This educational module contains information regarding selected Breyanzi®-associated adverse reactions of cytokine release syndrome (CRS) and neurologic toxicities. These are not all of the adverse reactions associated with Breyanzi. Please refer to the Breyanzi Prescribing Information and Medication Guide for more information.
Indication

BREYANZI® is a CD19-directed genetically modified autologous T cell immunotherapy indicated for the treatment of adult patients with large B-cell lymphoma (LBCL), including diffuse large B-cell lymphoma (DLBCL) not otherwise specified (including DLBCL arising from indolent lymphoma), high-grade B cell lymphoma, primary mediastinal large B-cell lymphoma, and follicular lymphoma grade 3B, who have:

- refractory disease to first-line chemoimmunotherapy or relapse within 12 months of first-line chemoimmunotherapy; or
- refractory disease to first-line chemoimmunotherapy or relapse after first-line chemoimmunotherapy and are not eligible for hematopoietic stem cell transplantation (HSCT) due to comorbidities or age; or
- relapsed or refractory disease after two or more lines of systemic therapy

Limitations of Use: BREYANZI is not indicated for the treatment of patients with primary central nervous system (CNS) lymphoma.

Please see full Prescribing Information including Boxed WARNINGS and Medication Guide.
About the BREYANZI® REMS

A Risk Evaluation and Mitigation Strategy (REMS) is a drug safety program to manage known or potential risks associated with a drug and is required by the United States (US) Food and Drug Administration (FDA) to ensure that the benefits of the drug outweigh its risks. BREYANZI is only available under a restricted program called the BREYANZI REMS because of the serious risks of CRS and neurologic toxicities.

The goals of the BREYANZI REMS are to mitigate the risks of CRS and neurologic toxicities by:

- Ensuring that hospitals and their associated clinics that dispense BREYANZI are specially certified and have on-site, immediate access to tocilizumab.

- Ensuring that those who prescribe, dispense, or administer BREYANZI are aware of how to manage the risks of CRS and neurologic toxicities.
Certification of Hospitals and Their Associated Clinic(s)

To become certified to dispense BREYANZI®, hospitals and associated clinic(s) must:

1. Designate an authorized representative (AR) to carry out the certification process by completing and submitting the **Hospital Enrollment Form** on behalf of the hospital and its associated clinic(s).

2. Ensure the AR oversees implementation and compliance with the BREYANZI REMS requirements.

3. Dispense BREYANZI only after verifying that a minimum of 2 doses of tocilizumab are available on-site for each patient and ready for immediate administration (within 2 hours of infusion).

4. Ensure that if the hospital or its associated clinic(s) designate a replacement AR, the replacement AR must take the **Training Program**, complete the **Knowledge Assessment**, and complete and submit a new **Hospital Enrollment Form**.

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Certification of Hospitals and Their Associated Clinic(s) (cont’d)

5. Maintain documentation of all processes and procedures for the BREYANZI® REMS and provide documentation upon request to Juno Therapeutics, Inc., a Bristol-Myers Squibb Company, or to a third party acting on behalf of Juno Therapeutics, Inc.

6. Comply with audits by Juno Therapeutics, Inc. or a third party acting on behalf of Juno Therapeutics, Inc. to ensure that all training, processes, and procedures are in place and are being followed for the BREYANZI REMS.

7. Report any serious adverse events suggestive of CRS or neurologic toxicities to Bristol-Myers Squibb Company at www.bms.com or 1-888-805-4555, or to the FDA at www.fda.gov/medwatch or by calling 1-800-FDA-1088.

