>11</td>
<td>31 (13, 27)</td>
</tr>
</tbody>
</table>

---

### Table 7: Components of ACR Response at Week 12 in Studies III and IV

<table>
<thead>
<tr>
<th></th>
<th>cDMARD-IR</th>
<th>TNFi-IR</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Study III</td>
<td>Study IV</td>
</tr>
<tr>
<td></td>
<td>Placebo + cDMARDs</td>
<td>OLUMIANT 2 mg/day + cDMARDs</td>
</tr>
<tr>
<td>N</td>
<td>228</td>
<td>229</td>
</tr>
</tbody>
</table>

---

The effects of OLUMIANT treatment on the components of the ACR response criteria for Studies III and IV are shown in Table 7.

---

*a* Patients who were rescued or discontinued treatment were considered as non-responders in the analyses.

*b* 95% confidence interval for the difference (Δ) in response rate between OLUMIANT treatment and placebo (Study III, Study IV).
<table>
<thead>
<tr>
<th></th>
<th>Baseline</th>
<th>Baseline</th>
<th>Baseline</th>
<th>Baseline</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>24 (15)</td>
<td>24 (14)</td>
<td>28 (16)</td>
<td>31 (16)</td>
</tr>
<tr>
<td>Number of Swollen Joints (0-66)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baseline</td>
<td>13 (7)</td>
<td>14 (9)</td>
<td>17 (11)</td>
<td>19 (12)</td>
</tr>
<tr>
<td>Week 12</td>
<td>8 (8)</td>
<td>5 (6)</td>
<td>12 (10)</td>
<td>10 (12)</td>
</tr>
</tbody>
</table>

| Pain                 |          |          |          |          |
| Baseline             | 57 (23)  | 60 (21)  | 65 (19)  | 62 (22)  |
| Week 12              | 43 (24)  | 34 (25)  | 55 (25)  | 46 (28)  |

| Patient Global Assessment |          |          |          |          |
| Baseline                | 60 (21)  | 62 (20)  | 66 (19)  | 67 (19)  |
| Week 12                 | 44 (23)  | 36 (25)  | 56 (25)  | 46 (26)  |

| Physician Global Assessment |          |          |          |          |
| Baseline                  | 62 (17)  | 64 (17)  | 67 (19)  | 67 (17)  |
| Week 12                   | 41 (24)  | 33 (22)  | 50 (26)  | 36 (24)  |

| Disability Index (HAQ-DI) |          |          |          |          |
| Baseline                 | 1.50 (0.60) | 1.51 (0.62) | 1.78 (0.57) | 1.71 (0.55) |
| Week 12                  | 1.17 (0.62) | 0.96 (0.69) | 1.59 (0.68) | 1.31 (0.72) |

| hsCRP (mg/L)            |          |          |          |          |
| Baseline                | 17.7 (20.4) | 18.2 (21.5) | 20.6 (25.3) | 19.9 (22.5) |
| Week 12                 | 17.2 (19.3) | 8.6 (14.6)  | 19.9 (23.0) | 13.5 (20.1) |

Data shown are mean (standard deviation).
Visual analog scale: 0=best, 100=worst.
Health Assessment Questionnaire–Disability Index: 0=best, 3=worst; 20 questions; 8 categories: dressing and grooming, arising, eating, walking, hygiene, reach, grip, and activities.

Figure 4: Percent of Patients Achieving ACR20
Physical Function Response

Improvement in physical function was measured by the Health Assessment Questionnaire-Disability Index (HAQ-DI). Patients receiving OLUMIANT 2 mg demonstrated greater improvement from baseline in physical functioning compared to placebo at Week 24. The mean difference (95% CI) from placebo in HAQ-DI change from baseline at Week 24 was -0.24 (-0.35, -0.14) in Study III and -0.23 (-0.35, -0.12) in Study IV.

Other Health Related Outcomes

General health status was assessed by the Short Form health survey (SF-36). In Studies III and IV, compared to placebo, patients treated with OLUMIANT 2 mg demonstrated greater improvement from baseline in the physical component summary (PCS) score and the physical function, role physical, bodily pain, vitality, and general health domains at Week 12, with no consistent improvements in the mental component summary (MCS) scores or the role emotional, mental health, and social functioning domains.

16 HOW SUPPLIED/STORAGE AND HANDLING

16.1 How Supplied

OLUMIANT for oral administration is available as debossed, film-coated, immediate-release tablets. Each tablet contains a recessed area on each face of the tablet surface.
**OLUMIANT Tablets**

<table>
<thead>
<tr>
<th>Color</th>
<th>1 mg</th>
<th>2 mg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Light Pink</td>
<td>Light Pink</td>
<td></td>
</tr>
</tbody>
</table>

| Shape           |  |  |
|-----------------|  |  |
| Round           | Oblong |

| Identification |  |  |
|----------------|  |  |
| Lilly          | Lilly |

| NDC Codes:     |  |  |
|----------------|  |  |
| Bottle of 30   | 0002-4732-30 | 0002-4182-30 |

**16.2 Storage and Handling**

Store at 20° to 25°C (68° to 77°F); excursions permitted to 15° to 30°C (59° to 86°F) [see USP Controlled Room Temperature].

Keep out of reach of children.

**17 PATIENT COUNSELING INFORMATION**

Advise the patient to read the FDA-approved patient labeling (Medication Guide).

**Patient Counseling**

Advise patients of the potential benefits and risks of OLUMIANT.

**Infections**

Inform patients that they may be more likely to develop infections when taking OLUMIANT. Instruct patients to tell their healthcare provider if they develop any signs or symptoms of an infection [see Warnings and Precautions (5.1)].

Advise patients that the risk of herpes zoster is increased in patients treated with OLUMIANT and some cases can be serious [see Warnings and Precautions (5.1)].

**Malignancies and Lymphoproliferative Disorders**

Inform patients that OLUMIANT may increase their risk of developing lymphomas and other malignancies, including of the skin. Instruct patients to inform their healthcare provider if they have ever had any type of cancer [see Warnings and Precautions (5.2)].

**Thrombosis**

Advise patients that events of DVT and PE have been reported in clinical studies with OLUMIANT. Instruct patients to tell their healthcare provider if they develop any signs or symptoms of a DVT or PE [see Warnings and Precautions (5.3)].

**Laboratory Abnormalities**

Inform patients that OLUMIANT may affect certain lab tests, and that blood tests are required before and during OLUMIANT treatment [see Warnings and Precautions (5.5)].

**Lactation**

Advise a woman not to breastfeed during treatment with OLUMIANT [see Use in Specific Populations (8.2)].

Literature revised: 07/2020
What is the most important information I should know about OLUMIANT?

OLUMIANT may cause serious side effects, including:

1. Serious infections.
OLUMIANT is a medicine that affects your immune system. OLUMIANT can lower the ability of your immune system to fight infections. Some people have had serious infections while taking OLUMIANT, including tuberculosis (TB), and infections caused by bacteria, fungi, or viruses that can spread throughout the body. Some people have died from these infections.

