

B. PACKAGE LEAFLET

Package leaflet: Information for the patient

Jakavi 5 mg tablets
Jakavi 10 mg tablets
Jakavi 15 mg tablets
Jakavi 20 mg tablets
ruxolitinib

Read all of this leaflet carefully before you start taking this medicine because it contains important information for you.

- Keep this leaflet. You may need to read it again.
- If you have any further questions, ask your doctor or pharmacist.
- This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
- If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Jakavi is and what it is used for
2. What you need to know before you take Jakavi
3. How to take Jakavi
4. Possible side effects
5. How to store Jakavi
6. Contents of the pack and other information

1. What Jakavi is and what it is used for

Jakavi contains the active substance ruxolitinib.

Jakavi is used to treat adult patients with an enlarged spleen or with symptoms related to myelofibrosis, a rare form of blood cancer.

Jakavi is also used to treat adult patients with polycythaemia vera who are resistant to or intolerant of hydroxyurea.

Jakavi is also used to treat patients 12 years of age and older and adults with graft-versus-host disease (GvHD). There are two forms of GvHD: an early form called acute GvHD that usually develops soon after the transplantation and can affect skin, liver and gastrointestinal tract, and a form called chronic GvHD, which develops later, usually weeks to months after the transplantation. Almost any organ can be affected by chronic GvHD.

How Jakavi works

Enlargement of the spleen is one of the characteristics of myelofibrosis. Myelofibrosis is a disorder of the bone marrow, in which the marrow is replaced by scar tissue. The abnormal marrow can no longer produce enough normal blood cells and as a result the spleen becomes significantly enlarged. By blocking the action of certain enzymes (called Janus Associated Kinases), Jakavi can reduce the size of the spleen in patients with myelofibrosis and relieve symptoms such as fever, night sweats, bone pain and weight loss in patients with myelofibrosis. Jakavi can help reduce the risk of serious blood or vascular complications.

Polycythaemia vera is a disorder of the bone marrow, in which the marrow produce too many red blood cells. The blood becomes thicker as a result of the increased red blood cells. Jakavi can relieve the symptoms, reduce spleen size and the volume of red blood cells produced in patients with polycythaemia vera by selectively blocking enzymes called Janus Associated Kinases (JAK1 and JAK2), thus potentially reducing the risk of serious blood or vascular complications.

Graft-versus-host disease is a complication which occurs after transplantation when specific cells (T cells) in the donor's graft (e.g. bone marrow) do not recognise the host cells/organs and attack them. By selectively blocking enzymes called Janus Associated Kinases (JAK1 and JAK2), Jakavi reduces signs and symptoms of the acute and the chronic forms of graft-versus-host disease leading to disease improvement and survival of the transplanted cells.

If you have any questions about how Jakavi works or why this medicine has been prescribed for you, ask your doctor.

2. What you need to know before you take Jakavi

Follow all your doctor's instructions carefully. They may differ from the general information contained in this leaflet.

Do not take Jakavi

- if you are allergic to ruxolitinib or any of the other ingredients of this medicine (listed in section 6).
- if you are pregnant or breast-feeding.

If either of the above applies to you, tell your doctor who will then decide whether you should start treatment with Jakavi.

Warnings and precautions

Talk to your doctor or pharmacist before taking Jakavi

- if you have any infections. It may be necessary to treat your infection before starting Jakavi. It is important that you tell your doctor if you have ever had tuberculosis or if you have been in close contact with someone who has or has had tuberculosis. Your doctor may perform tests to see if you have tuberculosis or any other infections. It is important that you tell your doctor if you have ever had hepatitis B.
- if you have any kidney problems. Your doctor may need to prescribe a different dose of Jakavi.
- if you have or have ever had any liver problems. Your doctor may need to prescribe a different dose of Jakavi.
- if you are taking other medicines (see section "Other medicines and Jakavi").
- if you have ever had tuberculosis.
- if you have ever had skin cancer.