- For the purpose of this REMS, serious adverse event is defined as any adverse experience occurring at any dose that results in any of the following outcomes: death, a life-threatening adverse experience, inpatient hospitalization or prolongation of existing hospitalization, a persistent or significant disability/incapacity, or a congenital anomaly/birth defect. Important medical events that may not result in death, be life-threatening, or require hospitalization may be considered a serious adverse drug experience when, based upon appropriate medical judgment, they may jeopardize the patient or subject and may require medical or surgical intervention to prevent one of the outcomes listed in this definition. Examples of such medical events include allergic bronchospasm requiring intensive treatment in an emergency room or at home, blood dyscrasias or convulsions that do not result in inpatient hospitalization, or the development of drug dependency or drug abuse.
Identifying an Authorized Representative

The AR responsible for the hospital and any associated clinic(s) must have capacity to oversee implementation of, and compliance with, the BREYANZI® REMS by:

1. Ensuring that all relevant staff are trained, complete the Knowledge Assessment, and maintain records.

2. Having the ability to ensure that processes and procedures have been established and are being followed.

3. Having the ability to comply with audits carried out by Juno Therapeutics, Inc.

It is not required that the AR be a healthcare provider.
Responsibilities of the BREYANZI® REMS Authorized Representative

To successfully complete the BREYANZI REMS certification, the designated AR must:

• Complete the BREYANZI REMS Live Training Program (live in-person, via webcast or online), which includes review of:
  - REMS Training Program

• Oversee the implementation of, and compliance with, the BREYANZI REMS in hospitals and associated clinic(s).

• Submit a successfully completed BREYANZI REMS Knowledge Assessment to the BREYANZI REMS online at www.BreyanziREMS.com, via email to REMSCallCenter@bms.com, or by fax to 1-855-496-8607.

• Submit a successfully completed BREYANZI REMS Hospital Enrollment Form to the BREYANZI REMS online at www.BreyanziREMS.com, via email to REMSCallCenter@bms.com, or by fax to 1-855-496-8607.
Responsibilities of the BREYANZI® REMS Authorized Representative (cont’d)

Before administering BREYANZI, establish processes and procedures that are subject to monitoring by Juno Therapeutics, Inc. or a third party acting on behalf of Juno Therapeutics, Inc. to help ensure the following:

- All relevant staff involved in prescribing, dispensing, or administering of BREYANZI are trained on the REMS requirements using the Training Program, and successfully complete and submit the Knowledge Assessment, and records are maintained of staff training (including a retraining process if BREYANZI has not been dispensed at least once annually from the date of certification in the BREYANZI REMS).

- Prior to dispensing BREYANZI, put processes and procedures in place to verify a minimum of 2 doses of tocilizumab are available on-site for each patient and are ready for immediate administration (within 2 hours of BREYANZI infusion).

- Before discharge, provide patients with the Patient Wallet Card.
Completion of the BREYANZI® REMS Training and Knowledge Assessment

The following individuals are recommended to complete the BREYANZI REMS Training Program and the Knowledge Assessment:

- Individuals involved in prescribing, dispensing, or administering BREYANZI.
- Individuals who will be the AR or may complete tasks on behalf of the AR.
- Individuals who may discuss the BREYANZI REMS education with patients or provide a Patient Wallet Card to a patient.
- Individuals involved in the verification, dispensing, and administration of tocilizumab.
- Individuals who may be responsible for reporting adverse events per the REMS program to FDA or the manufacturer.

Note: Juno Therapeutics, Inc. recognizes that the assignment of REMS activities may be made to different personnel in each healthcare facility. Each healthcare facility should independently assess REMS training needs to ensure that appropriate personnel are trained.
Serious Risks Associated with BREYANZI®
Serious Risks Associated with Breyanzi®

WARNING: CYTOKINE RELEASE SYNDROME and NEUROLOGIC TOXICITIES

- Cytokine Release Syndrome (CRS), including fatal or life-threatening reactions, occurred in patients receiving Breyanzi. Do not administer Breyanzi to patients with active infection or inflammatory disorders. Treat severe or life-threatening CRS with tocilizumab with or without corticosteroids.

- Neurologic toxicities, including fatal or life-threatening reactions, occurred in patients receiving Breyanzi, including concurrently with CRS, after CRS resolution, or in the absence of CRS. Monitor for neurologic events after treatment with Breyanzi. Provide supportive care and/or corticosteroids as needed.

- Breyanzi is available only through a restricted program under a Risk Evaluation and Mitigation Strategy (REMS) called the Breyanzi REMS.
Management of Cytokine Release Syndrome
Cytokine Release Syndrome

- CRS, including fatal or life-threatening reactions, occurred following treatment with BREYANZI®. Among patients receiving BREYANZI for LBCL (N=418), CRS occur in 46% (190/418), including ≥ Grade 3 CRS (Lee grading system\(^1\)) in 3.1% of patients.

