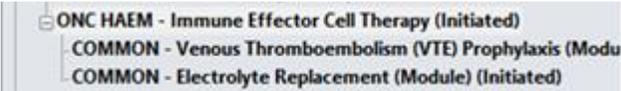


## Immune Effector Cell Admission Checklist

<input type="checkbox"/>	Notify Haem-Onc fellow or consultant to perform in-person evaluation of the patient if it was not already completed before transfer. This is a requirement for both management of CRS and ICANS to determine grades and direct management.
<input type="checkbox"/>	If ICANS Grade 2 or higher, ensure Neurology has been consulted.
<input type="checkbox"/>	Management of patient is to be between CCTC fellow or consultant and Haem-Onc fellow or consultant.
<input type="checkbox"/>	<p>Ensure “<b>ONC - Syndrome Management Immune Effector Cell</b>” care set is initiated by CCTC fellow or Haem-Onc fellow or consultant, based on CRS and/or ICANS grades. These care sets will include necessary medications, monitoring, and other interventions.</p> 
<input type="checkbox"/>	<p>Ensure CCTC fellow or consultant reviews “<b>ONC HAEM – Immune Effector Cell Therapy</b>” care set with Haem-Onc fellow or consultant. Do not discontinue this without the Haem-Onc team’s review. There are a number of important medications that should continue.</p> 
<input type="checkbox"/>	Review interventions and monitoring requirements from care set(s).
<input type="checkbox"/>	Ensure “Immunological Effector Cell Encephalopathy (ICE)” is on view. See slide show for details.
<input type="checkbox"/>	Document admission ICE with standard neurological and vital sign assessment. Reassess and document Q1H until Haem-Onc/CCTC determines deescalation is appropriate.
<input type="checkbox"/>	Monitor for CRS including temperature, vital signs, SpO2, blood gases, lactate and organ function per CCTC standard care.

## Cytokine Release Syndrome (CRS)

CRS is an exaggerated systemic inflammatory response following Immune Effector Cell (IEC) therapy. CAR-T therapy is associated with more severe CRS due to a surge of cytokines released by activated immune cells. For monitoring, nurses are expected to conduct frequent vital sign assessments (with temperature) and labs, at the frequency indicated in the care set or according to CCTC nursing standards. Monitor for fever, hypotension, hypoxemia and signs of organ dysfunction as with other severe inflammatory responses.

### CRS Grading System:

CRS is graded from 1 (least severe) to 4 (most severe). At each grade, there is a specific care set that outlines medical management and monitoring. Patients with Grade 2 CRS will have CCOT consulted and may require admission to CCTC if their risk for deterioration is predicted by Haem-Onc to be high. Patients with Grade 3 CRS require transfer to CCTC for vasopressor support and/or positive pressure ventilation.

Parameter	Grade 1	Grade 2	Grade 3	Grade 4
Fever	Temperature greater or equal to 38C	Temperature greater or equal to 38C	Temperature greater or equal to 38C	Temperature greater or equal to 38C
WITH				
Hypotension	None	Not requiring vasopressors	Requiring 1 vasopressor (+/- vasopressin)	Requiring 2 or more vasopressors excluding vasopressin
AND/OR				
Hypoxia	None	Requiring low-flow nasal cannula	Requiring HFNC, facemask, venturi or non-rebreather	Requiring positive pressure (CPAP, BiPAP, mechanical ventilation)

## Immune Effector Cell–Associated Neurotoxicity Syndrome (ICANS)

ICANS is caused by cytokine-mediated disruption of the blood–brain barrier. The Immunological Effector Cell Encephalopathy (ICE) assessment is used to determine ICANS grade.

### Immune Effector Cell Encephalopathy (ICE) Assessment:

<b>Orientation</b>	Assess the patients' orientation to year, month, city, and hospital.	1 point for each correct answer.
<b>Naming</b>	Assess expressive aphasia by pointing to 3 objects and having the patient name the 3 objects.	1 point for each correct answer.
<b>Following Commands</b>	Assess receptive aphasia by instructing the patient to follow a simple command (e.g. show 2 fingers)	1 point for correctly following command.
<b>Writing</b>	Assess apraxia by having the patient write a sentence on the specified writing document (CAN0259-OND) and compare to previous.	1 point for writing that is comparable to previous.
<b>Attention</b>	Assess attention by instructing the patient to count backwards from 100 by increments of 10.	1 point for correctly and entirely counting backwards from 100 to 0.

## ICANS Grading System:

*ICANS is graded from 1 (least severe) to 4 (most severe). At each grade, there is a specific care set that outlines medical management and monitoring. Patients with Grade 2 ICANS will have CCOT and Neurology consulted and may require admission to CCTC if their risk for deterioration is predicted by Haem-Onc to be high. Grade 3 ICANS will need transfer to ICU for monitoring and management of cerebral edema*

Neurotoxicity Domain	N/A	Grade 1	Grade 2	Grade 3	Grade 4
ICE Score	10	7-9	3-6	0-2	0 (patient unarousable and unable to perform that is not attributed to another cause)
Depressed LOC	N/A	Awaken 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	N/A	Any clinical seizure focal or generalized that resolves rapidly or nonconvulsive 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	N/A	Deep focal motor weakness such as hemiparesis or paraparesis
Elevated ICP/cerebral edema	N/A	N/A	N/A	Focal/local edema on neuroimaging <sup>s</sup>	Diffuse cerebral edema on neuroimaging; decerebrate or decorticate posturing; or cranial nerve VI palsy; or papilledema; or Cushing's triad

ADDRESSOGRAPH

<p align="center"><b>Write the following sentence at each visit to the chemotherapy suite and at your clinic follow-up appointments. Keep this sheet on you for all visits, thank you!</b></p>	<p align="center"><b>Date</b> (YYYY/MMDD)</p>
<p>Hello, my name is _____ <i>First Name</i> <i>Last Name</i></p>	

Copies of this form are available in file folder at the front desk.

Continue documenting the patient’s handwriting on the form from Haem-Onc.

If another form is needed, go to “Programs and Services” and chose “Forms Management”. Search the “Forms Catalogue”. Enter form number CAN0259 and download another copy. The owner is Cancer Care Ontario.

Have patient write the sentence “my name is x x” on the line below the previous entry, or use the same sentence as previously entered. Time the entry and compare the handwriting quality/characteristics with the previous entry.