Talk to your doctor or pharmacist during your treatment with Jakavi

- if you experience unexpected bruising and/or bleeding, unusual tiredness, shortness of breath during exercise or at rest, unusually pale skin, or frequent infections (these are signs of blood disorders).
- if you experience fever, chills or other symptoms of infections.
- if you experience chronic coughing with blood-tinged sputum, fever, night sweats and weight loss (these can be signs of tuberculosis).
- if you have any of the following symptoms or if anyone close to you notices that you have any of these symptoms: confusion or difficulty thinking, loss of balance or difficulty walking, clumsiness, difficulty speaking, decreased strength or weakness on one side of your body, blurred and/or loss of vision. These may be signs of a serious brain infection and your doctor may suggest further testing and follow-up.
- if you develop painful skin rash with blisters (these are signs of shingles).
- if you notice skin changes. This may require further observation, as certain types of skin cancer (non-melanoma) have been reported.

Blood tests

Before you start treatment with Jakavi, your doctor will perform blood tests to determine the best starting dose for you. You will need to have further blood tests during treatment so that your doctor can monitor the amount of blood cells (white cells, red cells and platelets) in your body and assess how you are responding to the treatment and whether Jakavi is having an unwanted effect on these cells. Your doctor may need to adjust the dose or stop treatment. Your doctor will carefully check if you have any signs or symptoms of infection before starting and during your treatment with Jakavi. Your doctor will also regularly check the level of lipids (fat) in your blood.

Children and adolescents

This medicine is not intended for use by children or adolescents aged below 18 years, who have the disease myelofibrosis or polycythaemia vera because it has not been studied in this age group.

For the treatment of graft-versus-host disease, Jakavi can be used in patients 12 years and older.

Other medicines and Jakavi

Tell your doctor or pharmacist if you are taking, have recently taken or might take any other medicines.

It is particularly important that you mention any of the following medicines containing any of the following active substances, as your doctor may need to adjust the Jakavi dose for you.

The following may increase the risk of side effects with Jakavi:

- Some medicines used to treat infections. These include medicines used to treat fungal diseases (such as ketoconazole, itraconazole, posaconazole, fluconazole and voriconazole), medicines used to treat certain types of bacterial infections (antibiotics such as clarithromycin, telithromycin, ciprofloxacin, or erythromycin), medicines to treat viral infections, including HIV infection/AIDS (such as amprenavir, atazanavir, indinavir, lopinavir/ritonavir, nelfinavir, ritonavir, saquinavir), medicines to treat hepatitis C (boceprevir, telaprevir).
- Nefazodone, a medicine to treat depression.
- Mibefradil or diltiazem, medicines to treat hypertension and chronic angina pectoris.
- Cimetidine, a medicine to treat heartburn.

The following may reduce the effectiveness of Jakavi:

- Avasimibe, a medicine to treat heart disease.
- Phenytoin, carbamazepine or phenobarbital and other anti-epileptics used to stop seizures or fits.
- Rifabutin or rifampicin, medicines used to treat tuberculosis (TB).
- St. John's wort (*Hypericum perforatum*), a herbal product used to treat depression.

While you are taking Jakavi you should never start a new medicine without checking first with the doctor who prescribed Jakavi. This includes prescription medicines, non-prescription medicines and herbal or alternative medicines.

Pregnancy and breast-feeding

Do not take Jakavi during pregnancy. Talk to your doctor about how to take appropriate measures to avoid becoming pregnant during your treatment with Jakavi.

Do not breast-feed while taking Jakavi. Tell your doctor if you are breast-feeding.

If you are pregnant or breast-feeding, think you may be pregnant or are planning to have a baby, ask your doctor or pharmacist for advice before taking this medicine.

Driving and using machines

If you experience dizziness after taking Jakavi, do not drive or use machines.

Jakavi contains lactose and sodium

Jakavi contains lactose (milk sugar). If you have been told by your doctor that you have an intolerance to some sugars, contact your doctor before taking this medicine.

This medicine contains less than 1 mmol sodium (23 mg) per tablet, that is to say essentially 'sodium-free'.