- In patients receiving BREYANZI after two or more lines of therapy for LBCL, CRS occurred in 46% (122/268), including ≥ Grade 3 CRS in 4.1% of patients. One patient had fatal CRS and 2 had ongoing CRS at time of death. The median time to onset was 5 days (range: 1 to 15 days). CRS resolved in 98% with a median duration of 5 days (range: 1 to 17 days).

- In patients receiving BREYANZI after one line of therapy for LBCL, CRS occurred in 45% (68/150), including Grade 3 CRS in 1.3% of patients. The median time to onset was 4 days (range: 1 to 63 days). CRS resolved in all patients with a median duration of 4 days (range: 1 to 16 days).

- The most common manifestations of CRS (≥10%) included fever (94%), hypotension (42%), tachycardia (28%), chills (23%), hypoxia (16%), and headache (12%).

- Serious events that may be associated with CRS include cardiac arrhythmias (including atrial fibrillation and ventricular tachycardia), cardiac arrest, cardiac failure, diffuse alveolar damage, renal insufficiency, capillary leak syndrome, hypotension, hypoxia, and hemophagocytic lymphohistiocytosis/macrophage activation syndrome (HLH/MAS).

- Ensure that 2 doses of tocilizumab are available prior to infusion of BREYANZI.

- Of the 418 patients who received BREYANZI for LBCL, 23% received tocilizumab and/or a corticosteroid for CRS, including 10% who received tocilizumab only and 2.2% who received corticosteroids only.

- Monitor patients daily for at least 7 days following BREYANZI infusion at a REMS-certified healthcare facility for signs and symptoms of CRS. Monitor patients for signs or symptoms of CRS for at least 4 weeks after infusion. At the first sign of CRS, institute treatment with supportive care, tocilizumab, or tocilizumab and corticosteroids as indicated.

- Counsel patients to seek immediate medical attention should signs or symptoms of CRS occur at any time.
Managing CRS

• Identify CRS based on clinical presentation.

• Evaluate for and treat other causes of fever, hypoxia, and hypotension.

• Monitor patients daily for at least 7 days following BREYANZI® infusion at a REMS-certified healthcare facility for signs and symptoms of CRS and neurologic toxicities.

• Monitor patients for signs or symptoms of CRS for at least 4 weeks after infusion.

• Counsel patients to seek immediate medical attention should signs or symptoms of CRS occur at any time.

• Instruct patients to remain within proximity of the certified healthcare facility for at least 4 weeks following infusion.

• If CRS is suspected, manage according to the recommendations on slides 18-19.

• If concurrent neurologic toxicity is suspected during CRS, administer:
  - Corticosteroids according to the more aggressive intervention based on the CRS and neurologic toxicity grades in slides 18-19 and slides 24-25 respectively.
  - Tocilizumab according to the CRS grade on slides 18-19.
  - Antiseizure medication according to the neurologic toxicity on slides 24-25.
Lee Criteria\textsuperscript{1} for CRS Grading

- CRS grading is based on Lee Criteria, shown in table below.
- Final grading should be done after reviewing all of the reported symptoms associated with CRS.

<table>
<thead>
<tr>
<th>Symptoms/Signs</th>
<th>CRS Grade 1 (mild)</th>
<th>CRS Grade 2 (moderate)</th>
<th>CRS Grade 3 (severe)</th>
<th>CRS Grade 4 (life-threatening)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Vital signs</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>Yes</td>
<td>Any</td>
<td>Any</td>
<td>Any</td>
</tr>
<tr>
<td>Systolic blood pressure (SBP) ≤90 mmHg</td>
<td>N/A</td>
<td>Responds to IV fluids or single low-dose vasopressor</td>
<td>Needs high-dose or multiple vasopressors</td>
<td>Life-threatening</td>
</tr>
<tr>
<td>Need for oxygen to reach oxygen saturation (SaO\textsubscript{2}) &gt;90%</td>
<td>N/A</td>
<td>Fraction of inspired oxygen (FiO\textsubscript{2}) &lt;40%</td>
<td>FiO\textsubscript{2} ≥40%</td>
<td>Needs ventilator support</td>
</tr>
<tr>
<td><strong>Organ toxicity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N/A</td>
<td>Grade 2</td>
<td>Grade 3 or transaminitis Grade 4</td>
<td>Grade 4 (excluding transaminitis)</td>
</tr>
</tbody>
</table>