- Your healthcare provider should test you for TB before starting treatment with OLUMIANT.
- Your healthcare provider should watch you closely for signs and symptoms of TB during treatment with OLUMIANT. You should not start taking OLUMIANT if you have any kind of infection unless your healthcare provider tells you it is okay. You may be at a higher risk of developing shingles.
- Before starting OLUMIANT, tell your healthcare provider if you:
  - are being treated for an infection.
  - have an infection that does not go away or that keeps coming back.
  - have diabetes, chronic lung disease, HIV, or a weak immune system. People with these conditions have a higher chance for infections.
  - have TB or have been in close contact with someone with TB.
  - have had hepatitis B or C.
  - live or have lived, or have traveled to certain parts of the country (such as the Ohio and Mississippi River valleys and the Southwest) where there is an increased chance for getting certain kinds of fungal infections. These infections may happen or become more severe if you use OLUMIANT. Ask your healthcare provider if you do not know if you have lived in an area where these infections are common.
  - think you have an infection or have symptoms of an infection such as:
    - fever, sweating, or chills
    - shortness of breath
    - warm, red, or painful skin
    - or sores on your body
    - feeling tired
    - muscle aches
    - blood in your phlegm
    - diarrhea or stomach pain
    - cough
    - weight loss
    - burning when you urinate or urinating more often than normal

After starting OLUMIANT, call your healthcare provider right away if you have any symptoms of an infection. OLUMIANT can make you more likely to get infections or make worse any infection that you have.

2. Cancer and immune system problems.
OLUMIANT may increase your risk of certain cancers by changing the way your immune
system works.

- Lymphoma and other cancers including skin cancers can happen in people taking OLUMIANT. Tell your healthcare provider if you have ever had any type of cancer.

Blood clots in the veins of your legs (deep vein thrombosis, DVT) or lungs (pulmonary embolism, PE) can happen in some people taking OLUMIANT. This may be life-threatening and cause death.

- Tell your healthcare provider if you have had blood clots in the veins of your legs or lungs in the past.
- Tell your healthcare provider right away if you have any signs and symptoms of blood clots during treatment with OLUMIANT, including: swelling, pain or tenderness in the leg, sudden unexplained chest pain, or shortness of breath.

4. Tears (perforation) in the stomach or intestines.
- Tell your healthcare provider if you have had diverticulitis (inflammation in parts of the large intestine) or ulcers in your stomach or intestines. Some people taking OLUMIANT can get tears in their stomach or intestines. This happens most often in people who also take nonsteroidal anti-inflammatory drugs (NSAIDs), corticosteroids, or methotrexate.
- Tell your healthcare provider right away if you have fever and stomach-area pain that does not go away, and a change in your bowel habits.

5. Changes in certain laboratory test results.
Your healthcare provider should do blood tests before you start taking OLUMIANT and while you take OLUMIANT to check for the following:

- **low lymphocyte counts.** Lymphocytes are white blood cells that help the body fight off infections.
- **low neutrophil counts.** Neutrophils are white blood cells that help the body fight off infections.
- **low red blood cell counts.** This may mean that you have anemia, which may make you feel weak and tired.

Your healthcare provider should routinely check certain liver tests.
You should not receive OLUMIANT if your lymphocyte count, neutrophil count, or red blood cell count is too low or your liver tests are too high.
Your healthcare provider may stop your OLUMIANT treatment for a period of time if needed because of changes in these blood test results.
You may also have changes in other laboratory tests, such as your blood cholesterol levels. Your healthcare provider should do blood tests to check your cholesterol levels approximately 12 weeks after you start taking OLUMIANT, and as needed after that.
Normal cholesterol levels are important to good heart health.

Symptoms such as rash, swelling of your lips, tongue, or throat, or hives (raised, red patches of skin that are often very itchy) that may mean you are having an allergic reaction have been seen in patients taking OLUMIANT. Some of these reactions were serious. If any of these symptoms occur while you are taking OLUMIANT, stop taking OLUMIANT and call your healthcare provider right away.

See "What are the possible side effects of OLUMIANT?" for more information about side effects.
What is OLUMIANT?
- OLUMIANT is a prescription medicine used to treat adult patients with moderately to severely active rheumatoid arthritis after treatment with at least one other medicine called a Tumor Necrosis Factor (TNF) antagonist has been used, and did not work well enough or could not be tolerated.
- It is not known if OLUMIANT is safe and effective in children.

Before taking OLUMIANT, tell your healthcare provider about all your medical conditions, including if you:
- See “What is the most important information I should know about OLUMIANT?”
  - have an infection.
  - have kidney problems.
  - have liver problems.
  - have low red or white blood cell counts.
  - have recently received or are scheduled to receive a vaccine. People who take OLUMIANT should not receive live vaccines.
  - have any stomach area (abdominal) pain or been diagnosed with diverticulitis or ulcers in your stomach or intestines.
  - are pregnant or plan to become pregnant. It is not known if OLUMIANT will harm an unborn baby.
  - are breastfeeding or plan to breastfeed. It is not known if OLUMIANT passes into your breast milk. You and your healthcare provider should decide if you will take OLUMIANT or breastfeed. You should not do both.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements. OLUMIANT and other medicines may affect each other causing side effects.

Especially tell your healthcare provider if you take:
- a medicine called probenecid.
- any other medicines to treat your rheumatoid arthritis. For example, you should not take tocilizumab (Actemra®), etanercept (Enbrel®), adalimumab (Humira®), infliximab (Remicade®), rituximab (Rituxan®), abatacept (Orencia®), anakinra (Kineret®), certolizumab pegol (Cimzia®), golimumab (Simponi®), tofacitinib (Xeljanz®, Xeljanz® XR), sarilumab (Kevzara®), azathioprine or cyclosporine while you are taking OLUMIANT. Taking OLUMIANT with these medicines may increase your risk of infection.

Know the medicines you take. Keep a list of them to show your healthcare provider and pharmacist when you get a new medicine.

How should I take OLUMIANT?
- Take OLUMIANT exactly as your healthcare provider tells you to take it.
- Take OLUMIANT 1 time a day with or without food.

What are the possible side effects of OLUMIANT?
OLUMIANT can cause serious side effects including:
See “What is the most important information I should know about OLUMIANT?”
Common side effects of OLUMIANT include (these are not all of the possible side effects
## Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

### How should I store OLUMIANT?

Store OLUMIANT at room temperature between 68°F to 77°F (20°C to 25°C). Keep OLUMIANT and all medicines out of the reach of children.

### General Information about the safe and effective use of OLUMIANT.

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. Do not use OLUMIANT for a condition for which it was not prescribed. Do not give OLUMIANT to other people, even if they have the same symptoms that you have. It may harm them.

You can ask your healthcare provider or pharmacist for information about OLUMIANT that is written for health professionals.

### What are the ingredients in OLUMIANT?

**Active ingredient:** baricitinib

**Inactive ingredients:** croscarmellose sodium, magnesium stearate, mannitol, microcrystalline cellulose, ferric oxide, lecithin (soya), polyethylene glycol, polyvinyl alcohol, talc, titanium dioxide.

OLUMIANT is a registered trademark of Eli Lilly and Company.

**Marketed by:** Lilly USA, LLC Indianapolis, IN 46285, USA

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For more information, call 1-800-545-5979 or go to the following website: www.olumiant.com.

