

# New leukemia drug is more effective and easier to use

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A Wright's stained bone marrow aspirate smear from a patient with precursor B-cell acute lymphoblastic leukemia. Credit: VashiDonsk/Wikipedia

A landmark study co-authored by a Loyola Medicine oncologist has found that a newer targeted drug is significantly more effective than standard therapy for treating elderly patients with chronic lymphocytic leukemia (CLL).

The [drug](#), ibrutinib, attacks cancer cells without damaging [normal cells](#), thus causing fewer side effects. The drug is taken as a pill once a day—much more convenient than the standard treatment requiring the patient to come in three times a month for infusions and an injection.

"Ibrutinib should become the new standard of care," said Loyola oncologist Scott Smith, MD, Ph.D., one of the senior authors of the study, which was published in *The New England Journal of Medicine*.

In 2016, the U.S. Food and Drug Administration approved ibrutinib (brand name, Imbruvica) for treatment of CLL.

Dr. Smith is a professor in the division of ematology/oncology, department of medicine of Loyola Medicine and Loyola University Chicago Stritch School of Medicine. He was executive officer of the Alliance for Clinical Trials in Oncology, which coordinated the study, and was responsible for the execution of the study.

CLL, a disease of the immune system, is the most common form of leukemia in adults. It affects mainly older adults, with the average age of diagnosis around 70. The risk is higher in men.

Until now, the standard treatment has been a combination of a chemotherapy drug (bendamustine) that kills cancer cells and an immunotherapy drug (rituximab) that suppresses the immune system.

The study enrolled 547 CLL patients (67 percent male) at 219 centers in the United States and Canada. All were older than 65, with a median age of 71. Researchers randomly assigned patients to receive one of three regimens: the standard treatment of bendamustine plus rituximab; ibrutinib alone; or ibrutinib plus rituximab. After two years, 87 percent of patients receiving ibrutinib alone were alive without any disease progression, compared with 74 percent of patients who received

bendamustine plus rituximab. There was no [significant difference](#) between patients receiving ibrutinib alone and those receiving ibrutinib plus rituximab.

About 17 percent of patients who received ibrutinib alone experienced an irregular heartbeat called atrial fibrillation. But overall, the drug caused fewer side effects than the standard treatment, Dr. Smith said.

Additional studies of ibrutinib are underway in CLL [patients](#) younger than age 65, Dr. Smith said.

The study, published Dec. 27, 2018, is titled "Ibrutinib Regimens versus Chemoimmunotherapy in Older Patients with Untreated CLL." First author is Jennifer Woyach, MD, of Ohio State University.

**More information:** Jennifer A. Woyach et al, Ibrutinib Regimens versus Chemoimmunotherapy in Older Patients with Untreated CLL, *New England Journal of Medicine* (2018). [DOI: 10.1056/NEJMoa1812836](#)

Provided by Loyola University Health System

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