

<b>Indication</b>	<p>Glofitamab in combination with gemcitabine and oxaliplatin is indicated for second line treatment of relapsed or refractory diffuse large B-cell lymphoma not otherwise specified (DLBCL NOS) who are ineligible for autologous stem cell transplant (ASCT).</p> <p>NB Primary CNS lymphoma, Burkitt lymphoma, transformed follicular lymphoma and plasmablastic lymphoma are NOT eligible for treatment with glofitamab, gemcitabine and oxaliplatin.</p> <p>NB the patient must have not received prior treatment with a bispecific antibody.</p>
<b>Treatment Intent</b>	Disease modification
<b>Frequency and number of cycles</b>	<p><b>Combination therapy:</b> Glofitamab in combination with gemcitabine and oxaliplatin: Repeat every 21 days for a maximum of 8 cycles.</p> <p>Followed by</p> <p><b>Monotherapy:</b> Glofitamab: Repeat every 21 days for a maximum of 4 cycles.</p> <p>For a maximum of 12 cycles, unless a patient experiences unmanageable toxicity, disease progression or patient choice to stop.</p>
<b>Monitoring Parameters pre-treatment</b>	<ul style="list-style-type: none"> <li>• <b>Virology screening:</b> All new patients referred for systemic anti-cancer treatment should be screened for hepatitis B and C and the result reviewed prior to the start of treatment. Patients not previously tested who are starting a new line of treatment, should also be screened for hepatitis B and C. Further virology screening will be performed following individual risk assessment and clinician discretion.</li> <li>• Patients must have had no exposure to oxaliplatin within the last <b>12 months</b>.</li> <li>• <b>ECG baseline</b> and as clinically indicated during cycle 1 to 8.</li> <li>• <b>Haematological monitoring and parameters:</b> <ul style="list-style-type: none"> <li>○ FBC, U&amp;Es and LFTs baseline.</li> <li>○ <b>Cycle 1:</b> Monitor FBCs, U&amp;Es and LFTs on Day 1, Day 8 and Day 15. Proceed with treatment if PLT <math>\geq 75</math> and neuts <math>\geq 1.0</math>.</li> <li>○ <b>Day 8:</b> Proceed with glofitamab if PLT <math>\geq 75</math> and neuts <math>\geq 1.0</math>. If parameters not met consider GCSF or delay until count recovery, consultant decision.</li> <li>○ <b>Day 15:</b> Proceed with glofitamab if PLT <math>\geq 75</math> and neuts <math>\geq 1.0</math>. If parameters not met consider GCSF or delay until count recovery, consultant decision.</li> <li>○ <b>Cycle 2 to 12:</b> FBC, U&amp;Es and LFTs at each cycle. Proceed with treatment if PLT <math>\geq 75</math> and neuts <math>\geq 1.0</math>, if parameters not met consider GCSF or delay until count recovery, consultant decision.</li> </ul> </li> <li>• <b>Hepatic impairment:</b> <ul style="list-style-type: none"> <li>○ <b>Obinutuzumab:</b> The safety and efficacy of obinutuzumab in patients with impaired hepatic function has not been established. No specific dose recommendations can be made.</li> <li>○ <b>Glofitamab:</b> No dose adjustment required in mild hepatic impairment (total bilirubin <math>&gt;ULN</math> to <math>\leq 1.5 \times ULN</math> or AST <math>&gt;ULN</math>). No data available in moderate or severe impairment, clinician's decision.</li> <li>○ <b>Oxaliplatin:</b> No adjustment required.</li> <li>○ <b>Gemcitabine:</b> If total bilirubin <math>&lt; 27\mu\text{mol/L}</math>: no dose adjustment is needed. Total bilirubin <math>\geq 27\mu\text{mol/L}</math>: either start at 80% of the original dose and increase the dose if tolerated or start with full dose with active monitoring.</li> </ul> </li> <li>• <b>Renal impairment:</b> <ul style="list-style-type: none"> <li>○ <b>Obinutuzumab:</b> no dose adjustment is required if CrCl <math>\geq 30\text{ml/min}</math>; there is no data for CrCl <math>&lt; 30\text{ml/min}</math>.</li> <li>○ <b>Glofitamab:</b> No dose adjustment in mild or moderate impairment (CrCl 30 to <math>&lt;90\text{ml/min}</math>). No data available in severe impairment, clinician's decision.</li> <li>○ <b>Oxaliplatin:</b> GFR <math>\geq 30\text{ mL/min}</math>: 100% dose If CrCl <math>&lt; 30\text{ml/min}</math> contraindicated (SmPC), off-label: consider 50% of original dose.</li> </ul> </li> </ul>

