Baricitinib Therapeutic Cheat Sheet

COMPILED BY: ALEXIS E. CARRINGTON, MD | REVIEWED BY: ADAM FRIEDMAN, MD.

TRADE NAME

- Olumiant®

MECHANISM OF ACTION[5]

- Baricitinib inhibits Janus kinases (JAK), a group of tyrosine kinases that phosphorylate signal transducers and activators of transcription (STATs) in the pro-inflammatory JAK-STAT pathway.
- Baricitinib specifically inhibits JAK1 and JAK2 compared to JAK3 subtypes.

FDA-APPROVED USE[6]

- Adults with severe alopecia areata (SALT score of 50 or higher).
- Adults with moderate to severe rheumatoid arthritis (RA) with inadequate response to one or more TNF blockers.
- Hospitalized adults with COVID-19 requiring supplemental oxygen, non-invasive or invasive mechanical ventilation or extracorporeal membrane oxygenation (ECMO).

OFF-LABEL USES[2-4]

- Atopic Dermatitis
- Psoriasis
- Vitiligo

DOSING[7]

- Alopecia Areata
  - 2 mg once daily. Increase to 4 mg once daily if no hair growth on 2mg daily.
  - For patients with nearly complete or complete scalp hair loss, with or without substantial eyelash or eyebrow hair loss, consider treating with 4 mg once daily.
  - Reduce the dose to 2 mg once daily when an adequate response has been achieved.
- Rheumatoid Arthritis*
  - Reduce the dose to 2 mg once daily when an adequate response has been achieved.
  - 2 mg once daily
- COVID-19
  - 4 mg once daily for up to 14 days

*Baricitinib may be used as monotherapy or in combination with methotrexate or DMARDS.

SIDE EFFECTS[7]

Some side effects of baricitinib in people treated for rheumatoid arthritis, COVID-19, and alopecia areata include:

- Upper and lower respiratory tract infections
- Urinary tract infection
- Elevated liver enzymes
- Folliculitis
- Acne
- Anemia
- Neutropenia
- Herpes simplex and herpes zoster
- Nausea
- Thrombocytosis
- Deep vein thrombosis and pulmonary embolism
- Urinary tract infection

WARNINGS[7]

- **Serious infections** - Baricitinib increases the risk of serious and potentially fatal infections, including tuberculosis (TB), fungal, and opportunistic infections. Avoid use in patients with an active infection, including localized infections. It is important to stop treatment with baricitinib if a serious infection occurs until it is controlled.
- **Major cardiovascular events** - There is an increased risk of major cardiovascular events, such as a heart attack or stroke, in people 50 years old or older with a history of a risk factor for heart disease (i.e., smoking)
- **Malignancies** - Barictinib can increase the risk of cancers, including lymphoma and skin cancers.
- **Blood clots** - There is an increased risk of blood clots in the legs and lungs, more often in people 50 years old or older with a heart disease risk factor. A patient must stop taking baricitinib if they experience any symptoms of blood clots, such as sudden shortness of breath or leg tenderness.
- **Hypersensitivity** - Serious hypersensitivity reactions (e.g., anaphylaxis) have been reported. Discontinue if a serious hypersensitivity reaction occurs.
- **Gastrointestinal (GI) Perforations** - This is more common in patients who are also taking NSAIDs, corticosteroids or methotrexate. Monitor patients at risk for any symptoms of GI perforations such as fever or persistent stomach pain.
- **Laboratory Abnormalities** - Obtain baseline labs to check lymphocytes, neutrophils, hemoglobin, liver enzymes and lipids. It is recommended to check lipids about 3 months after starting baricitinib and then as needed thereafter.
- **Embryo-Fetal Toxicity** - May cause fetal harm based on animal studies.
- **Vaccinations** - Avoid use with live vaccines.
- **Hepatic Impairment** - Barictinib is not recommended in patients with severe hepatic impairment.
- **Renal Impairment** - Barictinib is not recommended in COVID-19 patients with eGFR <15mL/min/1.73m2, who are on dialysis, have ESRD or acute kidney injury. Barictinib is not recommend in patients with rheumatoid arthritis patients with eGFR <30 mL/min/1.73m2.

CONTRAINDICATIONS[7]

- Patients with known hypersensitivity to baricitinib or any of the excipients in baricitinib.

PREGNANCY & BREASTFEEDING[7]

- Based on animal studies, baricitinib may cause embryo-fetal harm when administered to pregnant women.
- Advise female patients of reproductive potential of the potential risk to a fetus and to use effective contraception.
- Advise women not to breastfeed during treatment with baricitinib.

MONITORING[7]

- Test for active and latent TB before and during therapy in all patients.
- Perform a pregnancy test in all females of reproductive potential prior to starting baricitinib. Advise female patients of reproductive potential to use effective contraception during treatment with baricitinib.
- Obtain a baseline CBC to assess for neutropenia and anemia.
- Assess baseline values for elevated liver enzymes, impaired renal function, and dyslipidemia. Continue to monitor patients for any of these laboratory changes.
- Perform screening for viral hepatitis in accordance with clinical guidelines before starting therapy with baricitinib.*

*The impact of baricitinib on chronic viral hepatitis reactivation is unknown.