



NEWS RELEASE

FDA Expands IMBRUVICA Label to Include New Data from Two Key Phase 3 Trials, Adding Overall Survival and Combination Data

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- RESONATE-2 overall survival data added, showing significant improvement with IMBRUVICA versus chlorambucil as a first-line treatment for chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL)

- Phase 3 HELIOS data expands use to include SLL and incorporates data using IMBRUVICA in combination with bendamustine and rituximab (BR) in patients with relapsed/refractory CLL/SLL

HORSHAM, Pa., May 9, 2016 /PRNewswire/ -- The U.S. Food and Drug Administration (FDA) has approved an expansion to the IMBRUVICA® (ibrutinib) U.S. Prescribing Information (PI) based on data supporting its use in patients with chronic lymphocytic leukemia/small lymphocytic lymphoma (CLL/SLL), Janssen announced today.¹ The approved label now includes overall survival (OS) data from the Phase 3 RESONATE-2 (PCYC-1115) trial in treatment-naïve CLL/SLL patients 65 years or older. The updated label also contains clinical data from the Phase 3 HELIOS (CLL3001) trial investigating the use of IMBRUVICA in combination with bendamustine and rituximab (BR) versus placebo plus BR in patients with relapsed or refractory CLL/SLL.

About the IMBRUVICA Label Update

Updated data from the RESONATE-2 trial reflect a statistically significant 56 percent reduction in the risk of death with IMBRUVICA compared to chlorambucil after a median follow-up of 28.1 months (HR=0.44 [95 percent CI, 0.21, 0.92]). The RESONATE-2 trial served as the basis for the **March 2016** FDA approval of IMBRUVICA as a first-line treatment for patients with CLL.

Additionally, the first data from the HELIOS study on the use of IMBRUVICA in combination with other therapies were added to the label, highlighting the improvement in progression-free survival (PFS) and overall response rate (ORR) when using IMBRUVICA plus BR versus placebo plus BR in patients with relapsed/refractory CLL/SLL. Following a review of the November 2015 supplemental New Drug Application, the FDA has expanded the indication to include the use of IMBRUVICA for SLL patients with or without deletion of the chromosome 17p (del 17p). SLL is a slow-growing lymphoma that is similar to CLL.^{1,2}

"The clinical development plan for IMBRUVICA is very robust and includes many Phase 2 and 3 clinical trials across various indications and combinations," said Peter F. Lebowitz, M.D., Ph.D., Global Oncology Head, Janssen Research & Development, LLC. "In partnership with Pharmacyclics, an AbbVie company, we continue to explore the clinical utility of IMBRUVICA and potential benefit it offers to patients with CLL/SLL and other hematologic malignancies."

"The update helps to affirm the established efficacy, safety and tolerability of this therapy for the treatment of patients with CLL/SLL, both as a monotherapy or in combination with other agents," said Jan Burger, M.D., Ph.D., Associate Professor, Department of Leukemia, Division of Cancer Medicine, The University of Texas MD Anderson Cancer Center, Houston, TX and RESONATE-2 study lead investigator. "It reflects the growing body of clinical evidence supporting this therapy as a potential treatment option for people living with CLL/SLL."

About the RESONATE-2 Study

Building on existing positive PFS results from the RESONATE-2 trial, the updated labeling includes information from an additional analysis of the OS data. IMBRUVICA demonstrated a statistically significant 56 percent reduction in the risk of death after a median follow-up of 28.1 months (HR=0.44 [95 percent CI, 0.21, 0.92]). This analysis included 41 percent of patients in the chlorambucil arm who crossed over to receive IMBRUVICA therapy after progressing.

RESONATE-2 is a Pharmacyclics-sponsored, randomized, open-label, international, multi-center Phase 3 study which evaluated the safety and efficacy of IMBRUVICA versus chlorambucil in 269 treatment-naïve patients with CLL/SLL aged 65 years or older. Patients were randomized to receive either IMBRUVICA 420 mg orally, once daily until progression or unacceptable toxicity, or chlorambucil 0.5 to 0.8 mg/kg on days 1 and 15 of each 28-day cycle for up to 12 cycles, with an allowance for inpatient dose increases up to 0.8 mg/kg based on tolerability. The primary endpoint of the study was PFS as assessed by an Independent Review Committee (IRC) according to the International Workshop on Chronic Lymphocytic Leukemia (iWCLL) 2008 criteria, with modification for treatment-related lymphocytosis. OS was a key secondary endpoint assessed in the study.

