

## Dosing and Administration Guide

BRIUMVI injection is a 150 mg/6 mL (25 mg/mL) clear to opalescent, colorless to slightly yellow solution in a single-dose vial.<sup>1</sup>

BRIUMVI is administered by IV infusion as a 450-mg IV dose over 1 hour every 24 weeks after the first starting doses (doses 1 and 2).1\*

Please see accompanying full Prescribing Information for full Dosing and Administration instructions.



\*First dose is a 150-mg infusion over 4 hours, followed 2 weeks later by a second dose of 450 mg over 1 hour.¹ IV, intravenous.

## **INDICATION**

BRIUMVI is indicated for the treatment of relapsing forms of multiple sclerosis (MS), to include clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive disease, in adults.

## **IMPORTANT SAFETY INFORMATION**

**Contraindications:** BRIUMVI is contraindicated in patients with:

- Active HBV infection
- A history of life-threatening infusion reaction to BRIUMVI

This Dosing Guide is not a substitute for the full Prescribing Information.

Please see accompanying full Prescribing Information. For additional Important Safety Information, please see pages 14-15.

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This Dosing Guide is not a substitute for the full Prescribing Information.

## Indication and overview of BRIUMVI<sup>1,2-5</sup>



## **INDICATION**

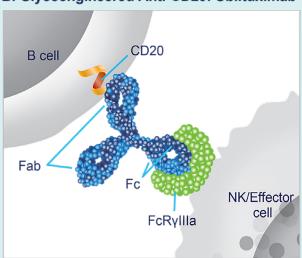
BRIUMVI is indicated for the treatment of relapsing forms of multiple sclerosis (MS), to include clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive disease, in adults.<sup>1</sup>

## BRIUMVI is designed for efficient B-cell depletion at low doses<sup>2-5</sup>

## A. Nonglycoengineered Anti-CD20

# Oligosaccharides Fab Fc NK/Effector cell

## B. Glycoengineered Anti-CD20: Ublituximab



BRIUMVI is glycoengineered to exclude certain sugar molecules normally present on antibodies that can interfere with their function. Removal of these sugar molecules enhances affinity for the NK/effector cells, leading to efficient B-cell depletion at low doses. B-cell counts were depleted by 96% at 24 hours after a single dose and were maintained at this level for the remainder of the study.

Fab, fragment antigen-binding; Fc, fragment crystallizable; NK, natural killer.

### IMPORTANT SAFETY INFORMATION

### WARNINGS AND PRECAUTIONS

**Infusion Reactions:** BRIUMVI can cause infusion reactions, which can include pyrexia, chills, headache, influenza-like illness, tachycardia, nausea, throat irritation, erythema, and an anaphylactic reaction. In MS clinical trials, the incidence of infusion reactions in BRIUMVI-treated patients who received infusion reaction-limiting premedication prior to each infusion was 48%, with the highest incidence within 24 hours of the first infusion. 0.6% of BRIUMVI-treated patients experienced infusion reactions that were serious, some requiring hospitalization.

This Dosing Guide is not a substitute for the full Prescribing Information.

## Patient counseling information<sup>1</sup>



## **Infusion Reactions**

Inform patients about the signs and symptoms of infusion reactions and that infusion reactions can occur up to 24 hours after infusion. Advise patients to contact their healthcare provider immediately for signs or symptoms of infusion reactions.

## Infection

Advise patients to contact their healthcare provider for any signs of infection during treatment or after the last infusion. Signs can include fever, chills, constant cough, or dysuria.

## Hepatitis B Virus (HBV) Reactivation

Advise patients that BRIUMVI may cause reactivation of hepatitis B infection and that monitoring will be required if they are at risk.