\textit{FiO\textsubscript{2}}, fraction of inspired oxygen; IV, intravenous; SaO\textsubscript{2}, oxygen saturation.
# BREYANZI® CRS Grading and Management Guidance

<table>
<thead>
<tr>
<th>CRS Grade*</th>
<th>When to use tocilizumab</th>
<th>When to use corticosteroids†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fever</td>
<td>If &lt;72 hours after infusion, consider tocilizumab 8 mg/kg IV over 1 hour (not to exceed 800 mg). If ≥72 hours after infusion, treat symptomatically.</td>
<td>If &lt;72 hours after infusion, consider dexamethasone 10 mg IV every 24 hours. If ≥72 hours after infusion, treat symptomatically.</td>
</tr>
<tr>
<td>Grade 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Symptoms require and respond to moderate intervention. Oxygen requirement &lt;40% FI\textsubscript{O}2, or hypotension responsive to fluids or low dose of one vasopressor, or Grade 2 organ toxicity.</td>
<td>Administer tocilizumab 8 mg/kg IV over 1 hour (not to exceed 800 mg). Repeat tocilizumab every 8 hours as needed if not responsive to intravenous fluids or increasing supplemental oxygen. Limit to a maximum of 3 doses in a 24-hour period; maximum total of 4 doses.</td>
<td>If &lt;72 hours after infusion, administer dexamethasone 10 mg IV every 12 to 24 hours. If ≥72 hours after infusion, consider dexamethasone 10 mg IV every 12 to 24 hours.</td>
</tr>
</tbody>
</table>

If no improvement within 24 hours or rapid progression, repeat tocilizumab and escalate dose and frequency of dexamethasone (10-20 mg IV every 6 to 12 hours). If no improvement or continued rapid progression, maximize dexamethasone, switch to high-dose methylprednisolone 2 mg/kg if needed. After 2 doses of tocilizumab, consider alternative immunosuppressants. Do not exceed 3 doses tocilizumab in 24 hours, or 4 doses in total.

IV, intravenous; FI\textsubscript{O}2, fraction of inspired oxygen.

* Lee criteria for grading CRS (Lee et al, 2014). † If corticosteroids are initiated, continue corticosteroids for at least 3 doses or until complete resolution of symptoms, and consider corticosteroid taper.
## BREYANZI® CRS Grading and Management Guidance (cont’d)

<table>
<thead>
<tr>
<th>CRS Grade*</th>
<th>When to use tocilizumab</th>
<th>When to use corticosteroids†</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grade 3</strong></td>
<td>Per Grade 2.</td>
<td>Administer dexamethasone 10 mg IV every 12 hours.</td>
</tr>
<tr>
<td>Symptoms require and respond to aggressive intervention. Oxygen requirement ≥40% FiO₂, or hypotension requiring high-dose or multiple vasopressors, or Grade 3 organ toxicity, or Grade 4 transaminitis.</td>
<td>If no improvement within 24 hours or rapid progression of CRS, repeat tocilizumab and escalate dose and frequency of dexamethasone (10-20 mg IV every 6 to 12 hours). If no improvement or continued rapid progression, maximize dexamethasone, switch to high-dose methylprednisolone 2 mg/kg if needed. After 2 doses of tocilizumab, consider alternative immunosuppressants. Do not exceed 3 doses tocilizumab in 24 hours, or 4 doses in total.</td>
<td></td>
</tr>
</tbody>
</table>

| **Grade 4** | Per Grade 2.              | Administer dexamethasone 20 mg IV every 6 hours. |
| Life-threatening symptoms. Requirements for ventilator support or continuous veno-venous hemodialysis (CVVHD) or Grade 4 organ toxicity (excluding transaminitis). | If no improvement within 24 hours or rapid progression of CRS, escalate tocilizumab and corticosteroid use. If no improvement or continued rapid progression, maximize dexamethasone, switch to high-dose methylprednisolone 2 mg/kg if needed. After 2 doses of tocilizumab, consider alternative immunosuppressants. Do not exceed 3 doses tocilizumab in 24 hours, or 4 doses in total. | |

IV, intravenous; FiO₂, fraction of inspired oxygen.

