#### HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use IMBRUVICA safely and effectively. See full prescribing information for IMBRUVICA.

IMBRUVICA® (ibrutinib) capsules, for oral use IMBRUVICA® (ibrutinib) tablets, for oral use Initial U.S. Approval: 2013

RECENT MAJOR	CHANGES
Dosage and Administration (2.1)	04/2020

Warnings and Precautions (5.1, 5.2, 5.3, 5.4, 5.5, 5.6)

04/2020 04/2020

#### -----INDICATIONS AND USAGE-----

IMBRUVICA is a kinase inhibitor indicated for the treatment of adult patients with:

Mantle cell lymphoma (MCL) who have received at least one prior therapy (1.1).

This indiation is approved under accelerated approval based on overall response rate. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial(s).

- Chronic lymphocytic leukemia (CLL)/Small lymphocytic lymphoma (SLL)(1.2).
- Chronic lymphocytic leukemia (CLL)/Small lymphocytic lymphoma (SLL) with 17p deletion (1.3).
- Waldenström's macroglobulinemia (WM) (1.4).
- Marginal zone lymphoma (MZL) who require systemic therapy and have received at least one prior anti-CD20-based therapy (1.5).

This indication is approved under accelerated approval based on overall response rate. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory

Chronic graft versus host disease (cGVHD) after failure of one or more lines of systemic therapy (1.6).

#### -----DOSAGE AND ADMINISTRATION-----

- MCL and MZL: 560 mg taken orally once daily (2.1).
- CLL/SLL, WM, and cGVHD: 420 mg taken orally once daily (2.1).

Dose should be taken orally with a glass of water. Do not open, break, or chew the capsules. Do not cut, crush, or chew the tablets (2.1).

#### -----DOSAGE FORMS AND STRENGTHS-----

Capsules: 70 mg and 140 mg (3)

Tablets: 140 mg, 280 mg, 420 mg, and 560 mg (3)

-----CONTRAINDICATIONS-----

None (4)

#### FULL PRESCRIBING INFORMATION: CONTENTS\*

- INDICATIONS AND USAGE
  - Mantle Cell Lymphoma 1.1
  - 1.2 Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma
  - 1.3 Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma with 17p deletion
  - Waldenström's Macroglobulinemia
  - Marginal Zone Lymphoma 1.5
  - Chronic Graft versus Host Disease
- DOSAGE AND ADMINISTRATION
  - 2.1 Recommended Dosage
  - 2.2 Dosage Modifications for Adverse Reactions
  - 2.3 Dosage Modifications for Use with CYP3A Inhibitors
  - 2.4 Dosage Modifications for Use in Hepatic Impairment
- DOSAGE FORMS AND STRENGTHS
- CONTRAINDICATIONS
- WARNINGS AND PRECAUTIONS
  - Hemorrhage 5.1
  - 5.2 Infections
  - 5.3 Cytopenias
  - 5.4 Cardiac Arrhythmias
  - 5.5 Hypertension
  - 5.6 Second Primary Malignancies
  - 5.7 Tumor Lysis Syndrome
  - **Embryo-Fetal Toxicity**

# ------WARNINGS AND PRECAUTIONS-----

- <u>Hemorrhage</u>: Monitor for bleeding and manage (5.1).
- Infections: Monitor patients for fever and infections, evaluate promptly, and treat (5.2).
- Cytopenias: Check complete blood counts monthly (5.3).
- Cardiac Arrhythmias: Monitor for symptoms of arrhythmias and manage
- Hypertension: Monitor blood pressure and treat (5.5).
- Second Primary Malignancies: Other malignancies have occurred in patients, including skin cancers, and other carcinomas (5.6).
- Tumor Lysis Syndrome (TLS): Assess baseline risk and take precautions. Monitor and treat for TLS (5.7).
- Embryo-Fetal Toxicity: Can cause fetal harm. Advise females of reproductive potential of the potential risk to a fetus and to use effective contraception (5.8, 8.1, 8.3).

#### -----ADVERSE REACTIONS-----

- The most common (≥30%) adverse reactions in patients with B-cell malignancies (MCL, CLL/SLL, WM and MZL) are thrombocytopenia, diarrhea, fatigue, musculoskeletal pain, neutropenia, rash, anemia, and bruising(6).
- The most common (≥20%) adverse reactions in patients with cGVHD are fatigue, bruising, diarrhea, thrombocytopenia, muscle spasms, stomatitis, nausea, hemorrhage, anemia, and pneumonia (6).

To report SUSPECTED ADVERSE REACTIONS, contact Pharmacyclics at 1-877-877-3536 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

#### -----DRUG INTERACTIONS-----

- CYP3A Inhibitors: Modify IMBRUVICA dose as described (2.3, 7.1).
- CYP3A Inducers: Avoid coadministration with strong CYP3A inducers

#### -----USE IN SPECIFIC POPULATIONS-----

- Lactation: Advise not to breastfeed. (8.2)
- Hepatic Impairment (based on Child-Pugh criteria): Avoid use of IMBRUVICA in patients with severe hepatic impairment. In patients with mild or moderate impairment, reduce IMBRUVICA dose (2.4, 8.6).