## Progressive Multifocal Leukoencephalopathy (PML)

Advise patients that PML has happened with drugs that are similar to BRIUMVI and may happen with BRIUMVI. Inform the patient that PML is characterized by a progression of deficits and usually leads to death or severe disability over weeks or months. Instruct the patient of the importance of contacting their doctor if they develop any symptoms suggestive of PML. Inform the patient that typical symptoms associated with PML are diverse, progress over days to weeks, and include progressive weakness on one side of the body or clumsiness of limbs, disturbance of vision, and changes in thinking, memory, and orientation leading to confusion and personality changes.

## **Vaccinations**

Advise patients to complete any required live or live-attenuated vaccinations at least 4 weeks and, whenever possible, non-live vaccinations at least 2 weeks prior to initiation of BRIUMVI. Administration of live-attenuated or live vaccines is not recommended during BRIUMVI treatment and until B-cell recovery.

## **Fetal Risk**

Advise pregnant women and females of reproductive potential of the potential risk to a fetus. Advise females of reproductive potential to use effective contraception during treatment with BRIUMVI and for 6 months after the last BRIUMVI dose. Advise patients to notify their healthcare provider if they are pregnant during treatment with BRIUMVI.

## IMPORTANT SAFETY INFORMATION

Infusion Reactions (cont'd): Observe treated patients for infusion reactions during the infusion and for at least one hour after the completion of the first two infusions unless infusion reaction and/or hypersensitivity has been observed in association with the current or any prior infusion. Inform patients that infusion reactions can occur up to 24 hours after the infusion. Administer the recommended pre-medication to reduce the frequency and severity of infusion reactions. If life-threatening, stop the infusion immediately, permanently discontinue BRIUMVI, and administer appropriate supportive treatment. Less severe infusion reactions may involve temporarily stopping the infusion, reducing the infusion rate, and/or administering symptomatic treatment.

This Dosing Guide is not a substitute for the full Prescribing Information.

## Assessments and preparation<sup>1</sup>



## Assessments prior to the first dose of BRIUMVI



## **HBV Screening**

- Prior to initiating BRIUMVI, perform HBV screening. BRIUMVI is contraindicated in patients with active HBV confirmed by positive results for Hepatitis B surface antigen (HBsAg) and anti-HBV tests
- For patients who are negative for HBsAg and positive for Hepatitis B core antibody (HBcAb+) or are carriers of HBV (HBsAg+), consult liver disease experts before starting and during treatment with BRIUMVI



## **Serum Immunoglobulins**

 Prior to initiating BRIUMVI, perform testing for quantitative serum immunoglobulins. For patients with low serum immunoglobulins, consult immunology experts before initiating treatment with BRIUMVI



## **Vaccinations**

• Because vaccination with live-attenuated or live vaccines is not recommended during treatment and after discontinuation until B-cell repletion, administer all immunizations according to immunization guidelines at least 4 weeks prior to initiation of BRIUMVI for live or live-attenuated vaccines and, whenever possible, at least 2 weeks prior to initiation of BRIUMVI for non-live vaccines

## **Assessment before every infusion**



## **Infection Assessment**

• Prior to every infusion of BRIUMVI, determine whether there is an active infection. In case of an active infection, delay infusion of BRIUMVI until the infection resolves



## **Pregnancy Testing (Recommended)**

 Pregnancy testing is recommended for females of reproductive potential prior to each infusion with BRIUMVI

## **IMPORTANT SAFETY INFORMATION**

**Infections:** Serious, life-threatening or fatal, bacterial and viral infections have been reported in BRIUMVI-treated patients. In MS clinical trials, the overall rate of infections in BRIUMVI-treated patients was 56% compared to 54% in teriflunomide-treated patients. The rate of serious infections was 5% compared to 3% respectively. There were 3 infection-related deaths in BRIUMVI-treated patients. The most common infections in BRIUMVI-treated patients included upper respiratory tract infection (45%) and urinary tract infection (10%). Delay BRIUMVI administration in patients with an active infection until the infection is resolved.

Consider the potential for increased immunosuppressive effects when initiating BRIUMVI after immunosuppressive therapy or initiating an immunosuppressive therapy after BRIUMVI.