* Lee criteria for grading CRS (Lee et al, 2014). † If corticosteroids are initiated, continue corticosteroids for at least 3 doses or until complete resolution of symptoms, and consider corticosteroid taper.

**Approved v1.0**
Management of Neurologic Toxicities
Clinical Presentation of Neurologic Toxicities

- Neurologic toxicities that were fatal or life-threatening, including immune effector cell-associated neurotoxicity syndrome (ICANS), occurred following treatment with Breyanzi®. Serious events including cerebral edema and seizures occurred with Breyanzi. Fatal and serious cases of leukoencephalopathy, some attributable to fludarabine, also occurred.

- In patients receiving Breyanzi after two or more lines of therapy for LBCL, CAR T cell-associated neurologic toxicities occurred in 35% (95/268), including ≥ Grade 3 cases in 12% of patients. Three patients had fatal neurologic toxicity and 7 had ongoing neurologic toxicity at time of death. The median time to onset of neurotoxicity was 8 days (range: 1 to 46 days). Neurologic toxicities resolved in 85% with a median duration of 12 days (range: 1 to 87 days).

- In patients receiving Breyanzi after one line of therapy for LBCL, CAR T cell-associated neurologic toxicities occurred in 27% (41/150) of patients, including Grade 3 cases in 7% of patients. The median time to onset of neurologic toxicity was 8 days (range: 1 to 63 days). The median duration of neurologic toxicity was 6 days (range: 1 to 119 days).

- In all patients combined receiving Breyanzi for LBCL, neurologic toxicities occurred in 33% (136/418), including ≥ Grade 3 cases in 10% of patients. The median time to onset was 8 days (range: 1 to 63), with 87% of cases developing by 16 days. Neurologic toxicities resolved in 85% of patients with a median duration of 11 days (range: 1 to 119 days). Of patients developing neurotoxicity, 77% (105/136) also developed CRS.

- The most common neurologic toxicities (≥5%) included encephalopathy (20%), tremor (13%), aphasia (8%), headache (6%), dizziness (6%), and delirium (5%).

- Monitor patients daily for at least 7 days following Breyanzi infusion at a REMS-certified healthcare facility for signs and symptoms of neurologic toxicities and assess for other causes of neurological symptoms. Monitor patients for signs or symptoms of neurologic toxicities for at least 4 weeks after infusion and treat promptly. Manage neurologic toxicity with supportive care and/or corticosteroid as needed.

- Counsel patients to seek immediate medical attention should signs or symptoms of neurologic toxicity occur at any time.

- Serious events including cerebral edema and seizures occurred with Breyanzi.

- Neurologic toxicities occurred concurrently with CRS, after CRS resolution or in the absence of CRS.
Management of Neurologic Toxicities

- Monitor patients for signs and symptoms of neurologic toxicities.
- Rule out other causes of neurologic symptoms.
- If neurologic toxicity is suspected, manage according to the recommendations on slides 24-25.
- If concurrent CRS is suspected during neurologic toxicity, administer:
  - Corticosteroids according to the more aggressive intervention based on the CRS and neurologic toxicity grades on slides 18-19 and 24-25.
  - Tocilizumab according to the CRS grade on slides 18-19.
  - Antiseizure medication according to the neurologic toxicity on slides 24-25.
- Provide intensive care supportive therapy for severe or life-threatening neurologic toxicities.
- Monitor patients daily for at least 7 days following BREYANZI® infusion at a REMS-certified healthcare facility for signs and symptoms of CRS and neurologic toxicities.
- Monitor patients for signs or symptoms of neurologic toxicities for at least 4 weeks after infusion; evaluate and treat promptly.
- Counsel patients and their care partner to seek immediate medical attention should signs and symptoms of neurologic toxicity occur at any time.
### CTCAE v4.03 Grading of Individual Neurologic Symptoms of Neurologic Toxicities Used to Determine Overall Grade of Neurologic Toxicities

