Targeted drug can 'diminish the suffering' of myelofibrosis

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Use of the targeted agent pacritinib significantly reduced the symptoms and burden of advanced myelofibrosis in patients, says a Mayo Clinic researcher who co-led PERSIST-1, the worldwide phase III clinical trial that tested the therapy. Specifically, pacritinib substantially reduced severe enlargement of the spleen, a typical feature of advanced myelofibrosis, in more than 20 percent of patients and alleviated debilitating side effects in more than 46 percent.

Investigators further found that pacritinib could be used safely in patients with myelofibrosis who have thrombocytopenia, a life-threating loss of blood platelets that can lead to deadly bleeding. The only currently approved therapy for myelofibrosis—ruxolitinib—is not recommended in patients who have severe thrombocytopenia.

Ruben A. Mesa, M.D., chair of hematology and medical oncology at Mayo Clinic in Arizona, will present these results at a press conference held during the 2015 American Society of Clinical Oncology (ASCO) annual meeting in Chicago.

'Use of pacritinib can alleviate the burden and diminish the suffering that this cancer causes,' says Mesa. 'For many of the patients who used it, pacritinib is a very good drug. The agent was significantly superior to other medical treatments.

'It is too early to know if pacritinib has an impact on survival, but that is clearly our expectation,' he adds.

Mayo researchers led by Mesa were also part of a phase II trial that found pacritinib offered significant benefit in treating the disorder.

Myelofibrosis is a chronic bone-marrow disorder that can lead to lowering of blood counts, scarring in the bone marrow, severe symptoms and enlargement of the spleen. Myelofibrosis can be life threatening for afflicted patients because of the debilitation the disease causes and/or progression to acute leukemia, Mesa says.

Myelofibrosis is one of three blood cancers classified as myeloproliferative neoplasms (MPNs), and MPN affects about 350,000 people in the U.S., he says.

In this study, two-thirds of the 327 patients with primary and secondary myelofibrosis were treated with pacritinib. The other one-third were treated with best available therapy (BAT), but were able to cross over to use of pacritinib if their cancer was largely nonresponsive. BAT was chosen by the patient's physician, but did not include ruxolitinib because many patients were not eligible for it due to existing thrombocytopenia.

Pacritinib, an oral drug, is known as a JAK2/FLT3 inhibitor. JAK2 is a protein that acts like an on-off growth switch in blood cells.

'The JAK2 pathway is abnormally turned on in patients, which leads to this chronic leukemia. This drug turns off that switch,' Mesa says.

PERSIST-1 investigators found that medium duration of treatment on the study was 16-plus months, and that by six months, spleen size was reduced in 25 percent of evaluable patients treated with pacritinib compared to 6 percent in the BAT group. Almost 80 percent of BAT patients crossed over to use of pacritinib, and 21 percent of all pacritinib patients had achieved a reduction in spleen volume of 35 percent or more. Symptoms of the cancer were reduced in more than 46 percent of

pacritinib-treated patients compared to 9 percent in patients given BAT.

Researchers also found that 25 percent of patients who needed blood transfusions at the beginning of the trial were able to stop the transfusions.

'This is a very favorable observation,' says Mesa.

Provided by Mayo Clinic