HEMATOLOGY-ONCOLOGY ASSOCIATES OF CNY

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

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

Neurotoxicity Domain	Grade 1	Grade 2	Grade 3	Grade 4
ICE Score[b]	7-9	3-6	0-2	0 (patient is unarousable and unable to perform ICE)
Depressed level of consciousnesss[c]	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
Seizure	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
Motor findings	N/A	N/A	N/A	Deep focal motor weakness such as hemiparesis or paraparesis

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Raised ICP/ Cerebral edema	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

[a] 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.

[b] 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.

[c] Depressed level of consciousness should be attributable to no other cause (e.g. no sedating medication).

To Determine Ice Score:

ICE score definitions		
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

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ICANS Grade	Concurrent CRS	No Concurrent CRS
Grade 1 (ICE 7-9)	-Should be evaluated in office -Dexamethasone 16 mg PO X 1 - 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. -Observation	-Supportive care and observation
Grade 2 (ICE 3-6)	-Admit to hospital for monitoring -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. -If no improvement after tocilizumab, administer dexamethasone 10 mg IV every 6 hours until grade ≤1	-Admit to hospital for monitoring -Supportive Care -Dexamethasone 10 mg IV, repeat every 6 hours if no improvement until grade ≤1
Grade 3 (ICE 0-2)	-ICU Care is recommended -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. -Administer dexamethasone 10 mg IV with first dose of tocilizumab and repeat every 6 hours until ≤1 or may use methylprednisolone 1 mg/kg IV every 12 hours -Consider repeat neuroimaging (CT or MRI) every 2–3 days if patient has persistent grade ≥3 neurotoxicity	-ICU Care is recommended -Dexamethasone 10 mg IV every 6 hours or methylprednisolone 1 mg/kg IV every 12 hours -Consider repeat neuroimaging (CT or MRI) every 2–3 days if patient has persistent grade ≥3 neurotoxicity
Grade 4 (ICE 0)	-ICU Care - 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. - Methylprednisolone 1000 mg/day for 3 days followed by a rapid taper. -Consider repeat neuroimaging (CT or MRI) every 2–3 days if patient has persistent grade ≥3 neurotoxicity -Treat convulsive status epilepticus per institutional guidelines	-ICU Care -Consider mechanical ventilation -Methylprednisolone 1000 mg/day for 3 days -Consider repeat neuroimaging (CT or MRI) every 2–3 days if patient has persistent grade ≥3 neurotoxicity -Treat convulsive status epilepticus per institutional guidelines