<table>
<thead>
<tr>
<th>Adverse event term/Neurotoxicity domain²</th>
<th>Grade 1</th>
<th>Grade 2</th>
<th>Grade 3</th>
<th>Grade 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cerebral edema</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>Life-threatening consequences; urgent intervention indicated</td>
</tr>
<tr>
<td>Confusion</td>
<td>Mild disorientation</td>
<td>Moderate disorientation; limiting instrumental ADL</td>
<td>Severe disorientation; limiting self-care ADL</td>
<td>Life-threatening consequences; urgent intervention indicated</td>
</tr>
<tr>
<td>Depressed level of consciousness</td>
<td>Decreased level of alertness</td>
<td>Sedation; slow response to stimuli; limiting instrumental ADL</td>
<td>Difficult to arouse</td>
<td>Life-threatening consequences</td>
</tr>
<tr>
<td>Dysphasia</td>
<td>Awareness of receptive or expressive characteristics; not impairing ability to communicate</td>
<td>Moderate receptive or expressive characteristics; impairing ability to communicate spontaneously</td>
<td>Severe receptive or expressive characteristics; impairing ability to read, write, communicate intelligibly</td>
<td>N/A</td>
</tr>
<tr>
<td>Encephalopathy</td>
<td>Mild symptoms</td>
<td>Moderate symptoms; limiting instrumental ADL</td>
<td>Severe symptoms; limiting self-care ADL</td>
<td>Life-threatening consequences; urgent intervention indicated</td>
</tr>
<tr>
<td>Headache</td>
<td>Mild pain</td>
<td>Moderate pain; limiting instrumental ADL</td>
<td>Severe pain; limiting self-care ADL</td>
<td>N/A</td>
</tr>
<tr>
<td>Seizure</td>
<td>Brief partial seizure; no loss of consciousness</td>
<td>Brief generalized seizure</td>
<td>Multiple seizures despite medical intervention</td>
<td>Life-threatening; prolonged repetitive seizures</td>
</tr>
<tr>
<td>Tremor</td>
<td>Mild symptoms</td>
<td>Moderate symptoms; limiting instrumental ADL</td>
<td>Severe symptoms; limiting self-care ADL</td>
<td>N/A</td>
</tr>
</tbody>
</table>

ADL, activities of daily living; CTCAE, Common Terminology Criteria for Adverse Events.
# Neurologic Toxicity Grading and Management Guidance

<table>
<thead>
<tr>
<th>NT Grade*</th>
<th>Corticosteroids and Antiseizure Medication</th>
</tr>
</thead>
</table>
| **Grade 1** | Start non-sedating, antiseizure medicines (eg, levetiracetam) for seizure prophylaxis.  
If ≥72 hours after infusion, observe.  
If <72 hours after infusion, consider dexamethasone 10 mg IV every 12 to 24 hours for 2 to 3 days. |
| **Grade 2** | Start non-sedating, antiseizure medicines (eg, levetiracetam) for seizure prophylaxis.  
Dexamethasone 10 mg IV every 12 hours for 2 to 3 days, or longer for persistent symptoms. Consider taper for a total steroid exposure of >3 days.  
If no improvement after 24 hours or worsening of neurologic toxicity, increase the dose and/or frequency of dexamethasone up to a maximum of 20 mg IV every 6 hours.  
If no improvement after another 24 hours, rapidly-progressing symptoms, or life-threatening complications arise, give methylprednisolone (2 mg/kg loading dose, followed by 2 mg/kg divided 4 times a day; taper within 7 days). |

IV, intravenous; NT, neurologic toxicity.  
* NCI CTCAE criteria for grading neurologic toxicities version 4.03.
# Neurologic Toxicity Grading and Management Guidance