This Medication Guide has been approved by the U.S. Food and Drug Administration

Revised: 07/2020

OLM-0002-MG-20200708

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### FACT SHEET FOR HEALTHCARE PROVIDERS

**EMERGENCY USE AUTHORIZATION (EUA) OF BARICITINIB**

The U.S. Food and Drug Administration (FDA) has issued an Emergency Use Authorization (EUA) to permit the emergency use of baricitinib for treatment of coronavirus disease 2019 (COVID-19) in hospitalized adults and pediatric patients 2 years of age or older requiring supplemental oxygen, non-invasive or invasive mechanical ventilation, or extracorporeal membrane oxygenation (ECMO).

Baricitinib has been authorized by FDA for the emergency uses described above. Baricitinib is not FDA-approved for these uses.

Baricitinib is authorized only for the duration of the declaration that circumstances exist justifying the authorization of the emergency use of baricitinib under section 564(b)(1) of the Act, 21 U.S.C. § 360bbb-3(b)(1), unless the declaration is terminated or authorization revoked sooner.
This EUA is for the unapproved use of baricitinib to treat COVID-19 in hospitalized adults and pediatric patients 2 years of age or older requiring supplemental oxygen, non-invasive or invasive mechanical ventilation, or ECMO.

Baricitinib is administered orally.

To request baricitinib under Emergency Use Authorization (EUA): In-patient pharmacies may order directly from an Authorized Distributor of Record. A current list of Lilly's Authorized Distributors of Record is available at www.lillytrade.com or visit www.baricitinibemergencyuse.com for additional access information.

Healthcare providers must submit a report on all medication errors and ALL SERIOUS ADVERSE EVENTS potentially related to baricitinib.

See specific reporting instructions below.

The recommended dosage of baricitinib under the EUA is:
- Adults and pediatric patients 9 years of age and older: 4 mg once daily
- Pediatric patients 2 years to less than 9 years of age: 2 mg once daily

Dosage adjustments are recommended for laboratory abnormalities, including renal impairment (see Table 1).

The optimal duration of treatment is unknown.

The recommended total treatment duration of baricitinib is 14 days or until hospital discharge, whichever comes first.

For information on clinical trials that are testing the use of baricitinib in COVID-19, please see www.clinicaltrials.gov.

This Fact Sheet may be updated as new data become available. The most recent version of this Fact Sheet is available at www.baricitinibemergencyuse.com for download.

INSTRUCTIONS FOR ADMINISTRATION

This section provides essential information on the unapproved use of baricitinib to treat COVID-19 in hospitalized adults and pediatric patients 2 years of age or older requiring supplemental oxygen, non-invasive or invasive mechanical ventilation, or ECMO under this EUA.

For more information, including pharmacokinetics and safety information of baricitinib, tradename Olumiant®, see the FDA-approved package insert at http://pi.lilly.com/us/olumiant-uspi.pdf.

Contraindications

There are no known contraindications for baricitinib.

Dosing

Patient Selection
- Evaluate baseline eGFR, liver enzymes, and complete blood count to determine treatment suitability and dose. Monitor closely patients with abnormal baseline and post-baseline laboratory values. See Table 1 for dosage adjustments for patients with laboratory abnormalities.
- Baricitinib is not recommended for:
- Patients who are on dialysis, have end-stage renal disease (ESRD, EGFR <15 mL/min/1.73 m²), or have acute kidney injury
- Patients with known active tuberculosis

**Adult Patients**

- The recommended dosage in adults with eGFR ≥60 mL/min/1.73 m² is 4 mg once daily for 14 days of total treatment or until hospital discharge, whichever is first. See Table 1 for dosage adjustments for patients with laboratory abnormalities.
- Dosage adjustments in patients with renal or hepatic impairment are recommended (see Renal Impairment, Hepatic Impairment).
- Dosage adjustments due to drug interactions are recommended (see Drug Interactions).
- In hospitalized patients with COVID-19, prophylaxis for venous thromboembolism (VTE) is recommended unless contraindicated (see Warnings).

**Pediatric Patients**

Limited data informing baricitinib dosing in pediatric patients comes from ongoing clinical trials for other uses. Based on the available information, treatment for COVID-19 for pediatric patients under this EUA is as follows:

- The recommended dosage for patients 9 years of age and older is 4 mg once daily for 14 days of total treatment or until hospital discharge, whichever is first.
- The recommended dosage for patients ages 2 years through less than 9 years of age is 2 mg once daily for 14 days of total treatment or until hospital discharge, whichever is first.
- Baricitinib is not authorized for patients younger than 2 years of age.
- Dosage adjustments in patients with renal or hepatic impairment are recommended (see Renal Impairment, Hepatic Impairment).

<table>
<thead>
<tr>
<th>Laboratory Analyte</th>
<th>Laboratory Analyte Value</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>eGFR</td>
<td>≥60 mL/min/1.73 m²</td>
<td>Adults and pediatric patients 9 years of age and older: 4 mg once daily. Pediatric patients 2 years to less than 9 years of age: 2 mg once daily.</td>
</tr>
<tr>
<td></td>
<td>30 to &lt;60 mL/min/1.73 m²</td>
<td>Adults and pediatric patients 9 years of age and older: 2 mg once daily. Pediatric patients 2 years to less than 9 years of age: 1 mg once daily.</td>
</tr>
<tr>
<td></td>
<td>15 to &lt;30 mL/min/1.73 m²</td>
<td>Adults and pediatric patients 9 years of age and older: 1 mg once daily. Pediatric patients 2 years to less than 9 years of age: Not recommended.</td>
</tr>
<tr>
<td></td>
<td>&lt;15 mL/min/1.73</td>
<td>Not recommended.</td>
</tr>
</tbody>
</table>

---

**Table 1: Dosage Adjustments for Patients with Abnormal Laboratory Values**

<table>
<thead>
<tr>
<th>Laboratory Analyte</th>
<th>Laboratory Analyte Value</th>
<th>Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>eGFR</td>
<td>≥60 mL/min/1.73 m²</td>
<td>Adults and pediatric patients 9 years of age and older: 4 mg once daily. Pediatric patients 2 years to less than 9 years of age: 2 mg once daily.</td>
</tr>
<tr>
<td></td>
<td>30 to &lt;60 mL/min/1.73 m²</td>
<td>Adults and pediatric patients 9 years of age and older: 2 mg once daily. Pediatric patients 2 years to less than 9 years of age: 1 mg once daily.</td>
</tr>
<tr>
<td></td>
<td>15 to &lt;30 mL/min/1.73 m²</td>
<td>Adults and pediatric patients 9 years of age and older: 1 mg once daily. Pediatric patients 2 years to less than 9 years of age: Not recommended.</td>
</tr>
<tr>
<td></td>
<td>&lt;15 mL/min/1.73</td>
<td>Not recommended.</td>
</tr>
</tbody>
</table>
Abbreviations: ALC = absolute lymphocyte count, ALT = alanine transaminase, ANC = absolute neutrophil count, AST = aspartate transaminase, DILI = drug induced liver injury, eGFR = estimated glomerular filtration rate.

If a laboratory abnormality is likely due to the underlying disease state, consider the risks and benefits of continuing baricitinib at the same or a reduced dose.