3. How to take Jakavi

Always take this medicine exactly as your doctor or pharmacist has told you. Check with your doctor or pharmacist if you are not sure.

The dose of Jakavi depends on the patient's blood cell count. Your doctor will measure the amount of blood cells in your body and find the best dose for you, particularly if you have liver or kidney problems.

- The recommended starting dose in myelofibrosis is 5 mg twice daily, 10 mg twice daily, 15 mg twice daily or 20 mg twice daily, depending on your blood cell count.
- The recommended starting dose in polycythaemia vera and in graft-versus-host disease is 10 mg twice daily.
- The maximum dose is 25 mg twice daily.

Your doctor will always tell you exactly how many Jakavi tablets to take.

During the treatment your doctor may recommend a lower or higher dose to you if the results of blood tests show that this is necessary, if you have problems with your liver or kidneys, or if you also need treatment with certain other medicines.

If you receive dialysis, take either one single dose or two separate doses of Jakavi only on dialysis days, after the dialysis has been completed. Your doctor will tell you if you should take one or two doses and how many tablets to take for each dose.

You should take Jakavi every day at the same time, either with or without food.

You should continue taking Jakavi for as long as your doctor tells you to. This is a long-term treatment.

Your doctor will regularly monitor your condition to make sure that the treatment is having the desired effect.

If you have questions about how long to take Jakavi, talk to your doctor or pharmacist.

If you experience certain side effects (e.g. blood disorders), your doctor might need to change the amount of Jakavi you have to take or tell you to stop taking Jakavi for a while.

If you take more Jakavi than you should

If you accidentally take more Jakavi than your doctor prescribed, contact your doctor or pharmacist immediately.

If you forget to take Jakavi

If you forgot to take Jakavi simply take your next dose at the scheduled time. Do not take a double dose to make up for a forgotten dose.

If you stop taking Jakavi

If you interrupt your treatment with Jakavi your symptoms related to myelofibrosis or polycythaemia vera may come back. In graft-versus-host disease, a reduction in your dose or stopping your treatment with Jakavi is possible if you respond to treatment and your doctor will supervise this procedure. Therefore, you should not stop taking Jakavi or change the dose without discussing it with your doctor.

If you have any further questions on the use of this medicine, ask your doctor or pharmacist.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Most of the side effects of Jakavi are mild to moderate and will generally disappear after a few days to a few weeks of treatment.

Myelofibrosis and polycythaemia vera

Some side effects could be serious

Seek medical help immediately prior to taking the next scheduled dose if you experience the following serious side effects:

Very common (may affect more than 1 in 10 people):

- any sign of bleeding in the stomach or intestine, such as passing black or bloodstained stools, or vomiting blood
- unexpected bruising and/or bleeding, unusual tiredness, shortness of breath during exercise or at rest, unusually pale skin, or frequent infections (possible symptoms of blood disorders)
- painful skin rash with blisters (possible symptoms of shingles (*herpes zoster*))
- fever, chills or other symptoms of infections
- low level of red blood cells (*anaemia*), low level of white blood cells (*neutropenia*) or low level of platelets (*thrombocytopenia*)

Common (may affect up to 1 in 10 people):

- any sign of bleeding in the brain, such as sudden altered level of consciousness, persistent headache, numbness, tingling, weakness or paralysis

Other side effects

Other possible side effects include the following listed below. If you experience these side effects, talk to your doctor or pharmacist.

Very common (may affect more than 1 in 10 people):

- high level of cholesterol or fat in the blood (*hypertriglyceridaemia*)
- abnormal liver function test results
- dizziness
- headache
- urinary tract infections
- weight gain
- fever, cough, difficult or painful breathing, wheezing, pain in chest when breathing (possible symptoms of pneumonia)
- high blood pressure (*hypertension*), which may also be the cause of dizziness and headaches
- constipation
- high level of lipase in the blood

Common (may affect up to 1 in 10 people):

- reduced number of all three types of blood cells - red blood cells, white blood cells, and platelets (*pancytopenia*)
- frequently passing wind (*flatulence*)

Uncommon (may affect up to 1 in 100 people):

- tuberculosis
- recurrence of hepatitis B infection (which can cause yellowing of the skin and eyes, dark brown-colored urine, right-sided stomach pain, fever and feeling nauseous or being sick).