See 17 for PATIENT COUNSELING INFORMATION and FDA approved patient labeling.

Revised: 12/2020

#### **DRUG INTERACTIONS**

- Effect of CYP3A Inhibitors on Ibrutinib
- Effect of CYP3A Inducers on Ibrutinib
- USE IN SPECIFIC POPULATIONS
  - 8.1 Pregnancy
  - 8.2 Lactation
  - 8.3 Females and Males of Reproductive Potential
  - 8.4 Pediatric Use
  - 8.5 Geriatric Use
  - 8.6 Hepatic Impairment
  - 8.7 Plasmapheresis
- **OVERDOSAGE**
- DESCRIPTION
- **CLINICAL PHARMACOLOGY** 
  - 12.1 Mechanism of Action
  - 12.2 Pharmacodynamics
  - 12.3 Pharmacokinetics
- NONCLINICAL TOXICOLOGY
  - 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility
- CLINICAL STUDIES
  - 14.1 Mantle Cell Lymphoma
  - 14.2 Chronic Lymphocytic Leukemia / Small Lymphocytic Lymphoma
  - 14.3 Waldenström's Macroglobulinemia
  - 14.4 Marginal Zone Lymphoma
  - Chronic Graft versus Host Disease



#### **FULL PRESCRIBING INFORMATION**

#### 1 INDICATIONS AND USAGE

# 1.1 Mantle Cell Lymphoma

IMBRUVICA is indicated for the treatment of adult patients with mantle cell lymphoma (MCL) who have received at least one prior therapy.

This indication is approved under accelerated approval based on overall response rate. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial(s) [see Clinical Studies (14.1)].

# 1.2 Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma

IMBRUVICA is indicated for the treatment of adult patients with chronic lymphocytic leukemia (CLL)/small lymphocytic lymphoma (SLL).

# 1.3 Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma with 17p deletion

IMBRUVICA is indicated for the treatment of adult patients with chronic lymphocytic leukemia (CLL)/small lymphocytic lymphoma (SLL) with 17p deletion.

# 1.4 Waldenström's Macroglobulinemia

IMBRUVICA is indicated for the treatment of adult patients with Waldenström's macroglobulinemia (WM).

## 1.5 Marginal Zone Lymphoma

IMBRUVICA is indicated for the treatment of adult patients with marginal zone lymphoma (MZL) who require systemic therapy and have received at least one prior anti-CD20-based therapy.

This indication is approved under accelerated approval based on overall response rate [see Clinical Studies (14.4)]. Continued approval for this indication may be contingent upon verification and description of clinical benefit in a confirmatory trial(s).

#### 1.6 Chronic Graft versus Host Disease

IMBRUVICA is indicated for the treatment of adult patients with chronic graft-versus-host disease (cGVHD) after failure of one or more lines of systemic therapy.

#### 2 DOSAGE AND ADMINISTRATION

# 2.1 Recommended Dosage

Mantle Cell Lymphoma and Marginal Zone Lymphoma

The recommended dosage of IMBRUVICA for MCL and MZL is 560 mg orally once daily until disease progression or unacceptable toxicity.



# <u>Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma and Waldenström's Macroglobulinemia</u>

The recommended dosage of IMBRUVICA for CLL/SLL and WM is 420 mg orally once daily until disease progression or unacceptable toxicity.

For CLL/SLL, IMBRUVICA can be administered as a single agent, in combination with rituximab or obinutuzumab, or in combination with bendamustine and rituximab (BR).

For WM, IMBRUVICA can be administered as a single agent or in combination with rituximab.

When administering IMBRUVICA in combination with rituximab or obinutuzumab, consider administering IMBRUVICA prior to rituximab or obinutuzumab when given on the same day.

#### Chronic Graft versus Host Disease

The recommended dosage of IMBRUVICA for cGVHD is 420 mg orally once daily until cGVHD progression, recurrence of an underlying malignancy, or unacceptable toxicity. When a patient no longer requires therapy for the treatment of cGVHD, IMBRUVICA should be discontinued considering the medical assessment of the individual patient.

# Administration

Administer IMBRUVICA at approximately the same time each day with a glass of water.

Swallow tablets or capsule whole. Do not open, break, or chew the capsules. Do not cut, crush, or chew the tablets.

If a dose of IMBRUVICA is not taken at the scheduled time, it can be taken as soon as possible on the same day with a return to the normal schedule the following day. Do not take extra doses of IMBRUVICA to make up for the missed dose.

# 2.2 Dosage Modifications for Adverse Reactions

Interrupt IMBRUVICA therapy for any Grade 3 or 4 non-hematological toxicities, Grade 3 or 4 neutropenia with infection or fever, or Grade 4 hematological toxicities. Once the adverse reaction has improved to Grade 1 or baseline (recovery), IMBRUVICA may be reinitiated at the starting dose. If the adverse reaction reoccurs, reduce dose by 140 mg per day. Consider a second reduction of dose by 140 mg as needed. If these adverse reactions persist or recur following two dose reductions, discontinue IMBRUVICA.

