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Health Canada Approves IMBRUVICA™ by Priority Review, Giving Physicians and Patients a Much-Needed Option in the Fight Against Chronic Lymphocytic Leukemia

New targeted oral therapy has demonstrated significant progression-free and overall survival benefits for patients with CLL who have received at least one prior therapy

Toronto, ON – November 19, 2014 – Janssen Inc. announced today Health Canada has approved IMBRUVICA™ (ibrutinib) for the treatment of the blood cancer chronic lymphocytic leukemia (CLL). It is indicated for the treatment of patients with CLL, including those with 17p deletion, who have received at least one prior therapy, or for the frontline treatment of patients with CLL with 17p deletion.[1] In CLL, 17p deletion is a genetic mutation that has been associated with poor treatment outcomes.[2]

IMBRUVICA™ is co-developed by Cilag GmbH International (a member of the Janssen Pharmaceutical Companies) and Pharmacyclics, Inc. Janssen will commercialize IMBRUVICA™ in Canada, and Janssen affiliates will commercialize it around the world, except in the United States, where Pharmacyclics and Janssen Biotech, Inc. co-market it.

IMBRUVICA™, a first-in-class Bruton's tyrosine kinase (BTK) inhibitor, is a once-daily, single-agent oral treatment that offers patients with CLL significant improvements in progression-free survival (PFS) and overall survival (OS).[3] IMBRUVICA™ is also the first approved therapy to demonstrate an overall survival advantage versus an active comparator (ofatumumab) in previously treated patients with CLL.

“The availability of IMBRUVICA™ is good news for Canadians who suffer from CLL. It provides patients the convenience of an oral therapy with unprecedented efficacy as seen in the clinical trials,” says Dr. Peter Anglin, Medical Oncologist at the Stronach Regional Cancer Centre in Newmarket. “This targeted therapy represents a milestone that changes the treatment paradigm, giving patients a new option other than chemo-immunotherapy. It should be accessible for patients who could benefit from it.”*

The approval of IMBRUVICA™ is supported by results from the RESONATE trial, an open label multicentre, randomized, controlled phase 3 study of single-agent, orally administered

IMBRUVICA™ versus the intravenous monoclonal antibody ofatumumab. The results showed IMBRUVICA™ significantly improved PFS (median not reached versus 8.1 months; HR 0.22, 95 per cent CI, 0.15 to 0.32; P<0.0001) and OS (HR 0.43; 95 per cent CI, 0.24 to 0.79; P=0.0049) compared to ofatumumab. The median OS was not reached in either arm.[4]

These PFS results represent a 78 per cent reduction in the risk of disease progression or death from any cause in patients treated with IMBRUVICA™ compared to ofatumumab.[5] The OS results represent a 57 per cent reduction in the risk of death in patients receiving IMBRUVICA™ compared to ofatumumab.

Additionally, the overall response rate (ORR) was significantly higher in patients taking IMBRUVICA™ versus ofatumumab (p<0.0001).

Results were consistent across all baseline subgroups including those with 17p deletion, a genetic mutation typically associated with poor prognosis.[6] This mutation affects less than 10 per cent of CLL patients who are newly diagnosed[7] and 20 to 40 per cent of previously treated patients with CLL.[8]

In January 2014, an Independent Data Monitoring Committee (IDMC) unanimously recommended the RESONATE study be stopped early at the pre-planned interim analysis which concluded there was a significant improvement in PFS compared to ofatumumab. The IDMC also recommended allowing patients receiving ofatumumab to switch to IMBRUVICA™.

About IMBRUVICA™

IMBRUVICA™ is an oral Bruton's tyrosine kinase (BTK) inhibitor that targets and blocks BTK, inhibiting cancer cell survival and spread.[9] The unique mechanism of action of IMBRUVICA™ leaves the healthy cells in the immune system largely unaffected, increasing their chances for long-term survival.

IMBRUVICA™ (ibrutinib) is indicated for the treatment of patients with chronic lymphocytic leukemia (CLL), including those with 17p deletion, who have received at least one prior therapy, or for the frontline treatment of patients with CLL with 17p deletion. Clinical effectiveness of IMBRUVICA™ in the frontline setting is based on the benefit observed in CLL patients with 17p deletion who have received at least one prior therapy. Clinical trial data in the frontline setting are very limited.