This Dosing Guide is not a substitute for the full Prescribing Information.

## Premedication<sup>1</sup>



## **BRIUMVI** offers flexible premedication



Premedicate with 100 mg of methylprednisolone administered intravenously (or an equivalent oral dosage or equivalent corticosteroid) approximately 30 minutes prior to each BRIUMVI infusion to reduce the frequency and severity of infusion reactions.

Premedicate with an antihistamine
(eg, diphenhydramine) administered orally
or intravenously approximately
30-60 minutes prior to each BRIUMVI
infusion to further reduce the frequency
and severity of infusion reactions.



The addition of an antipyretic (eg, acetaminophen) may also be considered.

### IMPORTANT SAFETY INFORMATION

Hepatitis B Virus (HBV) Reactivation: HBV reactivation occurred in an MS patient treated with BRIUMVI in clinical trials. Fulminant hepatitis, hepatic failure, and death caused by HBV reactivation have occurred in patients treated with anti-CD20 antibodies. Perform HBV screening in all patients before initiation of treatment with BRIUMVI. Do not start treatment with BRIUMVI in patients with active HBV confirmed by positive results for HBsAg and anti-HB tests. For patients who are negative for surface antigen [HBsAg] and positive for HB core antibody [HBcAb+] or are carriers of HBV [HBsAg+], consult a liver disease expert before starting and during treatment.

*Progressive Multifocal Leukoencephalopathy (PML):* Although no cases of PML have occurred in BRIUMVI-treated MS patients, JCV infection resulting in PML has been observed in patients treated with other anti-CD20 antibodies and other MS therapies.

If PML is suspected, withhold BRIUMVI and perform an appropriate diagnostic evaluation. Typical symptoms associated with PML are diverse, progress over days to weeks, and include progressive weakness on one side of the body or clumsiness of limbs, disturbance of vision, and changes in thinking, memory, and orientation leading to confusion and personality changes.

This Dosing Guide is not a substitute for the full Prescribing Information.

## Dose and dosing schedule<sup>1,6,7</sup>



## BRIUMVI is the first and only anti-CD20 therapy that is administered as a twice-yearly 1-hour infusion<sup>1,6,7</sup>\*

- Administer BRIUMVI under the close supervision of an experienced healthcare professional with access to appropriate medical support to manage severe reactions such as serious infusion reactions
- The first IV infusion is 150 mg over 4 hours
- Followed by a second IV infusion of 450 mg administered 2 weeks after the first infusion
- Subsequent infusions of 450 mg IV over 1 hour are given every 24 weeks after the **FIRST** 150-mg IV infusion and every 24 weeks thereafter
- Observe the patient during and for at least 1 hour after the completion of the first 2 infusions. Post-infusion monitoring of subsequent infusions is at physician discretion unless infusion reaction and/or hypersensitivity has been observed in association with the current or any prior infusion



## Delayed or missed doses<sup>1</sup>

- If a planned infusion of BRIUMVI is missed, administer BRIUMVI as soon as possible. **Do not wait until the next scheduled infusion**
- Reset the infusion schedule to administer the next sequential infusion 24 weeks after the missed infusion is administered. Infusions of BRIUMVI must be separated by at least 5 months

### IMPORTANT SAFETY INFORMATION

Progressive Multifocal Leukoencephalopathy (PML) (cont'd): MRI findings may be apparent before clinical signs or symptoms; monitoring for signs consistent with PML may be useful. Further investigate suspicious findings to allow for an early diagnosis of PML, if present. Following discontinuation of another MS medication associated with PML, lower PML-related mortality and morbidity have been reported in patients who were initially asymptomatic at diagnosis compared to patients who had characteristic clinical signs and symptoms at diagnosis.

If PML is confirmed, treatment with BRIUMVI should be discontinued.