Recommended dose modifications are described below:

	Dose Modification for MCL and MZL After Recovery	Dose Modification for CLL/SLL, WM, and cGVHD After Recovery
<b>Toxicity Occurrence</b>	Starting Dose = 560 mg	Starting Dose = 420 mg
First	Restart at 560 mg daily	Restart at 420 mg daily
Second	Restart at 420 mg daily	Restart at 280 mg daily
Third	Restart at 280 mg daily	Restart at 140 mg daily
Fourth	Discontinue IMBRUVICA	Discontinue IMBRUVICA



# 2.3 Dosage Modifications for Use with CYP3A Inhibitors

Recommended dosage modifications are described below [see Drug Interactions (7.1)]:

Patient Population	Coadministered Drug	Recommended IMBRUVICA Dosage
B-Cell Malignancies	Moderate CYP3A inhibitor	280 mg once daily  Modify dose as recommended [see Dosage and Administration (2.2)].
	<ul> <li>Voriconazole 200 mg twice daily</li> <li>Posaconazole suspension 100 mg once daily, 100 mg twice daily, or 200 mg twice daily</li> </ul>	140 mg once daily  Modify dose as recommended [see Dosage and Administration (2.2)].
	<ul> <li>Posaconazole suspension 200 mg three times daily or 400 mg twice daily</li> <li>Posaconazole intravenously 300 mg once daily</li> <li>Posaconazole delayed-release tablets 300 mg once daily</li> </ul>	70 mg once daily Interrupt dose as recommended [see Dosage and Administration (2.2)].
	Other strong CYP3A inhibitors	Avoid concomitant use.  If these inhibitors will be used short-term (such as anti-infectives for seven days or less), interrupt IMBRUVICA.
Chronic Graft versus Host Disease	Moderate CYP3A inhibitor	420 mg once daily  Modify dose as recommended [see Dosage and Administration (2.2)].
	<ul> <li>Voriconazole 200 mg twice daily</li> <li>Posaconazole suspension 100 mg once daily, 100 mg twice daily, or 200 mg twice daily</li> </ul>	280 mg once daily Modify dose as recommended [see Dosage and Administration (2.2)].
	<ul> <li>Posaconazole suspension 200 mg three times daily or 400 mg twice daily</li> <li>Posaconazole intravenously 300 mg once daily</li> <li>Posaconazole delayed-release tablets 300 mg once daily</li> </ul>	140 mg once daily Interrupt dose as recommended [see Dosage and Administration (2.2)].
	Other strong CYP3A inhibitors	Avoid concomitant use.  If these inhibitors will be used short-term (such as anti-infectives for seven days or less), interrupt IMBRUVICA.

After discontinuation of a CYP3A inhibitor, resume previous dose of IMBRUVICA [see Dosage and Administration (2.1), Drug Interactions (7.1)].



# 2.4 Dosage Modifications for Use in Hepatic Impairment

The recommended dosage is 140 mg daily for patients with mild hepatic impairment (Child-Pugh class A).

The recommended dosage is 70 mg daily for patients with moderate hepatic impairment (Child-Pugh class B).

Avoid the use of IMBRUVICA in patients with severe hepatic impairment (Child-Pugh class C) [see Use in Specific Populations (8.6), Clinical Pharmacology (12.3)].

#### 3 DOSAGE FORMS AND STRENGTHS

# Capsules:

Each 70 mg capsule is a yellow, opaque capsule marked with "ibr 70 mg" in black ink.

Each 140 mg capsule is a white, opaque capsule marked with "ibr 140 mg" in black ink.

## Tablets:

Each 140 mg tablet is a yellow green to green round tablet debossed with "ibr" on one side and "140" on the other side.

Each 280 mg tablet is a purple oblong tablet debossed with "ibr" on one side and "280" on the other side.

Each 420 mg tablet is a yellow green to green oblong tablet debossed with "ibr" on one side and "420" on the other side.

Each 560 mg tablet is a yellow to orange oblong tablet debossed with "ibr" on one side and "560" on the other side.

#### 4 CONTRAINDICATIONS

None

#### 5 WARNINGS AND PRECAUTIONS

## 5.1 Hemorrhage

Fatal bleeding events have occurred in patients who received IMBRUVICA. Major hemorrhage (≥ Grade 3, serious, or any central nervous system events; e.g., intracranial hemorrhage [including subdural hematoma], gastrointestinal bleeding, hematuria, and post procedural hemorrhage) occurred in 4% of patients, with fatalities occurring in 0.4% of 2,838 patients who received IMBRUVICA in 27 clinical trials. Bleeding events, including bruising and petechiae, occurred in 39% of patients who received IMBRUVICA.

The mechanism for the bleeding events is not well understood.

Use of either anticoagulant or antiplatelet agents concomitantly with IMBRUVICA increases the risk of major hemorrhage. Across clinical trials, 3.1% of 2,838 patients who received IMBRUVICA without antiplatelet or anticoagulant therapy experienced major hemorrhage. The



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