Results from **RESONATE-2** were presented in an oral session at the American Society of Hematology (ASH) meeting in Orlando, FL in December 2015 and simultaneously published in **The New England Journal of Medicine**. The results were also part of the official press program at ASH 2015.

About the HELIOS Study

Results showed the combination of IMBRUVICA plus BR was associated with an 80 percent reduction in the risk of progression or death (HR=0.20 [95 percent CI, 0.15, 0.28, P

HELIOS is a Janssen-sponsored, randomized, double-blind, placebo-controlled, international, multi-center, Phase 3 study conducted in 21 countries, which evaluated the safety and efficacy of IMBRUVICA in combination with BR in 578 patients with relapsed/refractory CLL/SLL who had received at least one prior therapy. Patients were randomized to receive either the combination of 420 mg IMBRUVICA orally once daily and six cycles of BR, or matching regimen of placebo orally once daily and six cycles of BR, with IMBRUVICA or placebo continued until disease progression or unacceptable toxicity. The primary endpoint was IRC-assessed PFS using the iwCLL 2008 criteria with modification for treatment-related lymphocytosis. Secondary endpoints included IRC-assessed ORR and safety.

Data from an interim analysis of **HELIOS** were presented during the official press program at the American Society of Clinical Oncology (ASCO) meeting in Chicago, IL in May 2015. The results were also published in **The Lancet Oncology** in December 2015.

IMBRUVICA Safety in CLL/SLL

Warnings and Precautions include hemorrhage, infections, cytopenias, atrial fibrillation, hypertension, second primary malignancies, tumor lysis syndrome and embryo-fetal toxicity. Four to 10 percent of patients receiving IMBRUVICA in the studies supporting the CLL indications (PCYC-1102, RESONATE-1 [PCYC-1112], RESONATE-2 [PCYC-1115] and HELIOS [CLL3001]) discontinued treatment due to adverse reactions (ARs). These included pneumonia, hemorrhage, atrial fibrillation, rash and neutropenia (one percent each). ARs leading to dose reduction occurred in approximately six percent of patients.

The ARs from the RESONATE-2 trial reported in the IMBRUVICA U.S. PI reflect exposure to IMBRUVICA with a median duration of 17.4 months versus a median exposure to chlorambucil of 7.1 months. The most common ARs (>20 percent) of any Grade in the RESONATE-2 trial for IMBRUVICA were diarrhea (42 percent), musculoskeletal pain* (36 percent), cough (22 percent) and rash* (21 percent). The most common Grade 3/4 AR (>five percent) was pneumonia* (eight percent).

The ARs from the HELIOS trial reported in the IMBRUVICA U.S. PI reflect exposure to IMBRUVICA plus BR with a median duration of 14.7 months versus a median exposure to placebo plus BR of 12.8 months. The most common ARs (>20 percent) of any Grade in the HELIOS trial for IMBRUVICA plus BR were neutropenia* (66 percent), diarrhea (36 percent), thrombocytopenia* (34 percent), musculoskeletal pain* (29 percent), pyrexia (25 percent), rash* (32 percent) and bruising* (20 percent). The most common Grade 3/4 ARs (>five percent) were neutropenia* (61

percent), thrombocytopenia* (16 percent) and hypertension* (five percent).

IMBRUVICA is jointly developed and commercialized by Janssen Biotech, Inc. and Pharmacyclics LLC, an AbbVie company. Janssen and Pharmacyclics continue to support an extensive clinical development program for IMBRUVICA, including a number of Phase 3 study commitments in a variety of patient populations.

About CLL/SLL

CLL is a slow-growing blood cancer that most commonly arises from B cells, a type of white blood cell (lymphocyte) that originates in the bone marrow.^{3,4} SLL is a slow-growing lymphoma biologically similar to CLL in which too many immature white blood cells cause lymph nodes to become larger than normal.² CLL/SLL are predominantly a disease of the elderly, with a median age of 71 at diagnosis.⁵

About IMBRUVICA

IMBRUVICA was one of the first therapies to receive U.S. approval after having received the FDA's Breakthrough Therapy Designation. IMBRUVICA works by blocking a specific protein called Bruton's tyrosine kinase (BTK).¹ The BTK protein transmits important signals that tell B cells to mature and produce antibodies and is needed by specific cancer cells to multiply and spread.^{1,6} IMBRUVICA targets and blocks BTK, inhibiting cancer cell survival and spread.¹ For more information, visit www.IMBRUVICA.com.