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<sup>\*</sup>Following the starting dose. Day 1 infusion of 150 mg in 4 hours, day 15 infusion of 450 mg in 1 hour, and subsequent infusions of 450 mg in 1 hour every 24 weeks.  $^{1}$ 

## Administration and infusion rate table<sup>1</sup>



## Administer the diluted infusion solution through a dedicated line



Administer BRIUMVI under the close supervision of an experienced healthcare professional with access to appropriate medical support to manage severe reactions such as serious infusion reactions.

## Recommended dose, infusion rate, and infusion duration for relapsing forms of MS

## **FIRST INFUSION**

BRIUMVI Total dose volume	m-4-1	Infusion rate				m . 1
		0-30 min	30 min- hour 1	Hours 1-2	Hours 2-4	Total duration*
150 mg	250 mL	10 mL/hr	20 mL/hr	35 mL/hr	100 mL/hr	4 hours

## **SECOND INFUSION**

2 weeks after the first infusion

DDWWW	manal.	Infusion rate		m-4-1
BRIUMVI dose	Total volume	0-30 min	30 min-hour 1	Total duration*
450 mg	250 mL	100 mL/hr	400 mL/hr	1 hour

## **SUBSEQUENT INFUSIONS**

Once every 24 weeks. First subsequent infusion administered 24 weeks after the first infusion

DDWAW	maga1	Infusion rate		m-A-1
BRIUMVI dose	Total volume	0-30 min	30 min-hour 1	Total duration*
450 mg	250 mL	100 mL/hr	400 mL/hr	1 hour

<sup>\*</sup>Infusion duration may take longer if the infusion is interrupted or slowed.1

## **IMPORTANT SAFETY INFORMATION**

*Vaccinations:* Administer all immunizations according to immunization guidelines: for live or live-attenuated vaccines at least 4 weeks and, whenever possible at least 2 weeks prior to initiation of BRIUMVI for non-live vaccines. BRIUMVI may interfere with the effectiveness of non-live vaccines. The safety of immunization with live or live-attenuated vaccines during or following administration of BRIUMVI has not been studied. Vaccination with live virus vaccines is not recommended during treatment and until B-cell repletion.

This Dosing Guide is not a substitute for the full Prescribing Information.

## In clinical trials, most common adverse reactions for BRIUMVI were infusion reactions<sup>1,8</sup>

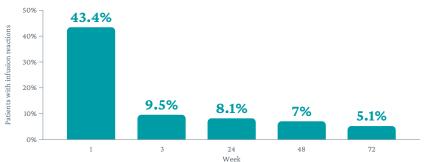


Infusion reactions were highest at the first dose and decreased with subsequent doses. The incidence of infusion reactions was 43.4% for the first 4-hour infusion but decreased over time.

There were less than 10% infusion reactions with the second infusion of BRIUMVI, and

they continued to decrease thereafter.8

Incidence of infusion reactions in MS in patients treated with BRIUMVI<sup>8</sup>



## Infusion reactions can occur in patients treated with BRIUMVI¹\*

Pyrexia Chills Headache

Influenza-like illness Tachycardia Nausea

Throat irritation Erythema Anaphylactic reaction

There were **no fatal infusion reactions**, and **0.6%** of BRIUMVI-treated patients experienced infusion reactions that were serious, with some requiring hospitalization.



Observe patients treated with BRIUMVI for infusion reactions during infusion and for at least 1 hour after the completion of the first 2 infusions.

Post-infusion monitoring of subsequent infusions is at physician discretion unless infusion reaction and/or hypersensitivity has been observed in association with the current or any prior infusion.



Inform patients that infusion reactions can occur for up to 24 hours after the infusion.

Remember: Premedication (eg, methylprednisolone or an equivalent corticosteroid, and an antihistamine) may reduce the frequency and severity of infusion reactions.