### Absolute Lymphocyte Count (ALC)
- ≥200 cells/μL: Maintain dose
- <200 cells/μL: Consider interruption until ALC is ≥200 cells/μL

### Absolute Neutrophil Count (ANC)
- ≥500 cells/μL: Maintain dose
- <500 cells/μL: Consider interruption until ANC is ≥500 cells/μL

### Aminotransferases
- If increases in ALT or AST are observed and drug-induced liver injury (DILI) is suspected:
  - Interrupt baricitinib until the diagnosis of DILI is excluded

### Pregnancy

Baricitinib should be used during pregnancy only if the potential benefit justifies the potential risk for the mother and the fetus. Consistent with the mechanism of action, embryo-fetal toxicities including skeletal anomalies and reduced fertility have been observed in animals dosed in excess of the maximum human exposure. The limited human data on use of baricitinib in pregnant women are not sufficient to inform a drug-associated risk for major birth defects or miscarriage.

See also Section 8.1 Pregnancy in the FDA approved full prescribing information for more information.

### Renal Impairment

There are limited data for baricitinib in patients with severe renal impairment.
- Baricitinib is not recommended for patients who are on dialysis, have ESRD, or have acute kidney injury.
- See Table 1 for treatment modifications for patients with laboratory abnormalities.
  - Baricitinib should only be used in adults and pediatric patients 9 years of age and older with eGFR 15 to <30 mL/min/1.73 m² if the potential benefit outweighs the potential risk.
  - Baricitinib is not recommended for pediatric patients ages 2 years through less than 9 years of age with eGFR <30 mL/min/1.73 m².

### Hepatic Impairment

Baricitinib has not been studied in patients with severe hepatic impairment. Baricitinib should only be used in patients with severe hepatic impairment if the potential benefit outweighs the potential risk. It is not known if dosage adjustment is needed in patients with severe hepatic impairment.

See Table 1 for dosage adjustments for patients with abnormal laboratory values.

### Administration

Baricitinib tablets are given orally once daily with or without food.
Alternate Administration

For patients who are unable to swallow whole tablets, alternate administration may be considered:
- Oral dispersion
- Gastrostomy tube (G tube)
- Nasogastric tube (NG tube)

Preparation for Alternate Administration
- **Oral administration of dispersed tablets in water:**
  For patients who are unable to swallow whole tablets, 1-mg and/or 2-mg baricitinib tablet(s), or any combination of tablets necessary to achieve the desired dose up to 4-mg may be placed in a container with approximately 10 mL (5 mL minimum) of room temperature water, dispersed by gently swirling the tablet(s) and immediately taken orally. The container should be rinsed with an additional 10 mL (5 mL minimum) of room temperature water and the entire contents swallowed by the patient (see **Table 2**).

- **Administration via gastrostomy feeding tube:**
  For patients with a gastrostomy feeding tube, 1-mg and/or 2-mg baricitinib tablet(s), or any combination of tablets necessary to achieve the desired dose up to 4-mg may be placed in a container with approximately 15 mL (10 mL minimum) of room temperature water and dispersed with gentle swirling. Ensure the tablet(s) are sufficiently dispersed to allow free passage through the tip of the syringe. Withdraw entire contents from the container into an appropriate syringe and immediately administer through the gastric feeding tube. Rinse container with approximately 15 mL (10 mL minimum) of room temperature water, withdraw the contents into the syringe, and administer through the tube (see **Table 2**).

- **Administration via nasogastric feeding tube:**
  For patients with an enteral feeding tube, 1-mg and/or 2-mg baricitinib tablet(s), or a combination of tablets necessary to achieve the desired dose may be placed into a container with approximately 30 mL of room temperature water and dispersed with gentle swirling. Ensure the tablet(s) are sufficiently dispersed to allow free passage through the tip of the syringe. Withdraw the entire contents from the container into an appropriate syringe and immediately administer through the enteral feeding tube. To avoid clogging of small diameter tubes (smaller than 12 Fr), the syringe can be held horizontally and shaken during administration. Rinse container with a sufficient amount (minimum of 15 mL) of room temperature water, withdraw the contents into the syringe, and administer through the tube (see **Table 2**).

Intact tablets are not hazardous. Tablets may be crushed to facilitate dispersion. It is not known if powder from the crushed tablets may constitute a reproductive hazard to the preparer. Use proper control measures (e.g. ventilated enclosure) or personal protective equipment (i.e. N95 respirator).

Dispersed tablets are stable in water for up to 4 hours.

**Table 2: Dispersion and Rinse Volume for Alternate Administration**

<table>
<thead>
<tr>
<th>Administration via</th>
<th>Dispersion Volume</th>
<th>Container Rinse Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral dispersion</td>
<td>10 mL</td>
<td>10 mL</td>
</tr>
<tr>
<td>Gastrostomy tube (G tube)</td>
<td>15 mL</td>
<td>15 mL</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Nasogastric tube (NG tube)</td>
<td>30 mL</td>
<td>15 mL</td>
</tr>
</tbody>
</table>

**Drug Interactions**

**Strong OAT3 Inhibitors:** Baricitinib exposure is increased when baricitinib is co-administered with strong OAT3 inhibitors (such as probenecid). In patients taking strong OAT3 inhibitors, such as probenecid, reduce the recommended dose as follows:
- If the recommended dose is 4 mg once daily, reduce dose to 2 mg once daily.
- If the recommended dose is 2 mg once daily, reduce dose to 1 mg once daily.
- If the recommended dose is 1 mg once daily, consider discontinuing probenecid.

**Other JAK Inhibitors or biologic disease modifying anti-rheumatic drugs (DMARDs):** Baricitinib has not been studied in combination with other JAK inhibitors or with biologic DMARDs (biologic treatments targeting cytokines, B-cells, or T-cells) and is not recommended.

**Pharmacology**

Pharmacokinetics: The pharmacokinetics in patients with COVID-19 who are intubated and have baricitinib administered via NG tube is similar to that in healthy subjects. The half-life of baricitinib in healthy subjects is approximately 10 hours.

**Warnings**

**Serious Infections**

There is limited information regarding use of baricitinib in patients with COVID-19 and concomitant active serious infections.

Serious infections have occurred in patients receiving baricitinib:
- Avoid the use of baricitinib with known active tuberculosis.
- Consider if the potential benefits outweigh the potential risks of baricitinib treatment in patients with active serious infections other than COVID-19 or chronic / recurrent infections.

**Thrombosis**

In hospitalized patients with COVID-19, prophylaxis for VTE is recommended unless contraindicated. If clinical features of deep vein thrombosis/pulmonary embolism occur, patients should be evaluated promptly and treated appropriately.

**Abnormal Laboratory Values**

There is limited information regarding use of baricitinib in patients with COVID-19 and any of the following clinical findings:
- ANC <1000 cells/mm³
- ALC <200 cells/mm³
- Hemoglobin <8 g/dL

Evaluate at baseline and thereafter according to local patient management practice. Monitor closely when treating patients with abnormal baseline and post-baseline laboratory values.

See **Table 1** for dosage adjustments for patients with abnormal renal, hematological and
hepatic laboratory values. Manage patients according to routine clinical guidelines.

**Vaccinations**

Avoid use of live vaccines with baricitinib.

**Hypersensitivity**

If a serious hypersensitivity occurs, discontinue baricitinib while evaluating the potential causes of the reaction.