In the RESONATE phase 3 clinical trial, published in the *New England Journal of Medicine*, IMBRUVICA™ was generally well-tolerated. The most common Grade 3 or 4 adverse events in the RESONATE trial (occurring in five per cent or more of patients) were neutropenia (decreased amount of neutrophils in the blood; 16 per cent in the IMBRUVICA™ arm versus 14 per cent in the ofatumumab arm), pneumonia (seven per cent versus five per cent), thrombocytopenia (decrease in platelets in the blood; six per cent versus four per cent) and anemia (five per cent versus eight per cent).[10]

About CLL

Chronic lymphocytic leukemia is a blood cancer of white blood cells called lymphocytes, most commonly B cells.[11] Chronic lymphocytic leukemia is the most common type of leukemia in adults, with an average age of onset of 65.[12] In Canada, it is estimated that about 2,400 adults were diagnosed with CLL in 2010.[13] The disease often eventually progresses after treatment, and therefore patients are faced with fewer treatment options and are often prescribed multiple lines of therapy as they relapse or become resistant to treatments.[14]

About Janssen Inc.

Janssen Inc., Janssen Biotech, Inc. and Cilag GmbH International are members of the Janssen Pharmaceutical Companies of Johnson & Johnson, which are dedicated to addressing and solving some of the most important unmet medical needs in oncology, immunology, neuroscience, infectious diseases and vaccines, and cardiovascular and metabolic diseases. Driven by our commitment to patients, we bring innovative products, services and solutions to people throughout the world. Please visit www.janssen.ca for more information.

-30-

**Dr. Anglin was not compensated for any media work. He has been a paid consultant to Janssen Inc.*

References:

[1] IMBRUVICA™ (Ibrutinib) Product Monograph, Janssen Inc.
[2] NCCN Clinical Practice Guidelines in Oncology. Non-Hodgkins Lymphomas. Version 4.2014. Last Accessed October 2014.
[3] Byrd, JC, et al. "Ibrutinib versus Ofatumumab in Previously Treated Chronic Lymphoid Leukemia." *The New England Journal of Medicine* 371 (2014): 213-223.
[4] Byrd, JC, et al. "Ibrutinib versus Ofatumumab in Previously Treated Chronic Lymphoid Leukemia." *The New England Journal of Medicine* 371 (2014): 213-223.
[5] Byrd, JC, et al. "Ibrutinib versus Ofatumumab in Previously Treated Chronic Lymphoid Leukemia." *The New England Journal of Medicine* 371 (2014): 213-223.
[6] Byrd, JC, et al. "Ibrutinib versus Ofatumumab in Previously Treated Chronic Lymphoid Leukemia." *The New England Journal of Medicine* 371 (2014): 213-223.
[7] Schnaiter A, Stilgenbauer S. "17p deletion in chronic lymphocytic leukemia: risk stratification and therapeutic approach." *Hematol Oncol Clin North Am* 27, no. 2 (2013): 289-301.
[8] Stilgenbauer S, Zenz T. "Understanding and managing ultra high-risk chronic lymphocytic leukemia." *Hematology Am Soc Hematol Educ Program* 2010 (2010): 481-8.
[9] IMBRUVICA™ (Ibrutinib) Product Monograph, Janssen Inc.
[10] Byrd, JC, et al. "Ibrutinib versus Ofatumumab in Previously Treated Chronic Lymphoid Leukemia." *The New England Journal of Medicine* 371 (2014): 213-223.
[11] American Cancer Society. *Leukemia--Chronic Lymphocytic*. Available at: http://www.cancer.org/acs/groups/cid/documents/webcontent/003111-pdf.pdf. Accessed October 2014.
[12] Shaffer AL, Rosenwald A, Staudt LM. "Lymphoid malignancies: the dark side of B-cell differentiation." *Nat Rev Immunol* 2, no. 12 (2002): 920-32.
[13] The Leukemia and Lymphoma Society of Canada. *Incidence: How Common Is CLL?* Available from: http://www.llscanada.org/#/diseaseinformation/leukemia/chroniclymphocyticleukemia/incidence/. Accessed October 2014.
[14] Veliz M, Pinilla-Ibarz J. "Treatment of relapsed or refractory chronic lymphocytic leukemia." *Cancer Control*. 19, no. 1 (2012): 37-53.