

## HEMATOLOGY-ONCOLOGY ASSOCIATES OF CNY

<b>DEPARTMENT: Pharmacy</b>	<b>POLICY DESCRIPTION: ICANS Grading and Treatment Protocol</b>
<b>PAGE: 1</b>	<b>REPLACES POLICY DATED:</b>
<b>APPROVED: Nick Bouchard, PharmD</b>	<b>CREATED BY: Nick Bouchard, PharmD</b>
<b>EFFECTIVE DATE: 1/3/24</b>	<b>REFERENCE NUMBER:</b>

**Purpose:** Immune effector cell-associated neurotoxicity syndrome (ICANS) is a clinical and neuropsychiatric syndrome that can occur in the days to weeks following administration of bispecific antibodies. All patients receiving bispecifics should be evaluated for signs and symptoms of ICANS.

**Scope:** All Clinical Staff

**Policy:** ICANS assessment and grading scale will be completed prior to initiation of bispecifics.

- If normal baseline neurologic assessment, patients and caregivers should be educated on potential manifestations of neurological toxicity and monitor or and changes in neurological status from baseline
  - Reassess with any changes and follow recommendations per grading scale
- If abnormal baseline neurologic assessment, clinical team to review and make recommendations regarding need for more frequent ICANS assessment

See below treatment chart for grading of ICANS in patients receiving bispecifics

<b>Neurotoxicity Domain</b>	<b>Grade 1</b>	<b>Grade 2</b>	<b>Grade 3</b>	<b>Grade 4</b>
<b>ICE Score<sup>b</sup></b>	7-9	3-6	0-2	0 (patient is unarousable and unable to perform ICE)
<b>Depressed level of consciousness<sup>c</sup></b>	Awakens spontaneously	Awakens to voice	Awakens only to tactile stimulus	Patient is unarousable or requires vigorous or repetitive tactile stimuli to arouse. Stupor or coma
<b>Seizure</b>	N/A	N/A	Any clinical seizure focal or generalized that resolves rapidly; or Non-convulsive seizures on EEG that resolve with intervention	Life-threatening prolonged seizure (>5 min); or Repetitive clinical or electrical seizures without return to baseline in between
<b>Motor findings</b>	N/A	N/A	N/A	Deep focal motor weakness such as hemiparesis or paraparesis

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<b>Raised ICP/ Cerebral edema</b>	N/A	N/A	Focal/local edema on neuroimaging	Diffuse cerebral edema on neuroimaging; Decerebrate or decorticate posturing; or Cranial nerve VI palsy; or Papilledema; or Cushing's triad
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<sup>a</sup> ICANS grade is determined by the most severe event (ICE score, level of consciousness, seizure, motor findings, raised ICP/cerebral edema) not attributable to any other cause. For example, a patient with an ICE score of 3 who has a generalized seizure is classified as having Grade 3 ICANS.

<sup>b</sup> A patient with an ICE score of 0 may be classified as having Grade 3 ICANS if the patient is awake with global aphasia. But a patient with an ICE score of 0 may be classified as having Grade 4 ICANS if the patient is unarousable.

<sup>c</sup> Depressed level of consciousness should be attributable to no other cause (e.g. no sedating medication).

### To Determine Ice Score:

<b>ICE score definitions</b>		
Orientation	Orientation to year, month, city, hospital	4 points
Naming	Ability to name 3 objects (eg, point to clock, pen, button)	3 points
Following commands	Ability to follow simple commands (eg, "Show me 2 fingers" or "Close your eyes and stick out your tongue")	1 point
Writing	Ability to write a standard sentence (eg, "Our national bird is the bald eagle")	1 point
Attention	Ability to count backwards from 100 by 10	1 point

[https://www.cancercalc.com/ICANS\\_grade.php](https://www.cancercalc.com/ICANS_grade.php)

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ICANS Grade	Concurrent CRS	No Concurrent CRS
Grade 1 (ICE 7-9)	<ul style="list-style-type: none"> <li>-Should be evaluated in office</li> <li>-Dexamethasone 12 mg PO X 1</li> <li>- Administer tocilizumab 8 mg/kg (max 800 mg). May repeat every 8 hours to a max of 3 doses in 24 hours and 4 doses total.</li> <li>-Observation</li> </ul>	<ul style="list-style-type: none"> <li>-Supportive care and observation</li> </ul>
Grade 2 (ICE 3-6)	<ul style="list-style-type: none"> <li><b>-Admit to hospital for monitoring</b></li> <li>-Administer tocilizumab 8 mg/kg (max 800 mg). May repeat every 8 hours to a max of 3 doses in 24 hours and 4 doses total.</li> <li>-If no improvement after tocilizumab, administer dexamethasone 10 mg IV every 6 hours until grade <math>\leq 1</math></li> </ul>	<ul style="list-style-type: none"> <li><b>-Admit to hospital for monitoring</b></li> <li>-Supportive Care</li> <li>-Dexamethasone 10 mg IV, repeat every 6 hours if no improvement until grade <math>\leq 1</math></li> </ul>
Grade 3 (ICE 0-2)	<ul style="list-style-type: none"> <li><b>-ICU Care is recommended</b></li> <li>-Administer tocilizumab 8 mg/kg (max 800 mg). May repeat every 8 hours to a max of 3 doses in 24 hours and 4 doses total.</li> <li>-Administer dexamethasone 10 mg IV with first dose of tocilizumab and repeat every 6 hours until <math>\leq 1</math> or may use methylprednisolone 1 mg/kg IV every 12 hours</li> <li>-Consider repeat neuroimaging (CT or MRI) every 2–3 days if patient has persistent grade <math>\geq 3</math> neurotoxicity</li> </ul>	<ul style="list-style-type: none"> <li><b>-ICU Care is recommended</b></li> <li>-Dexamethasone 10 mg IV every 6 hours or methylprednisolone 1 mg/kg IV every 12 hours</li> <li>-Consider repeat neuroimaging (CT or MRI) every 2–3 days if patient has persistent grade <math>\geq 3</math> neurotoxicity</li> </ul>
Grade 4 (ICE 0)	<ul style="list-style-type: none"> <li><b>-ICU Care</b></li> <li>- Administer tocilizumab 8 mg/kg (max 800 mg). May repeat every 8 hours to a max of 3 doses in 24 hours and 4 doses total.</li> <li>- Methylprednisolone 1000 mg/day for 3 days followed by a rapid taper.</li> <li>-Consider repeat neuroimaging (CT or MRI) every 2–3 days if patient has persistent grade <math>\geq 3</math> neurotoxicity</li> <li>-Treat convulsive status epilepticus per institutional guidelines</li> </ul>	<ul style="list-style-type: none"> <li><b>-ICU Care</b></li> <li>-Consider mechanical ventilation</li> <li>-Methylprednisolone 1000 mg/day for 3 days</li> <li>-Consider repeat neuroimaging (CT or MRI) every 2–3 days if patient has persistent grade <math>\geq 3</math> neurotoxicity</li> <li>-Treat convulsive status epilepticus per institutional guidelines</li> </ul>