## **IMPORTANT SAFETY INFORMATION**

Vaccination of Infants Born to Mothers Treated with BRIUMVI During Pregnancy: In infants of mothers exposed to BRIUMVI during pregnancy, assess B-cell counts prior to administration of live or live-attenuated vaccines as measured by CD19<sup>+</sup> B-cells. Depletion of B-cells in these infants may increase the risks from live or live-attenuated vaccines. Inactivated or non-live vaccines may be administered prior to B-cell recovery. Assessment of vaccine immune responses, including consultation with a qualified specialist, should be considered to determine whether a protective immune response was mounted.

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## Dose modifications due to infusion reactions<sup>1</sup>



Dose modifications in response to infusion reactions depend on the severity



Mild to moderate infusion reactions



Severe infusion reactions



Life-threatening infusion reactions

Reduce the infusion rate to half the rate at the onset of the infusion reaction and maintain the reduced rate for at least 30 minutes. If the reduced rate is tolerated, increase the rate as described on page 8. This change in rate will increase the total duration of the infusion but not the total dose.

Immediately interrupt the infusion and administer appropriate supportive treatment, as necessary.
Restart the infusion only after all symptoms have resolved.

When restarting, begin at half of the infusion rate at the time of onset of the infusion reaction. If this rate is tolerated, increase the rate as described on page 8. This change in rate will increase the total duration of the infusion but not the total dose.

Immediately stop infusion and permanently discontinue BRIUMVI if there are signs of a life-threatening or disabling infusion reaction.

Provide appropriate supportive treatment.

In clinical trials, 97% of all infusions were delivered without interruption, and 95% of all BRIUMVI 1-hour infusions were completed in 1 hour +/- 5 minutes without interruption.9

### IMPORTANT SAFETY INFORMATION

**Fetal Risk:** Based on data from animal studies, BRIUMVI may cause fetal harm when administered to a pregnant woman. Transient peripheral B-cell depletion and lymphocytopenia have been reported in infants born to mothers exposed to other anti-CD20 B-cell depleting antibodies during pregnancy. A pregnancy test is recommended in females of reproductive potential prior to each infusion. Advise females of reproductive potential to use effective contraception during BRIUMVI treatment and for 6 months after the last dose.

This Dosing Guide is not a substitute for the full Prescribing Information.

## How BRIUMVI is supplied and stored<sup>1</sup>



## How BRIUMVI is supplied



**BRIUMVI injection** is a sterile, clear to opalescent, colorless to slightly yellow, preservative-free solution for IV use.



Supplied as a carton containing one 150 mg/6 mL (25 mg/mL) single-dose vial (NDC 73150-150-06).

## How BRIUMVI is stored



Store BRIUMVI in the refrigerator at 2°C to 8°C (36°F to 46°F).



Store BRIUMVI in the outer carton to **protect from light**.



Do not freeze.



Do not shake.

## IMPORTANT SAFETY INFORMATION

**Reduction in Immunoglobulins:** As expected with any B-cell depleting therapy, decreased immunoglobulin levels were observed. Decrease in immunoglobulin M (IgM) was reported in 0.6% of BRIUMVI-treated patients compared to none of the patients treated with teriflunomide in RMS clinical trials. Monitor the levels of quantitative serum immunoglobulins during treatment, especially in patients with opportunistic or recurrent infections, and after discontinuation of therapy until B-cell repletion. Consider discontinuing BRIUMVI therapy if a patient with low immunoglobulins develops a serious opportunistic infection or recurrent infections, or if prolonged hypogammaglobulinemia requires treatment with intravenous immunoglobulins.

This Dosing Guide is not a substitute for the full Prescribing Information.

## BRIUMVI preparation<sup>1</sup>



Only use 0.9% NaCl injection, USP to dilute BRIUMVI. BRIUMVI must be prepared by a healthcare professional using **aseptic technique**.



BRIUMVI should be a clear to opalescent, colorless to slightly yellow solution.



Parenteral drug products should be inspected visually for particulate matter and discoloration prior to administration, whenever solution and container permit. **Do not use** the solution if discolored or if the solution contains discrete foreign particulate matter.