See **Warnings and Precautions** in the FDA approved full prescribing information for additional information on risks associated with longer-term treatment with baricitinib.

**Serious Side Effects**

Serious venous thrombosis, including pulmonary embolism, and serious infections have been observed in COVID-19 patients treated with baricitinib and are known adverse drug reactions of baricitinib.

**Scientific Evidence Supporting This EUA**

The efficacy and safety of baricitinib were assessed in 2 Phase 3, randomized, double-blind, placebo-controlled clinical trials:

- ACTT-2, which evaluated the combination of baricitinib 4 mg + remdesivir compared to placebo + remdesivir.
- COV-BARRIER, which evaluated baricitinib 4 mg compared to placebo. Patients could remain on background therapy, as defined per local guidelines.

**Efficacy**

**ACTT-2 (Adaptive COVID-19 Treatment Trial 2) Study in Hospitalized Adults Diagnosed with COVID-19 Infection**

A randomized, double-blind, placebo-controlled clinical trial (ACTT-2, NCT04401579) of hospitalized adults with confirmed SARS-CoV-2 infection compared treatment with baricitinib, a JAK inhibitor, plus remdesivir, an anti-viral (combination group; n=515) with placebo plus remdesivir (placebo group; n=518). Patients had to have laboratory-confirmed SARS-CoV-2 infection as well as at least one of the following to be enrolled in the trial: radiographic infiltrates by imaging, SpO$_2$ $\leq$94% on room air, a requirement for supplemental oxygen, or a requirement for mechanical ventilation or ECMO. Patients treated with the combination received the following regimen:

- Baricitinib 4 mg once daily (orally) for 14 days or until hospital discharge
- Remdesivir 200 mg on Day 1 and 100 mg once daily (via intravenous infusion) on subsequent days for a total treatment duration of 10 days or until hospital discharge

For the overall population (N=1033 patients) at randomization, mean age was 55 years (with 30% of patients aged 65 or older); 63% of patients were male, 51% were Hispanic or Latino, 48% were White, 15% were Black or African American, and 10% were Asian; 14% did not require supplemental oxygen, 55% required supplemental oxygen, 21% required non-invasive ventilation or high-flow oxygen, and 11% required invasive mechanical ventilation or ECMO. The most common comorbidities were obesity (56%), hypertension (52%), and type 2 diabetes (37%). Demographics and disease characteristics were balanced across the combination group and the placebo group.

The primary endpoint, for the intent to treat population, was time to recovery within 29
days after randomization. Recovery was defined as being discharged from the hospital without limitations on activities, being discharged from the hospital with limitations on activities and/or requiring home oxygen or hospitalized but not requiring supplemental oxygen and no longer requiring medical care. The key secondary endpoint was clinical status on Day 15 assessed on an 8-point ordinal scale (OS) consisting of the following categories:

1. Not hospitalized, no limitations on activities [OS-1];
2. Not hospitalized, limitation on activities and/or requiring home oxygen [OS-2];
3. Hospitalized, not requiring supplemental oxygen - no longer requires ongoing medical care [OS-3];
4. Hospitalized, not requiring supplemental oxygen - requiring ongoing medical care (COVID-19 related or otherwise) [OS 4];
5. Hospitalized, requiring supplemental oxygen [OS 5];
6. Hospitalized, on non-invasive ventilation or high-flow oxygen devices [OS 6];
7. Hospitalized, on invasive mechanical ventilation or ECMO [OS 7]; and
8. Death [OS 8]

For the overall population, the median time to recovery (defined as discharged from hospital or hospitalized but not requiring supplemental oxygen or ongoing medical care) was 7 days for baricitinib + remdesivir compared to 8 days for placebo + remdesivir [hazard ratio: 1.15 (95% CI 1.00, 1.31); p=0.047].

Patients assigned to baricitinib + remdesivir were more likely to have a better clinical status (according to an 8-point ordinal scale) at Day 15 compared to patients assigned to placebo + remdesivir [odds ratio: 1.26 (95% CI 1.01, 1.57); p=0.044].

The proportion of patients who died or progressed to non-invasive ventilation/high-flow oxygen or invasive mechanical ventilation by Day 29 was lower in baricitinib + remdesivir (23%) compared to placebo + remdesivir (28%) [odds ratio: 0.74 (95% CI 0.56, 0.99); p=0.039]. Patients who required non-invasive ventilation/high-flow oxygen or invasive mechanical ventilation (including ECMO) at baseline needed to worsen by at least 1 point on an 8-point ordinal scale to progress.

The proportion of patients who died by Day 29 was 4.7% (24/515) for baricitinib + remdesivir vs. 7.1% (37/518) for placebo + remdesivir [Kaplan Meier estimated difference in Day 29 probability of mortality: -2.6% (95% CI -5.8%, 0.5%)].

**COV-BARRIER Study in Hospitalized Adults Diagnosed with COVID-19 Infection**

A randomized, double-blind, placebo-controlled clinical trial (COV-BARRIER, NCT04421027) of hospitalized adults with confirmed SARS-CoV-2 infection compared treatment with baricitinib 4mg once daily (n=764) with placebo (n=761). Patients could remain on background standard of care, as defined per local guidelines, including antimalarials, antivirals, corticosteroids, and/or azithromycin. The most frequently used therapies were:

- corticosteroids (79% of patients, mostly dexamethasone)
- remdesivir (19% of patients)

Patients had to have laboratory-confirmed SARS-CoV-2 infection, at least one instance of elevation in at least one inflammatory marker (CRP, D-dimer, LDH, ferritin), and at least one of the following to be enrolled in the trial: radiographic infiltrates by imaging, SpO₂ ≤94% on room air, evidence of active COVID infection (with clinical symptoms
including any of the following: fever, vomiting, diarrhea, dry cough, tachypnea defined as respiratory rate >24 breaths/min) or requirement for supplemental oxygen. Patients requiring invasive mechanical ventilation or ECMO at baseline were enrolled in a sub-study of COV-BARRIER that is ongoing.

For the overall population (N=1525 patients) at randomization, mean age was 58 years (with 33% of patients aged 65 or older); 63% of patients were male, 62% were White, 5% were Black or African American, 12% were Asian; 12% did not require supplemental oxygen (OS 4), 63% required supplemental oxygen (OS 5), 24% required non-invasive ventilation or high-flow oxygen (OS 6). The most common comorbidities were hypertension (48%), obesity (33%), and type 2 diabetes (29%). Demographics and disease characteristics were balanced across the baricitinib and placebo groups.

The primary endpoint was the proportion of patients who died or progressed to non-invasive ventilation/high-flow oxygen or invasive mechanical ventilation within the first 28-days of the study. Patients who required non-invasive ventilation/high-flow oxygen at baseline needed to worsen by at least 1 point on an 8-point ordinal scale to progress. A key secondary endpoint was all-cause mortality by Day 28.

The estimated proportion of patients who died or progressed to non-invasive ventilation/high-flow oxygen or invasive mechanical ventilation was lower in patients treated with baricitinib (27.8%) compared to placebo (30.5%), but this effect was not statistically significant [odds ratio: 0.85 (95% CI 0.67, 1.08); p=0.180].

