

Fact Sheet

News from the IBD Help Center

JANUS KINASE INHIBITORS (JAK INHIBITORS)

Medical treatment for Crohn's disease and ulcerative colitis has two main goals: achieving remission (control or resolution of inflammation leading to symptom resolution) and then maintaining remission. To accomplish these goals, treatment is aimed at controlling the ongoing inflammation in the intestine—the cause of inflammatory bowel disease (IBD) symptoms.

JAK inhibitors are small molecule compounds that are broken down in the gastrointestinal tract after ingestion. The broken-down compounds are directly absorbed into the bloodstream through the intestines. Due to their small size, they can be carried to nearly anywhere in the body through the bloodstream to work directly on the immune system. These small substances can block multiple pathways of inflammation to control the inflammation of the intestines that IBD causes. They are currently available as tablets. But, unlike some of the other medications taken by mouth such as thiopurines (6-mercaptopurine and azathioprine) and methotrexate that take several weeks to control inflammation, JAK inhibitors work more quickly to achieve and maintain remission.

Currently, JAK inhibitors are used to treat ulcerative colitis, but they are also being studied in clinical trials for Crohn's disease. While their approval for ulcerative colitis is recent, they have been in use for rheumatoid arthritis since 2012.

Oral Medication

Tofacitinib (Xeljanz®) is FDA-approved, and available in tablets, to treat adult patients with moderate to severe ulcerative colitis.

Side Effects

- **Tofacitinib:** Most common side effects include headache, upper respiratory infection, and nasopharyngitis. Serious side effects include increased risk of cancers (skin cancers and lymphoma) as well as shingles.

Special Considerations

- JAK inhibitors reduce the activity of the immune system. In so doing, they also decrease the body's ability to fight infections. Be sure to report any signs of infection, including fever, chills, night sweats, sore throat, and other similar symptoms, to your doctor.
- While on tofacitinib, it is important to be vaccinated against infections that are preventable. You must, however, avoid live vaccines. There may be an increased risk of zoster (shingles) associated with tofacitinib; persons over the age of 50 should consider the dead, inactivated shingles vaccine series.
- Prior to starting tofacitinib, your health care provider will request blood work. Blood work that will be collected may include blood counts to look for anemia or a low white blood cell count, chronic infections such as tuberculosis (TB) and hepatitis, liver and kidney function tests, and cholesterol levels.

- There is insufficient data with tofacitinib use in pregnant women to establish a risk of major birth defects, miscarriage, or adverse maternal or fetal outcomes. Women who are pregnant or wish to become pregnant should talk to their doctors before starting tofacitinib.
- Become an active participant in your care! Learn as much as possible about these treatments from your doctor and pharmacist. Other information can be obtained from reliable internet sources, such as the Crohn's & Colitis Foundation (www.crohnscolitisfoundation.org) and treatment manufacturer websites.

Combination Therapy

For patients with IBD, tofacitinib is used as an individual therapy; combination therapy with immunomodulators or biologics is not recommended. Steroids should be tapered shortly after starting tofacitinib.

Drug Interactions

People taking several different medicines, whether prescription or over-the-counter should always consider interactions between drugs. Drug interactions may change how well a medication works, or cause unexpected side effects, some more harmful than others. Before taking any medication, be sure to read the label carefully and take it exactly as prescribed. Also, ask your doctor and pharmacist if there are any reactions to note with your existing medications. Be sure to include over-the-counter medications and complementary or alternative therapies (supplements, herbals, vitamins, etc.) when discussing your medications.

Take Medications as Prescribed

The best way to control IBD is by taking medications as recommended by your doctor. Even during times of remission, it is important to continue taking your medications as prescribed to stay well, and to prevent ongoing inflammation and future flares. If you are experiencing unpleasant side effects or you continue to have IBD symptoms, do not stop taking your medications until speaking with your doctor. Do not on your own alter the amount of medication or how frequently you take it.

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