

# Researchers examine the metabolic effects of an oral blood cancer drug

November 12 2019

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A popular cancer drug is associated with significant weight gain and increased systolic blood pressure, researchers from the Icahn School of Medicine at Mount Sinai report in a study published in *Scientific Reports* in November.

The drug, ruxolitinib, was the first and currently remains the most widely used FDA-approved mechanism-based therapy for myeloproliferative neoplasms (MPNs), blood cancers that include myelofibrosis and polycythemia vera. Ruxolitinib is a Janus kinases (JAK) 1/2 inhibitor, an enzyme-blocker that affects blood cell production.

As cancer therapies improve, and patients are living longer on them, understanding the long-term consequences of these targeted therapies on [metabolic health](#) is increasingly important.

"Weight gain with ruxolitinib has previously been reported in [clinical trials](#), but our study provides real-world experience regarding the extent of that [weight gain](#)," said Emily J. Gallagher, MD, Ph.D., the study's lead author and Assistant Professor of Medicine (Endocrinology, Diabetes and Bone Disease) at the Icahn School of Medicine at Mount Sinai, specializing in onco-endocrinology, the treatment of endocrine complications of oncology treatments. "We recommend that patients who go on this medication and do have an increase in weight get a full metabolic evaluation."

The researchers studied 69 patients with MPNs who started on ruxolitinib from 2010 to 2017 at Mount Sinai. The patients' [medical records](#) had data on metabolic parameters up to one year prior to starting ruxolitinib and 72 weeks after starting the drug. They found that more than half of patients taking this medication gained more than 5 percent in body weight. The weight gain was also associated with an increase in [systolic blood pressure](#) and [liver enzymes](#).

"In contrast to the perception of many health care providers, patients are not going from being underweight to being a normal weight. Instead, a significant number of patients are developing obesity. Based on these results, physicians should be aware of the potential effects, and counsel patients accordingly," said Dr. Gallagher.

This study is the first step in documenting the metabolic consequences of this drug. Further studies are needed to gain a greater understanding of the changes in hormones and metabolism in those receiving treatment for this condition.

Provided by The Mount Sinai Hospital

Citation: Researchers examine the metabolic effects of an oral blood cancer drug (2019, November 12) retrieved 26 April 2024 from <https://medicalxpress.com/news/2019-11-metabolic-effects-oral-blood-cancer.html>

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