The proportion of patients who died by Day 28 was 8.1% (62/764) for baricitinib vs. 13.3% (101/761) for placebo [estimated difference in Day 28 probability of mortality = -4.9% (95% CI: -8.0%, -1.9%); hazard ratio = 0.56 (95% CI: 0.41, 0.77)].

Safety

In placebo-controlled COVID-19 clinical trials, ACTT-2 and COV-BARRIER, for up to 29 days, 1257 patients received at least one dose of baricitinib 4 mg once daily, and 1261 patients received placebo, for up to 14 days or hospital discharge, whichever occurred first. Data on deaths, serious adverse events (SAEs), AEs leading to discontinuation, and infections are summarized in Table 3.

### Table 3: Comparisons of Adverse Events in the Safety Population

<table>
<thead>
<tr>
<th>Patients with at least 1:</th>
<th>ACTT-2 AND COV-BARRIER</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PBO (N = 1261) n (%)</td>
</tr>
<tr>
<td>TEAE</td>
<td>576 (46)</td>
</tr>
<tr>
<td>SAE</td>
<td>244 (19)</td>
</tr>
<tr>
<td>Deathc</td>
<td>137 (11)</td>
</tr>
<tr>
<td>DCAE</td>
<td>145 (12)</td>
</tr>
<tr>
<td>Infections</td>
<td>183 (15)</td>
</tr>
<tr>
<td>Venous thrombotic eventsd</td>
<td>27 (2)</td>
</tr>
</tbody>
</table>

*a* Abbreviations: TEAE = treatment emergent adverse event; AE = adverse event; DCAE = AE leading to discontinuation of study drug (including death due to AE); N = number of patients in the Safety Population; n = number of patients reporting at least 1 event; SAE = serious adverse event;

*b* Patients are counted once for each category regardless of the number of events.

*c* Includes patients who died from any cause.
Of the known adverse drug reactions of baricitinib in clinical trials of other indications, Table 4 summarizes the observed frequencies of adverse reactions occurring in ≥ 1% of patients during the first 29 days of studies ACTT-2 and COV-BARRIER.

Table 4: Adverse Reactions Occurring in ≥1% in the Safety Population

<table>
<thead>
<tr>
<th></th>
<th>Placebo (n = 1261) n (%)</th>
<th>BARICITINIB 4 mg (n = 1257) n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Infections and infestationa</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urinary tract infection</td>
<td>10 (0.8)</td>
<td>16 (1.3)</td>
</tr>
<tr>
<td><strong>Respiratory, thoracic, mediastinal disorders</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pulmonary embolism</td>
<td>11 (0.9)</td>
<td>18 (1.4)</td>
</tr>
<tr>
<td><strong>Vascular Disorders</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deep Vein Thrombosis</td>
<td>16 (1.3)</td>
<td>19 (1.5)</td>
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<tr>
<td><strong>Laboratory Parameters</strong></td>
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<tr>
<td><strong>Clinical Chemistry</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Creatine Phosphokinase &gt;5 x ULNb</td>
<td>20 (3.3)</td>
<td>22 (3.7)</td>
</tr>
<tr>
<td>ALT ≥3 x ULN</td>
<td>189 (15.6)</td>
<td>219 (18.0)</td>
</tr>
<tr>
<td>AST ≥3 x ULN</td>
<td>110 (9.1)</td>
<td>140 (11.5)</td>
</tr>
<tr>
<td><strong>Hematology</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neutropenia &lt;1000 cells/mm³</td>
<td>22 (1.9)</td>
<td>26 (2.2)</td>
</tr>
<tr>
<td>Thrombocytosis &gt;600,000 cells/mm³</td>
<td>30 (4.3)</td>
<td>57 (8.2)</td>
</tr>
</tbody>
</table>

*a* As assessed by measured values within the clinical trial database. Frequencies are based on shifts from pre-treatment to post-treatment (with number at risk as the denominator), except for ALT and AST for which frequencies are based on observed elevation during treatment.

*b*Creatine phosphokinase frequencies presented in the table were available for a single trial in patients with COVID-19 (KHAA) and do not represent integrated data.

**How Supplied/Storage and Handling**

How Supplied

Baricitinib for oral administration is available as debossed, film-coated, immediate-release tablets. Each tablet contains a recessed area on each face of the tablet surface.

Under this EUA, baricitinib is supplied in 30 count bottles as follows:

- OLUMIANT (baricitinib) 1 mg (NDC 0002-4732-30)
- OLUMIANT (baricitinib) 2 mg (NDC 0002-4182-30)

Storage and Handling

Store at 20° to 25°C (68° to 77°F); excursions permitted to 15° to 30°C (59° to 86°F). Keep out of reach of children.
Important Information for Patients, Parents and Caregivers

See Fact Sheets for Patients, Parents and Caregivers.

INSTRUCTIONS FOR HEALTHCARE PROVIDERS

As the healthcare provider, you must communicate to your patient or parent/caregiver, as age appropriate, information consistent with the “Fact Sheet for Patients, Parents and Caregivers” (and provide a copy of the Fact Sheet) prior to the patient receiving baricitinib, including:

- FDA has authorized the emergency use of baricitinib to treat COVID-19 in hospitalized adults and pediatric patients 2 years or older requiring supplemental oxygen, non-invasive or invasive mechanical ventilation, or extracorporeal membrane oxygenation (ECMO). This is not an FDA-approved use of baricitinib.
- The patient or parent/caregiver has the option to accept or refuse baricitinib.
- The significant known and potential risks and benefits of baricitinib, and the extent to which such potential risks and benefits are unknown.
- Information on available alternative treatments and the risks and benefits of those alternatives, including clinical trials.

If providing this information will delay the administration of baricitinib to a degree that would endanger the lives of patients, the information must be provided to the patients as soon as practicable after baricitinib is administered.

For information on clinical trials that are testing the use of baricitinib for COVID-19, please see www.clinicaltrials.gov.

MANDATORY REQUIREMENTS FOR BARICITINIB ADMINISTRATION UNDER EMERGENCY USE AUTHORIZATION

In order to mitigate the risks of using this approved product for an unapproved use under EUA and to optimize the potential benefit of baricitinib, the following items are required. Use of baricitinib under this EUA is limited to the following (all requirements must be met):

1. Treatment of coronavirus disease 2019 (COVID-19) in hospitalized adults and pediatric patients 2 years of age or older requiring supplemental oxygen, non-invasive or invasive mechanical ventilation, or ECMO.

2. As the healthcare provider, communicate to your patient or parent/caregiver information consistent with the “Fact Sheet for Patients, Parents and Caregivers” prior to the patient receiving baricitinib. Healthcare providers (to the extent practicable given the circumstances of the emergency) must document in the patient’s medical record that the patient/caregiver has been:
   a. Given the “Fact Sheet for Patients, Parents and Caregivers”,
   b. Informed of alternatives to receiving authorized baricitinib, and
   c. Informed that baricitinib is an approved drug that is authorized for the unapproved use under this Emergency Use Authorization.

3. Patients must have an eGFR, aminotransferases, and CBC with differential determined prior to first administration of baricitinib.

4. The prescribing healthcare provider and/or the provider’s designee are/is responsible for mandatory reporting of all medication errors and all serious adverse events* potentially related to baricitinib treatment within 7 calendar days from the onset of the event. The reports should include unique identifiers and the words “Baricitinib
treatment under Emergency Use Authorization (EUA)” in the description section of the report.