<table>
<thead>
<tr>
<th>NT Grade*</th>
<th>Corticosteroids and Antiseizure Medication</th>
</tr>
</thead>
</table>
| **Grade 3** | Start non-sedating, antiseizure medicines (e.g., levetiracetam) for seizure prophylaxis.  
Dexamethasone 10 to 20 mg IV every 8 to 12 hours. Steroids are not recommended for isolated Grade 3 headaches.  
If no improvement after 24 hours or worsening of neurologic toxicity, escalate to methylprednisolone (dose and frequency as per Grade 2).  
If cerebral edema is suspected, consider hyperventilation and hyperosmolar therapy. Give high-dose methylprednisolone (1 to 2 g, repeat every 24 hours if needed; taper as clinically indicated), and cyclophosphamide 1.5 g/m². |
| **Grade 4** | Start non-sedating, anti-seizure medicines (e.g., levetiracetam) for seizure prophylaxis.  
Dexamethasone 20 mg IV every 6 hours.  
If no improvement after 24 hours or worsening of neurologic toxicity, escalate to methylprednisolone (dose and frequency as per Grade 2).  
If cerebral edema is suspected, consider hyperventilation and hyperosmolar therapy. Give high-dose methylprednisolone (1 to 2 g, repeat every 24 hours if needed; taper as clinically indicated), and cyclophosphamide 1.5 g/m². |

IV, intravenous; NT, neurologic toxicity.
* NCI CTCAE criteria for grading neurologic toxicities version 4.03.
BREYANZI® Infusion Delays

Delay the infusion of BREYANZI if the patient has:

- Unresolved serious adverse events from preceding chemotherapies.
- Active uncontrolled infection.
- Active graft-versus-host disease (GVHD).
Reporting Adverse Events

Reporting suspected adverse events after administration of BREYANZI® is important and allows continued monitoring of the risk/benefit balance of therapy.

- Report any serious adverse events suggestive of CRS or neurologic toxicities to Bristol-Myers Squibb Company at www.bms.com or 1-888-805-4555, or to the FDA at www.fda.gov/medwatch or by calling 1-800-FDA-1088.

  - For the purpose of this REMS, serious adverse event is defined as any adverse experience occurring at any dose that results in any of the following outcomes: death, a life-threatening adverse experience, inpatient hospitalization or prolongation of existing hospitalization, a persistent or significant disability/incapacity, or a congenital anomaly/birth defect. Important medical events that may not result in death, be life-threatening, or require hospitalization may be considered a serious adverse drug experience when, based upon appropriate medical judgment, they may jeopardize the patient or subject and may require medical or surgical intervention to prevent one of the outcomes listed in this definition. Examples of such medical events include allergic bronchospasm requiring intensive treatment in an emergency room or at home, blood dyscrasias or convulsions that do not result in inpatient hospitalization, or the development of drug dependency or drug abuse.
BREYANZI® REMS Program Materials

- BREYANZI REMS Live Training Program
- BREYANZI REMS Knowledge Assessment
- BREYANZI REMS Hospital Enrollment Form
- BREYANZI REMS Patient Wallet Card
- BREYANZI REMS Program Website BreyanziREMS.com
Patient Counseling
Patient Counseling

- Advise the patient to read the FDA-approved patient labeling (Medication Guide).

- Talk to the patient about the risks of CRS and neurologic toxicities and advise patients to seek immediate medical care for any of the following:
  - CRS: Fever, chills, hypotension, tachycardia, hypoxia, and fatigue. Counsel patients to seek immediate medical attention should signs or symptoms of CRS occur at any time.
  - Neurologic toxicities: Encephalopathy, confusion, decreased consciousness, speech disorders, tremor, and seizures. Counsel patients to seek immediate medical attention should signs or symptoms of neurologic toxicity occur at any time.

- Advise the patient to read the FDA-approved patient labeling (Medication Guide).

- Before discharge, provide the patient with the Patient Wallet Card.

- Advise patients of the need to:
  - Remain within 2 hours of the certified healthcare facility for at least 4 weeks following infusion.
  - Contact Bristol-Myers Squibb Company at 1-888-805-4555 if they are diagnosed with a secondary malignancy.
  - Refrain from driving or operating heavy or potentially dangerous machines until at least 8 weeks after BREYANZI® administration.
References


To learn more about the BREYANZI® REMS, please visit www.BreyanziREMS.com or call 1-888-423-5436.