Graft-versus-host disease (GvHD)

Some side effects could be serious

Seek medical help immediately prior to taking the next scheduled dose if you experience the following serious side effects:

Very common (may affect more than 1 in 10 people):

- fever, pain, redness, and/or difficulty breathing (possible symptoms of an infection with the cytomegalovirus (*cytomegalovirus infection*))
- fever, pain when urinating (possible symptoms of a urinary tract infection)
- fast heart rate, fever, confusion and rapid breathing (possible symptoms of sepsis, which is a serious condition that occurs in response to an infection that causes widespread inflammation)
- tiredness, fatigue, pale skin (possible symptoms of anaemia which is caused by low level of red blood cells), frequent infections, fever, chills, sore throat or mouth ulcers due to infections (possible symptoms of neutropenia which is caused by low level of white blood cells), spontaneous bleeding or bruising (possible symptoms of thrombocytopenia which is caused by low levels of platelets)
- low counts of all three types of blood cells - red blood cells, white blood cells, and platelets (*pancytopenia*)

Other side effects

Other possible side effects include the following listed below. If you experience these side effects, talk to your doctor or pharmacist.

Very common (may affect more than 1 in 10 people):

- high level of cholesterol (*hypercholesterolaemia*)
- headache
- high blood pressure (*hypertension*)
- high level of lipase in the blood
- abnormal blood test, which could indicate possible damage to the pancreas (elevated amylase)
- feeling sick (nausea)
- abnormal liver function test results
- increased blood level of enzyme from muscle potentially indicating muscle damage and/or muscle breakdown (increased blood creatine phosphokinase)
- increased blood level of creatinine, a substance normally eliminated by the kidneys into the urine, which may mean that your kidneys are not functioning properly (increased blood creatinine)

Common (may affect up to 1 in 10 people):

- fever, pain, redness, and/or difficulty breathing (possible symptoms of infection with BK virus)
- weight gain
- constipation

Reporting of side effects

If you get any side effects, talk to your doctor or pharmacist. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via [the national reporting system](#) listed in [Appendix V](#). By reporting side effects you can help provide more information on the safety of this medicine.

5. How to store Jakavi

Keep this medicine out of the sight and reach of children.

Do not use this medicine after the expiry date which is stated on the carton or blister after “EXP”.

Do not store above 30°C.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What Jakavi contains

- The active substance of Jakavi is ruxolitinib.
- Each 5 mg Jakavi tablet contains 5 mg of ruxolitinib.
- Each 10 mg Jakavi tablet contains 10 mg of ruxolitinib.
- Each 15 mg Jakavi tablet contains 15 mg of ruxolitinib.
- Each 20 mg Jakavi tablet contains 20 mg of ruxolitinib.
- The other ingredients are: microcrystalline cellulose, magnesium stearate, colloidal anhydrous silica, sodium starch glycolate, povidone, hydroxypropylcellulose, lactose monohydrate.

What Jakavi looks like and contents of the pack

Jakavi 5 mg tablets are white to almost white round tablets with “NVR” debossed on one side and “L5” debossed on the other side.

Jakavi 10 mg tablets are white to almost white round tablets with “NVR” debossed on one side and “L10” debossed on the other side.

Jakavi 15 mg tablets are white to almost white oval tablets with “NVR” debossed on one side and “L15” debossed on the other side.

Jakavi 20 mg tablets are white to almost white elongated tablets with “NVR” debossed on one side and “L20” debossed on the other side.

Jakavi tablets are supplied in blister packs containing 14 or 56 tablets or multipacks containing 168 (3 packs of 56) tablets

Not all packs may be marketed in your country.

Marketing Authorisation Holder

Novartis Europharm Limited
Vista Building
Elm Park, Merrion Road
Dublin 4
Ireland