- Submit adverse event reports to FDA MedWatch using one of the following methods:
  - Complete and submit the report online: www.fda.gov/medwatch/report.htm, or
  - Complete and submit a postage-paid Form FDA 3500 (https://www.fda.gov/media/76299/download) and return by:
    - Mail to MedWatch, 5600 Fishers Lane, Rockville, MD 20852-9787, or
    - Fax (1-800-FDA-0178), or
  - Call 1-800-FDA-1088 to request a reporting form.
  - Submitted reports should include in the field name, “Describe Event, Problem, or Product Use/Medication Error” the statement “Baricitinib use for COVID-19 under Emergency Use Authorization (EUA).”

*Serious Adverse Events are defined as:
- death;
- a life-threatening adverse event;
- inpatient hospitalization or prolongation of existing hospitalization;
- a persistent or significant incapacity or substantial disruption of the ability to conduct normal life functions;
- a congenital anomaly/birth defect;
- a medical or surgical intervention to prevent death, a life-threatening event, hospitalization, disability, or congenital anomaly.

5. The prescribing healthcare provider and/or the provider's designee are/is to provide mandatory responses to requests from FDA for information about adverse events and medication errors following receipt of baricitinib.

6. OTHER REPORTING REQUIREMENTS
   Report adverse events or medication errors to Lilly at: 1-855-LillyC19 (1-855-545-5921)

   In addition, please provide a copy of all FDA MedWatch forms to:
   Eli Lilly and Company, Global Patient Safety
   Fax: 1-317-277-0853
   E-mail: mailindata_gsmtindy@lilly.com

APPROVED AVAILABLE ALTERNATIVES

There is no adequate, approved and available alternative to baricitinib for treatment of COVID-19 in hospitalized adults and pediatric patients 2 years of age or older requiring supplemental oxygen, non-invasive or invasive mechanical ventilation, or ECMO. Additional information on COVID-19 treatments can be found at https://www.cdc.gov/coronavirus/2019-ncov/index.html. The healthcare provider should visit https://clinicaltrials.gov/ to determine whether the patient may be eligible for enrollment in a clinical trial.

AUTHORITY FOR ISSUANCE OF THE EUA

The Secretary of the Department of Health and Human Services (HHS) has declared a public health emergency that justifies the emergency use of baricitinib to treat COVID-19 caused by SARS-CoV-2. In response, the Food and Drug Administration (FDA) has
issued an Emergency Use Authorization (EUA) for the unapproved use of baricitinib for the treatment of COVID-19 in hospitalized adults and pediatric patients 2 years of age or older requiring supplemental oxygen, non-invasive or invasive mechanical ventilation, or ECMO. As a healthcare provider, you must comply with the mandatory requirements of the EUA (see “MANDATORY REQUIREMENTS FOR BARICITINIB ADMINISTRATION UNDER EMERGENCY USE AUTHORIZATION” above).

FDA issued this EUA, requested by Eli Lilly and Company based on the submitted data. Although limited scientific information is available, based on the totality of the scientific evidence available to date, it is reasonable to believe that baricitinib may be effective for treatment of COVID-19 in certain patients as specified in this Fact Sheet. You may be contacted and asked to provide information to help with the assessment of the use of the product during this emergency.

This EUA for baricitinib will end when the Secretary determines that the circumstances justifying the EUA no longer exist or when there is a change in the approval status of the product such that an EUA is no longer needed.

The health care provider should visit clinicaltrials.gov to determine whether there is an active clinical trial for the product in this disease/condition and whether enrollment of the patient(s) in a clinical trial is more appropriate than product use under this EUA.

CONTACT INFORMATION

If you have questions, please contact:
1-855-LillyC19 (1-855-545-5921)
For additional information visit:
www.baricitinibemergencyuse.com

END FACT SHEET

Revised July 2021

Eli Lilly and Company, Indianapolis, IN 46285, USA

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BAR-0002-EUA HCP-20210728

Fact Sheet for Patients, Parents and Caregivers
Emergency Use Authorization (EUA) of Baricitinib

You (or your child) are being given a medicine called baricitinib to treat coronavirus disease 2019 (COVID-19). This Fact Sheet contains information to help you understand the risks and benefits of taking baricitinib, which you have received or may receive.

Taking baricitinib may benefit certain people in the hospital with COVID-19. This Fact Sheet provides you with the significant known and potential risks and benefits of the emergency use of baricitinib for treatment of COVID-19. Healthcare providers can
recommend or provide baricitinib to people they believe may benefit from it as authorized.

Read this Fact Sheet for information about baricitinib and talk to your healthcare provider if you have questions. It is your choice to take baricitinib or stop it at any time.

**What is COVID-19?**

COVID-19 is caused by a virus called a coronavirus. You can get COVID-19 through contact with another person who has the virus. COVID-19 illnesses have ranged from very mild (including some with no reported symptoms) to severe, including illness resulting in death. While information so far suggests that most COVID-19 illness is mild, serious illness can happen and may cause some of your other medical conditions to become worse. Older people and people of all ages with severe, long-lasting (chronic) medical conditions like heart disease, lung disease, and diabetes, for example, seem to be at higher risk of being hospitalized for COVID-19.

**What are the symptoms of COVID-19?**

The symptoms of COVID-19 include fever, cough, and shortness of breath, which may appear 2 to 14 days after exposure. Serious illness including breathing problems can occur and may cause your other medical conditions to become worse.

**What is baricitinib?**

Baricitinib is a prescription medicine that is FDA approved to treat adult patients with moderately to severely active rheumatoid arthritis after treatment with at least one other medicine called a Tumor Necrosis Factor (TNF) antagonist has been used and did not work well enough or could not be tolerated. Baricitinib is not FDA-approved to treat COVID-19.

Baricitinib is being studied for the treatment of certain people in the hospital with COVID-19. There is limited information about the safety and effectiveness of using baricitinib to treat people in the hospital with COVID-19.

The FDA has authorized the emergency use of baricitinib for the treatment of COVID-19 under an Emergency Use Authorization (EUA). For more information on EUA, see the section “What is an Emergency Use Authorization (EUA)?” at the end of this Fact Sheet.

**What should I tell my healthcare provider before taking baricitinib?**

Tell your healthcare provider about all of your medical conditions, including if you:

- Have an infection other than COVID-19. You should not take baricitinib if you have an active tuberculosis infection.
- Have hepatitis B, hepatitis C, or HIV.
- Have ever had any type of cancer.
- Have had blood clots.
- Have kidney problems. You should not take baricitinib if you have sudden, severe kidney problems or you are on dialysis.
- Have liver problems.
- Have low red or white blood cell counts.
- Have recently received a vaccine.
- Are pregnant or breastfeeding.
- Are allergic to baricitinib.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Especially tell your healthcare provider if you take:
- Probenecid
- Any medicines that affect your immune system

**How should I take baricitinib?**

Baricitinib is given to you by mouth 1 time each day for 14 days or until you are discharged from the hospital (whichever comes first), as instructed by your healthcare provider.