Access to IMBRUVICA

Janssen and AbbVie are striving to make access to IMBRUVICA easy by helping patients understand their insurance benefits for IMBRUVICA. The YOU&i™ Support Program is a personalized program that includes information on access and affordability, nurse call support and resources for patients being treated with IMBRUVICA. This includes the YOU&i™ Instant Savings program, which provides co-pay support to eligible commercially insured IMBRUVICA patients. This program is not valid for patients with Medicare or Medicaid. Patients can access the program by contacting 1-877-877-3536, option 1 or by visiting www.IMBRUVICA.com.

IMPORTANT SAFETY INFORMATION WARNINGS AND PRECAUTIONS

Hemorrhage - Fatal bleeding events have occurred in patients treated with IMBRUVICA[®]. Grade 3 or higher bleeding events (intracranial hemorrhage [including subdural hematoma], gastrointestinal bleeding, hematuria, and post-procedural hemorrhage) have occurred in up to 6% of patients. Bleeding events of any grade, including bruising and petechiae, occurred in approximately half of patients treated with IMBRUVICA[®].

The mechanism for the bleeding events is not well understood. IMBRUVICA[®] may increase the risk of hemorrhage in patients receiving antiplatelet or anticoagulant therapies and patients should be monitored for signs of bleeding.

Consider the benefit-risk of withholding IMBRUVICA[®] for at least 3 to 7 days pre- and postsurgery depending upon the type of surgery and the risk of bleeding.

Infections - Fatal and nonfatal infections have occurred with IMBRUVICA[®] therapy. Grade 3 or greater infections occurred in 14% to 29% of patients. Cases of progressive multifocal leukoencephalopathy (PML) have occurred in patients treated with IMBRUVICA[®]. Evaluate patients for fever and infections and treat appropriately.

Cytopenias - Treatment-emergent Grade 3 or 4 cytopenias including neutropenia (range, 19% to 29%), thrombocytopenia (range, 5% to 17%), and anemia (range, 0% to 9%) based on laboratory measurements occurred in patients treated with single agent IMBRUVICA[®]. Monitor complete blood counts monthly.

Atrial Fibrillation - Atrial fibrillation and atrial flutter (range, 6% to 9%) have occurred in patients treated with IMBRUVICA[®], particularly in patients with cardiac risk factors, hypertension, acute infections, and a previous history of atrial fibrillation. Periodically monitor patients clinically for atrial fibrillation. Patients who develop arrhythmic symptoms (eg, palpitations, lightheadedness) or new-onset dyspnea should have an ECG performed. Atrial fibrillation should be managed appropriately and if it persists, consider the risks and benefits of IMBRUVICA[®] treatment and follow dose modification guidelines.

Hypertension - Hypertension (range, 6% to 17%) has occurred in patients treated with IMBRUVICA[®] with a median time to onset of 4.6 months (range, 0.03 to 22 months). Monitor patients for new-onset hypertension or hypertension that is not adequately controlled after starting IMBRUVICA[®]. Adjust existing antihypertensive medications and/or initiate antihypertensive treatment as appropriate.

Second Primary Malignancies - Other malignancies (range, 5% to 16%) including non-skin carcinomas (range, 1% to 4%) have occurred in patients treated with IMBRUVICA[®]. The most frequent second primary malignancy was non-melanoma skin cancer (range, 4% to 13%).

Tumor Lysis Syndrome - Tumor lysis syndrome has been infrequently reported with IMBRUVICA[®] therapy. Assess the baseline risk (eg, high tumor burden) and take appropriate precautions. Monitor patients closely and treat as appropriate.

Embryo-Fetal Toxicity - Based on findings in animals, IMBRUVICA[®] can cause fetal harm when administered to a pregnant woman. Advise women to avoid becoming pregnant while taking IMBRUVICA[®] and for 1 month after cessation of therapy. If this drug is used during pregnancy or if the patient becomes pregnant while taking this drug, the patient should be apprised of the potential hazard to a fetus.

ADVERSE REACTIONS

The most common adverse reactions (>20%) in patients with B-cell malignancies (MCL, CLL/SLL, and WM) were neutropenia* (64%), thrombocytopenia* (63%), diarrhea (43%), anemia*(41%), musculoskeletal pain (30%), rash (29%), nausea (29%), bruising (29%), fatigue (27%), hemorrhage (21%), and pyrexia (21%).