## Preparation of solution for the **first infusion**

1

**Prepare** infusion bags for the **first infusion** (150 mg) using 1 vial (150 mg/6 mL) of BRIUMVI. 2

Withdraw 6 mL 0.9% NaCl injection, USP from the 250 mL infusion bag and discard. 3

**Withdraw** 6 mL BRIUMVI solution from the vial.

4

Add 6 mL (150 mg) BRIUMVI into the infusion bag containing 0.9% NaCl injection, USP.

## Preparation of solution for the **second** and **subsequent infusions**

1

Prepare infusion bag for second infusion (450 mg) and subsequent infusions (450 mg) using 3 vials (150 mg/6 mL) of BRIUMVI.

2

Withdraw 18 mL 0.9% NaCl injection, USP from the 250 mL infusion bag and discard. 3

Withdraw 18 mL BRIUMVI solution from the vials (6 mL/vial).

4

Add 18 mL (450 mg) BRIUMVI into the infusion bag containing 0.9% NaCl injection, USP.

Mix diluted solution by gentle inversion. Do not shake.

USP, United States Pharmacopeia.

## IMPORTANT SAFETY INFORMATION

**Most Common Adverse Reactions:** The most common adverse reactions in RMS trials (incidence of at least 10%) were infusion reactions and upper respiratory tract infections.

This Dosing Guide is not a substitute for the full Prescribing Information.

## BRIUMVI storage<sup>1</sup>

## Storage of infusion solution





**Prior to the start of the IV infusion**, the contents of the infusion bag should be at **room temperature**.



Use the prepared infusion solution **immediately**. If the diluted solution is not administered immediately, store for up to:

- 24 hours in the refrigerator at 2°C to 8°C (36°F to 46°F)
- An additional 8 hours at room temperature up to 25°C (77°F)\*



No incompatibilities between BRIUMVI and PVC or PO bags and IV administration sets have been observed.

## IMPORTANT SAFETY INFORMATION

### WARNINGS AND PRECAUTIONS

**Infusion Reactions:** BRIUMVI can cause infusion reactions, which can include pyrexia, chills, headache, influenza-like illness, tachycardia, nausea, throat irritation, erythema, and an anaphylactic reaction. In MS clinical trials, the incidence of infusion reactions in BRIUMVI-treated patients who received infusion reaction-limiting premedication prior to each infusion was 48%, with the highest incidence within 24 hours of the first infusion. 0.6% of BRIUMVI-treated patients experienced infusion reactions that were serious, some requiring hospitalization.

This Dosing Guide is not a substitute for the full Prescribing Information.

<sup>\*</sup>Includes the equilibration time and infusion time.<sup>1</sup> PO, polyolefin; PVC, polyvinyl chloride.

## Important Safety Information



### **INDICATION**

BRIUMVI is indicated for the treatment of relapsing forms of multiple sclerosis (MS), to include clinically isolated syndrome, relapsing-remitting disease, and active secondary progressive disease, in adults.

### IMPORTANT SAFETY INFORMATION

**Contraindications:** BRIUMVI is contraindicated in patients with:

- Active HBV infection
- A history of life-threatening infusion reaction to BRIUMVI

## WARNINGS AND PRECAUTIONS

**Infusion Reactions:** BRIUMVI can cause infusion reactions, which can include pyrexia, chills, headache, influenza-like illness, tachycardia, nausea, throat irritation, erythema, and an anaphylactic reaction. In MS clinical trials, the incidence of infusion reactions in BRIUMVI-treated patients who received infusion reaction-limiting premedication prior to each infusion was 48%, with the highest incidence within 24 hours of the first infusion. 0.6% of BRIUMVI-treated patients experienced infusion reactions that were serious, some requiring hospitalization.