**What are the important possible side effects of baricitinib?**

Baricitinib may cause serious side effects, including:
- **Serious infections.** Baricitinib is a medicine that affects your immune system. Baricitinib can lower the ability of your immune system to fight infections other than COVID-19.
- **Blood clots.** Blood clots in the veins of your legs (deep vein thrombosis) or lungs (pulmonary embolism) can happen in some people taking baricitinib. This may be life threatening and cause death.
- **Changes in certain laboratory test results.** Your healthcare provider should do blood tests before you start taking baricitinib to check how well your kidney and liver are working, as well as low white blood cells that help the body fight infections.
- **Allergic reactions.** Tell your healthcare provider right away if you have symptoms such as rash, swelling of your lips, tongue, or throat, or hives (raised red patches of skin that are often very itchy). This may mean you are having an allergic reaction.


**Tell your healthcare provider immediately if you get:**
- swelling, pain or tenderness in the leg
- sudden unexplained chest pain
- sudden worsening shortness of breath
- rash, swelling of your lips, tongue, or throat, or hives

**What other treatment choices are there?**

A medicine to treat people in the hospital with COVID-19 has been FDA approved. Like baricitinib, FDA may allow for the emergency use of other medicines that are not approved by FDA to treat people in the hospital with COVID-19. Go to https://www.covid19treatmentguidelines.nih.gov/ for information on the emergency use of other medicines that are not approved by FDA to treat people in the hospital with COVID-19. Your healthcare provider may talk with you about clinical trials you may be eligible for.

It is your choice to be treated or not to be treated with baricitinib. Should you decide not to receive it or stop it at any time, it will not change your standard medical care.

**What if I am pregnant or breastfeeding?**
Baricitinib has not been studied in pregnant women or breastfeeding mothers. It is not known if baricitinib will harm your unborn baby or if baricitinib passes into your breast milk. If you are pregnant or breastfeeding, discuss your options and specific situation with your healthcare provider.

**How do I report side effects with baricitinib?**

Tell your healthcare provider if you have any side effect that bothers you or does not go away. Report side effects to FDA MedWatch at [www.fda.gov/medwatch](http://www.fda.gov/medwatch) or call 1-800-FDA-1088. You may also report side effects to Lilly by calling 1-855-LillyC19 (1-855-545-5921).

**How can I learn more?**

- Ask your healthcare provider
- Contact your local or state public health department

**What is an Emergency Use Authorization (EUA)?**

The United States FDA has made baricitinib available under an emergency access mechanism called an EUA as a treatment for certain patients with COVID-19. The EUA is supported by a Secretary of Health and Human Service (HHS) declaration that circumstances exist to justify the emergency use of drugs and biological products during the COVID-19 pandemic.

Baricitinib, as a treatment for COVID-19, has not undergone the same type of review as an FDA-approved or cleared product. FDA may issue an EUA when certain criteria are met, which includes that there are no adequate, approved, available alternatives. In addition, the FDA decision is based on the totality of scientific evidence available showing that it is reasonable to believe that the product meets certain criteria for safety, performance, and labeling and may be effective in treatment of patients during the COVID-19 pandemic. All of these criteria must be met to allow for the product to be used in the treatment of patients during the COVID-19 pandemic.

The EUA for baricitinib as a treatment for certain patients with COVID-19 is in effect for the duration of the COVID-19 declaration justifying emergency use of these products, unless terminated or revoked (after which the products may no longer be used).

Revised July 2021

**Eli Lilly and Company, Indianapolis, IN 46285, USA**

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BAR-0002-EUA PAT-20210728

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**PACKAGE LABEL – OLMIANT 2 mg 30ct Bottle**

Rx Only

Always Dispense with Medication Guide

NDC 0002-4182-30
Olumiant®
(baricitinib) tablets
2 mg
30 tablets
Lilly
OLUMIANT
baricitinib tablet, film coated

Product Information

Product Type: HUMAN PRESCRIPTION DRUG
Route of Administration: ORAL

Active Ingredient/Active Moiety

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<tr>
<th>Ingredient Name</th>
<th>Basis of Strength</th>
<th>Strength</th>
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<tr>
<td>baricitinib (UNII: ISP4442I3Y) (baricitinib - UNII:ISP4442I3Y)</td>
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<td>2 mg</td>
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Inactive Ingredients

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<tbody>
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<td>Mannitol (UNII: 3OWL53L36A)</td>
<td></td>
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<tr>
<td>Microcrystalline Cellulose (UNII: OP1R32D61U)</td>
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<tr>
<td>Croscarmellose Sodium (UNII: M28OL1HH48)</td>
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<td>Magnesium Stearate (UNII: 70097M6I30)</td>
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<td>Polyvinyl Alcohol, Unspecified (UNII: 532B59J990)</td>
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<td>Titanium Dioxide (UNII: 15FIX9V2JP)</td>
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<td>Lecithin, Soybean (UNII: 1DI56QDM62)</td>
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Product Characteristics

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### Marketing Information

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<td>NDA</td>
<td>NDA207924</td>
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### OLUMIANT

baricitinib tablet, film coated

### Product Information

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### Active Ingredient/Active Moiety

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<thead>
<tr>
<th>Ingredient Name</th>
<th>Basis of Strength</th>
<th>Strength</th>
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<td><strong>baricitinib</strong> (UNII: ISP4442I3Y) (baricitinib - UNII:ISP4442I3Y)</td>
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<td>Magnesium Stearate (UNII:</td>
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<tr>
<td>70097M6I30)</td>
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<tr>
<td>Polyvinyl Alcohol, Unspecified</td>
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<td>(UNII: 532B59J990)</td>
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<td>Titanium Dioxide (UNII:</td>
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<tr>
<td>15FIX9V2JP)</td>
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<tr>
<td>Polyethylene Glycol, Unspecified</td>
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<tr>
<td>(UNII: 3WJO5SDW1A)</td>
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<tr>
<td>Talc (UNII: 75EV7J4R1U)</td>
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<td>Lecithin, Soybean (UNII:</td>
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<tr>
<td>1DI56QDM62)</td>
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<td>Ferric Oxide Red (UNII:</td>
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<td>1K09F3G675)</td>
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### Product Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Description</th>
<th>Score</th>
<th>Size</th>
<th>Imprint Code</th>
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</thead>
<tbody>
<tr>
<td>Color</td>
<td>pink (very light pink)</td>
<td>no score</td>
<td></td>
<td>Lilly;1</td>
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<tr>
<td>Shape</td>
<td>ROUND (round)</td>
<td></td>
<td>7mm</td>
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<tr>
<td>Flavor</td>
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<tr>
<td>#</td>
<td>Item Code</td>
<td>Package Description</td>
<td>Marketing Start Date</td>
<td>Marketing End Date</td>
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<tr>
<td>1</td>
<td>NDC:0002-4732-30</td>
<td>30 in 1 BOTTLE; Type 0: Not a Combination Product</td>
<td>10/08/2019</td>
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**Marketing Information**

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<thead>
<tr>
<th>Marketing Category</th>
<th>Application Number or Monograph Citation</th>
<th>Marketing Start Date</th>
<th>Marketing End Date</th>
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<tr>
<td>NDA</td>
<td>NDA207924</td>
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**Labeler - Eli Lilly and Company (006421325)**

Revised: 7/2021