

# Jeff Donovan MD PhD FRCPC

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## **INFORMATION ON RUXOLITINIB (JAKAFI/JAKAVI)**

### What is ruxolitinib?

- This medication is a tablet which inhibits a specific pathway inside cells which is known to play a role in development of alopecia areata
- Ruxolitinib inhibits the "Janus kinase" pathway and this medication is therefore known as a JAK inhibitor.
- Ruxolitinib has many uses and it is traditionally used to treat a condition known as myelofibrosis (a blood cancer) and another condition known as polycythemia vera

## What is the dose of ruxolitinib in alopecia areata?

- The dose will vary depending on age of the patient
- Adults frequently use 20 mg twice daily. This is started at 10 mg daily for 2 weeks followed by 20 mg daily for 2 weeks followed by 40 mg daily after. Blood tests are done every two weeks for the first 2 months.
- The medication can be taken with or without food (either is fine).
- Some patients use much lower doses than 20 mg twice daily. The only thing that matters in terms of dosing is whether hair growth is occurring. Some individuals experience growth on doses as low as 5-10 mg daily (and sometimes every other day).

#### Who should not use ruxolitinib?

Dr. Donovan will not prescribe this mediation if his patient:

- has an infection
- has tuberculosis (TB) at present of had the condition in the past, or have been in close contact with someone who has TB
- currently has or had hepatitis B or C or HIV
- currently has or have had liver problems
- currently has or have had kidney problems or are on dialysis.
- currently has or have had skin cancer in the past
- has any other medical conditions
- is pregnant or plans to become pregnant very soon.
- Is breastfeeding or plans to breastfeed

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### What are the side effects of ruxolitinib?

The following are potential side effects. It is important to keep in mind that side effects do not happen in most people. However, one must be aware of the range of side effects that are possible. The most common side effects are lowered red cells and platelets, bruising, headaches and dizziness.

Side effects include the following:

### 1. Lowered Blood Counts.

- Ruxolitinib can lower blood counts. This includes red cells, white cells and
  platelets in the blood stream. Blood tests will be important to have done
  every few weeks when starting to make sure the blood counts of the
  patients are remaining in a normal range.
- It is important that any patient with alopecia areata using ruxolitinib tell Dr. Donovan if they experience unusual bleeding, bruising, tiredness, fever or shortness of breath. Please call us at 604.283.9299 (press extension 1) and leave a message.
- If hemoglobin levels drop below 12.0 (US units), 120 (Canadian units) or platelets fall more than 100 points from the starting number (or below 150) or the absolute neutrophil count (ANC) drops below 2.0, Dr Donovan will advise you to reduce or stop the ruxolitinib regardless of how well it is working to help promote hair growth.

#### 2. Infection

- Ruxolitinib weakens the immune system and some patients develop infections while using this medication. These include bacterial, viral, fungal and other infections. These can be serious and affect any part of the body.
- It is important to contact our office immediately if you experience any of the following: fever, chills, aches, nausea, vomiting, weakness, skin rashes or blisters or just feel unwell.

### 3. Cholesterol problems

 Some patients using ruxolitinib develop high cholesterol. For this reason, Dr. Donovan will advise you to periodically check your cholesterol levels while on ruxolitinib.

#### 4. Skin cancers.

 It is important to periodically examine one's skin when using ruxolitinib because some patients have noted an increased chance of developing certain skin cancers (called non melanoma skin cancers).