Observe treated patients for infusion reactions during the infusion and for at least one hour after the completion of the first two infusions unless infusion reaction and/or hypersensitivity has been observed in association with the current or any prior infusion. Inform patients that infusion reactions can occur up to 24 hours after the infusion. Administer the recommended pre-medication to reduce the frequency and severity of infusion reactions. If life-threatening, stop the infusion immediately, permanently discontinue BRIUMVI, and administer appropriate supportive treatment. Less severe infusion reactions may involve temporarily stopping the infusion, reducing the infusion rate, and/or administering symptomatic treatment.

Infections: Serious, life-threatening or fatal, bacterial and viral infections have been reported in BRIUMVI-treated patients. In MS clinical trials, the overall rate of infections in BRIUMVI-treated patients was 56% compared to 54% in teriflunomide-treated patients. The rate of serious infections was 5% compared to 3% respectively. There were 3 infection-related deaths in BRIUMVI-treated patients. The most common infections in BRIUMVI-treated patients included upper respiratory tract infection (45%) and urinary tract infection (10%). Delay BRIUMVI administration in patients with an active infection until the infection is resolved.

Consider the potential for increased immunosuppressive effects when initiating BRIUMVI after immunosuppressive therapy or initiating an immunosuppressive therapy after BRIUMVI.

Hepatitis B Virus (HBV) Reactivation: HBV reactivation occurred in an MS patient treated with BRIUMVI in clinical trials. Fulminant hepatitis, hepatic failure, and death caused by HBV reactivation have occurred in patients treated with anti-CD20 antibodies. Perform HBV screening in all patients before initiation of treatment with BRIUMVI. Do not start treatment with BRIUMVI in patients with active HBV confirmed by positive results for HBsAg and anti-HB tests. For patients who are negative for surface antigen [HBsAg] and positive for HB core antibody [HBcAb+] or are carriers of HBV [HBsAg+], consult a liver disease expert before starting and during treatment.

Progressive Multifocal Leukoencephalopathy (PML): Although no cases of PML have occurred in BRIUMVI-treated MS patients, JCV infection resulting in PML has been observed in patients treated with other anti-CD20 antibodies and other MS therapies.

If PML is suspected, withhold BRIUMVI and perform an appropriate diagnostic evaluation. Typical symptoms associated with PML are diverse, progress over days to weeks, and include progressive weakness on one side of the body or clumsiness of limbs, disturbance of vision, and changes in thinking, memory, and orientation leading to confusion and personality changes.

This Dosing Guide is not a substitute for the full Prescribing Information.

Please see accompanying full Prescribing Information.

## Important Safety Information (cont'd)



MRI findings may be apparent before clinical signs or symptoms; monitoring for signs consistent with PML may be useful. Further investigate suspicious findings to allow for an early diagnosis of PML, if present. Following discontinuation of another MS medication associated with PML, lower PML-related mortality and morbidity have been reported in patients who were initially asymptomatic at diagnosis compared to patients who had characteristic clinical signs and symptoms at diagnosis.

If PML is confirmed, treatment with BRIUMVI should be discontinued.

Vaccinations: Administer all immunizations according to immunization guidelines: for live or live-attenuated vaccines at least 4 weeks and, whenever possible at least 2 weeks prior to initiation of BRIUMVI for non-live vaccines. BRIUMVI may interfere with the effectiveness of non-live vaccines. The safety of immunization with live or live-attenuated vaccines during or following administration of BRIUMVI has not been studied. Vaccination with live virus vaccines is not recommended during treatment and until B-cell repletion.

Vaccination of Infants Born to Mothers Treated with BRIUMVI During Pregnancy: In infants of mothers exposed to BRIUMVI during pregnancy, assess B-cell counts prior to administration of live or live-attenuated vaccines as measured by CD19<sup>+</sup> B-cells. Depletion of B-cells in these infants may increase the risks from live or live-attenuated vaccines. Inactivated or non-live vaccines may be administered prior to B-cell recovery. Assessment of vaccine immune responses, including consultation with a qualified specialist, should be considered to determine whether a protective immune response was mounted.