*Based on adverse reactions and/or laboratory measurements (noted as platelets, neutrophils, or hemoglobin decreased).

The most common Grade 3 or 4 non-hematologic adverse reactions (>5%) in MCL patients were pneumonia (7%), abdominal pain (5%), atrial fibrillation (5%), diarrhea (5%), fatigue (5%), and skin infections (5%).

Approximately 6% (CLL), 14% (MCL), and 11% (WM) of patients had a dose reduction due to adverse reactions.

Approximately 4%-10% (CLL), 9% (MCL), and 6% (WM) of patients discontinued due to adverse reactions. Most frequent adverse reactions leading to discontinuation were pneumonia, hemorrhage, atrial fibrillation, rash and neutropenia (1% each) in CLL patients and subdural hematoma (1.8%) in MCL patients.

DRUG INTERACTIONS

CYP3A Inhibitors - Avoid coadministration with strong and moderate CYP3A inhibitors. If a moderate CYP3A inhibitor must be used, reduce the IMBRUVICA® dose.

CYP3A Inducers - Avoid coadministration with strong CYP3A inducers.

SPECIFIC POPULATIONS

Hepatic Impairment - Avoid use in patients with moderate or severe baseline hepatic impairment. In patients with mild impairment, reduce IMBRUVICA® dose.

Please see Full Prescribing Information: http://www.imbruvica.com/downloads/Prescribing_Information.pdf.

About the Janssen Pharmaceutical Companies

At the Janssen Pharmaceutical Companies of Johnson & Johnson, we are working to create a world without disease. Transforming lives by finding new and better ways to prevent, intercept, treat and cure disease inspires us. We bring together the best minds and pursue the most promising science. We are Janssen. We collaborate with the world for the health of everyone in it. Learn more at www.janssen.com. Follow us on Twitter at www.twitter.com/JanssenUS.

Cautions Concerning Forward-Looking Statements

This press release contains "forward-looking statements" as defined in the Private Securities Litigation Reform Act

of 1995 regarding product development. The reader is cautioned not to rely on these forward-looking statements. These statements are based on current expectations of future events. If underlying assumptions prove inaccurate or known or unknown risks or uncertainties materialize, actual results could vary materially from the expectations and projections of Janssen Biotech, Inc, Janssen Research & Development, LLC and/or Johnson & Johnson. Risks and uncertainties include, but are not limited to: challenges inherent in product research and development, including the uncertainty of clinical success and of obtaining regulatory approvals; uncertainty of commercial success; manufacturing difficulties and delays; competition, including technological advances, new products and patents attained by competitors; challenges to patents; changes to applicable laws and regulations, including global health care reforms; and trends toward health care cost containment. A further list and description of these risks, uncertainties and other factors can be found in Johnson & Johnson's Annual Report on Form 10-K for the fiscal year ended January 3, 2016, including in Exhibit 99 thereto, and the company's subsequent filings with the Securities and Exchange Commission. Copies of these filings are available online at www.sec.gov, www.jnj.com or on request from Johnson & Johnson. None of the Janssen Pharmaceutical Companies or Johnson & Johnson undertakes to update any forward-looking statement as a result of new information or future events or developments.

¹ IMBRUVICA Prescribing Information, May 2016.

² American Cancer Society. Leukemia - Chronic Lymphocytic. Available from:

<http://www.cancer.org/acs/groups/cid/documents/webcontent/003111-pdf.pdf>. Accessed May 2016.

³ American Cancer Society. Detailed guide: what is chronic lymphocytic leukemia. Available from:

<http://www.cancer.org/acs/groups/cid/documents/webcontent/003111-pdf.pdf>. Accessed May 2016.

⁴ Shaffer AL, Rosenwald A, Staudt LM. Lymphoid malignancies: the dark side of B-cell differentiation. *Nat Rev Immunol.* 2002;2(12):920-932.

⁵ American Cancer Society. What are the key statistics for chronic lymphocytic leukemia? Available from:

<http://www.cancer.org/cancer/leukemia-chroniclymphocyticcll/detailedguide/leukemia-chronic-lymphocytic-key-statistics>. Accessed May 2016.

⁶ Genetics Home Reference. Isolated growth hormone deficiency. Available from:

<http://ghr.nlm.nih.gov/condition/isolated-growth-hormone-deficiency>. Accessed May 2016.

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