



# CIBINQO(ABROCITINIB): PARMACOVIGULACE REPORT AND ADVERSE DRUG REACTION ASSESSMENT

## **ABSTRACT**

CIBINQO (Abrocitinib) is JAK1 inhibitor used for moderate to severe apotoic dermatitis. This analysis summarizes its mechanism of action, reported ADR and safety measures based on FDA and Clinical based data, emphasizing pharmacovigilance in modern targeted therapies.

**Leeza Noor ul ain**

Pharmacovigilance and adverse drug reactions

# **CIBINQO(ABROCITINIB): PARMACOVIGULACE REPORT AND ADVERSE DRUG REACTION ASSESSMENT**

CIBINQO is a Janus Kinase (JAK) inhibitor approved for the treatment of people with refractory, moderate-to-severe atopic dermatitis that is inadequately managed by other systemic medications, including biologics, or when the use of such treatments is contraindicated.

Take CIBINQO orally once daily. If CIBINQO 100 mg daily does not work after 12 weeks, increase to 200 mg orally daily.

Discontinue medication if the 200 mg daily dose does not work (FDA 2022).

## **Mechanism**

Abrocitinib reversibly inhibits JAK1 by obstructing the adenosine triphosphate (ATP) binding site. Abrocitinib demonstrated selectivity for JAK1 over JAK2 (28-fold), JAK3 (>340-fold), tyrosine kinase (TYK) 2 (43-fold), and the wider kinase in an enzyme test using cell-free isolated enzymes. The significance of inhibiting individual JAK enzymes to treatment efficacy is still unknown. Both original drug and the active metabolites inhibit JAK1 activity in vitro with comparable selectivity (Pfizer. Inc).

## **Possible adverse effects**

In clinical trials, the most adverse effects of CIBINQO were nasopharyngitis, nausea, headaches, herpes simplex (which includes oral herpes, ophthalmic herpes, herpes dermatitis, and genital herpes), and increased blood creatine phosphokinase. Certain test abnormalities, such as thrombocytopenia, lymphopenia, and elevated lipid levels, can lead to serious infections, malignancies, catastrophic cardiovascular events, and thrombosis when used with CIBINQO. CIBINQO's safety profile was checked in four randomized placebo-controlled clinical trials, including two monotherapy trials, one combination therapy trial with a topical corticosteroid, a dose-ranging trial, and a long-term extension trial with people suffering from moderate to severe atopic dermatitis (AD). CIBINQO was used to treat 1,623 people with moderate to severe atopic dermatitis in these clinical studies, accounting for 1,428 patient-years of exposure. Among them, 8.1% were between the ages of 12 and 18, while 6.1% were aged 65 and older.

Adverse reactions resulted in 61 (5.1%) of the participants discontinuing their involvement in the studies. Throughout all monotherapy and combination trials, the safety profile of CIBINQO was found to be consistent.

## **Malignancy and Lymphoproliferative Disorders**

- Non-melanoma skin cancer (NMSC) was discovered in clinical studies using CIBINQO for atopic dermatitis.

- Lymphomas have developed in people taking JAK inhibitors to treat inflammatory disorders. CIBINQO is not approved for treating rheumatoid arthritis.
- Current or former smokers treated with JAK had a higher incidence of lung cancer.

## **Major Adverse Cardiovascular Events**

- Significant adverse cardiovascular events were documented in clinical studies of CIBINQO for atopic dermatitis.
- In a large, randomized, post-marketing safety evaluation of another JAK inhibitor in RA patients 50 years and older with at least one cardiovascular risk factor, the JAK inhibitor was associated with a greater rate of serious adverse cardiovascular events than those treated with TNF blockers. MACE consists of cardiovascular death, nonfatal myocardial infarction (MI), and nonfatal stroke.
- Patients who are current or former smokers are at a higher risk.

## **Thrombosis**

- Deep vein thrombosis (DVT) and pulmonary embolism (PE) have been reported in people using CIBINQO in clinical studies for atopic dermatitis.
- Thrombosis, including DVT, PE, and arterial thrombosis, has been described in individuals using JAK inhibitors for inflammatory diseases. Many of these adverse responses were severe, with some resulting in death.
- A major, randomized, post-marketing safety trial of another JAK inhibitor in RA participants 50 years of age and older with at least one cardiovascular risk factor found greater incidence of total thrombosis, DVT, and PE than those treated with TNF blockers.
- CIBINQO is not approved for treating rheumatoid arthritis.

## **Laboratory Abnormalities**

- Hematologic Abnormalities: Treatment with CIBINQO was associated with an increased incidence of thrombocytopenia and lymphopenia.
- Lipid Elevations: Dose-dependent increase in blood lipid parameters was reported in subjects treated with CIBINQO.

## **Recommendations to reduce diverse effects**

1. Before starting or continuing CIBINQO, evaluate the risks and benefits, especially for individuals with a history of malignancies, smoking history, or developing malignancies during therapy.
2. Inform patients about potential major cardiovascular events and how to handle them. Discontinue treatment in case of myocardial infarction or stroke.
3. Patients with a greater risk of thrombosis should avoid CIBINQO. If thrombosis symptoms emerge, discontinue use and seek appropriate treatment.
4. CBC examinations are indicated prior to CIBINQO beginning and at 4-week intervals after dosage escalation.

5. Assess lipid markers 4 weeks after starting CIBINQO medication and follow clinical recommendations for managing hyperlipidemia. The impact of these lipid parameter increases on cardiovascular morbidity and death has not been established.
6. Ensure immunizations for all age groups, including preventive herpes zoster, are done prior to CIBINQO in accordance with current standards.
7. Avoid administering live vaccinations immediately before, during, or after CIBINQO. therapy to prevent problems (FDA 2022).

## **References**

Pfizer. Inc. CIBINQO (abrocitinib) tablets Full Prescription CIBINQO® (abrocitinib) | Pfizer Medical - US.

U.S Food and Drug Administration. 2022. CIBINQO (abrocinib) prescribing information label.