**Fetal Risk:** Based on data from animal studies, BRIUMVI may cause fetal harm when administered to a pregnant woman. Transient peripheral B-cell depletion and lymphocytopenia have been reported in infants born to mothers exposed to other anti-CD20 B-cell depleting antibodies during pregnancy. A pregnancy test is recommended in females of reproductive potential prior to each infusion. Advise females of reproductive potential to use effective contraception during BRIUMVI treatment and for 6 months after the last dose.

**Reduction in Immunoglobulins:** As expected with any B-cell depleting therapy, decreased immunoglobulin levels were observed. Decrease in immunoglobulin M (IgM) was reported in 0.6% of BRIUMVI-treated patients compared to none of the patients treated with teriflunomide in RMS clinical trials. Monitor the levels of quantitative serum immunoglobulins during treatment, especially in patients with opportunistic or recurrent infections, and after discontinuation of therapy until B-cell repletion. Consider discontinuing BRIUMVI therapy if a patient with low immunoglobulins develops a serious opportunistic infection or recurrent infections, or if prolonged hypogammaglobulinemia requires treatment with intravenous immunoglobulins.

**Most Common Adverse Reactions:** The most common adverse reactions in RMS trials (incidence of at least 10%) were infusion reactions and upper respiratory tract infections.

You may report side effects to the FDA at (800) FDA-1088 or <u>www.fda.gov/medwatch</u>. You may also report side effects to TG Therapeutics at (877) 848-9462.

FDA, US Food and Drug Administration.

### References

1. BRIUMVI [prescribing information]. New York, NY: TG Therapeutics, Inc.; 2022. 2. Ferrara C, Grau S, Jäger C, et al. Unique carbohydrate—carbohydrate interactions are required for high affinity binding between FcγRIII and antibodies lacking core fucose. *Proc Natl Acad Sci U S A*. 2011;108 (31):12669-12674. doi: 10.1073/pnas.1108455108 3. Sun Y, Izadi S, Callahan M, Deperalta G, Wecksler AT. Antibody-receptor interactions mediate antibody-dependent cellular cytotoxicity. *J Biol Chem*. 2021;297(1):100826. doi: 10.1016/j.jbc.2021.100826 4. de Romeuf C, Dutertre C-A, Le Garff-Tavernier M, et al. Chronic lymphocytic leukaemia cells are efficiently killed by an anti-CD20 monoclonal antibody selected for improved engagement of FcγRIIIA/CD16. *Br J Haematol*. 2008;140(6):635-643. doi: 10.1111/j.1365-2141.2007.06974.x 5. Fox E, Lovett-Racke AE, Gormley M, et al. A phase 2 multicenter study of ublituximab, a novel glycoengineered anti-CD20 monoclonal antibody, in patients with relapsing forms of multiple sclerosis. *Mult Scler*. 2021;27(3):420-429. doi: 10.1177/1352458520918375 6. KESIMPTA [prescribing information]. East Hanover, NJ: Novartis Pharmaceuticals AG; 2022. 7. OCREVUS [prescribing information]. San Francisco, CA: Genentech, Inc.; 2022. 8. Steinman L, Fox E, Hartung HP, et al. Ublituximab versus teriflunomide in relapsing multiple sclerosis. *N Engl J Med*. 2022;387(8) (suppl):704-714. doi: 10.1056/NEJMoa2201904 9. Fox E, Steinman L, Hartung HP, et al. Infusion-related reactions (IRRs) with ublituximab in patients with relapsing multiple sclerosis (RMS): post hoc analyses from the phase 3 ULTIMATE I and II studies. Poster presented at: 2022 American Academy of Neurology (AAN) Annual Meeting. April 2-7, 2022; Seattle, WA.

This Dosing Guide is not a substitute for the full Prescribing Information. Please see accompanying full Prescribing Information.

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