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Date	09.01.2026	Authorising consultant (usually NOG Chair)	D. De-Silva

	<ul style="list-style-type: none"> <li>○ <b>Gemcitabine:</b> No dose adjustment required for CrCl <math>\geq 30</math> ml/min. No data for <math>&lt; 30</math> ml/min, clinical decision.</li> <li>● <b>Infusion-related reactions:</b></li> <li>● <b>Obinutuzumab:</b> <ul style="list-style-type: none"> <li>○ In the event of an infusion related reaction (IRR), the administration rate should be modified as follows:</li> <li>○ <b>Grade 1-2 IRR (mild-moderate):</b> Reduce infusion rate and treat symptoms. Upon resolution of symptoms, continue infusion and, if participant does not experience any IRR symptoms, infusion rate escalation may resume at the increments and intervals as appropriate for the treatment dose.</li> <li>○ <b>Grade 3 IRR (severe):</b> Temporarily interrupt infusion and treat symptoms. Upon resolution of symptoms, restart infusion at no more than half the previous rate (the rate being used at the time that the IRR occurred) and, if participant does not experience any IRR symptoms, infusion rate escalation may resume at the increments and intervals as appropriate for the treatment dose. If a grade 3 IRR occurs at re-challenge, stop infusion immediately and discontinue therapy permanently.</li> <li>○ Grade 4 IRR (life threatening): Stop infusion and discontinue therapy.</li> <li>○ Complete obinutuzumab monitoring/administration form</li> </ul> </li> <li>● <b>Glofitamab:</b> Infusion-related reactions may be clinically indistinguishable from manifestations of cytokine release syndrome (CRS) see CRS guidance see table 2.</li> <li>● <b>Management of adverse reactions:</b> <ul style="list-style-type: none"> <li>○ <b>Tumour lysis syndrome (TLS)</b> has been reported in patients receiving <b>glofitamab</b> and <b>obinutuzumab</b>. Patients with a high tumour burden and/or a high circulating lymphocyte count (<math>&gt; 25 \times 10^9/L</math>) and/or renal impairment (CrCl <math>&lt; 70</math> mL/min) are considered at risk of TLS and should receive prophylaxis prior to obinutuzumab and glofitamab. Prophylaxis should consist of adequate hydration, rasburicase (in high risk patients) and administration of uricostatics (e.g. allopurinol) as clinically appropriate, starting 12-24 hours prior to start of infusion to prevent hyperuricemia.</li> <li>○ <b>Obinutuzumab:</b></li> <li>○ <b>Antihypertensives:</b> Withholding of antihypertensive treatments should be considered for 12 hours prior to infusion and for the first hour after administration.</li> <li>○ Patients with a history of <b>cardiac disease</b> should be monitored closely.</li> <li>○ Dose reduction of <b>cytotoxic chemotherapy</b> should be considered if grade 3 or 4 non-haematological toxicity or repeat appearance of grade 2 (except N&amp;V and alopecia). Delay until resolution of toxicity to <math>\leq</math> grade 1.</li> <li>○ <b>Gemcitabine:</b></li> <li>○ <b>Posterior Reversible Encephalopathy Syndrome (PRES)</b> has been rarely reported with gemcitabine. In patients developing PRES, treatment of specific symptoms including control of hypertension is recommended along with discontinuation of gemcitabine.</li> <li>○ <b>Haemolytic uraemic syndrome.</b> Gemcitabine should be discontinued at the first signs of any evidence of microangiopathic haemolytic anaemia, such as rapidly falling haemoglobin with concomitant thrombocytopenia, elevation of serum bilirubin, serum creatinine, blood urea nitrogen, or LDH.</li> <li>○ <b>Capillary leak syndrome.</b> Gemcitabine should be discontinued and supportive measures implemented if capillary leak syndrome develops during therapy. Capillary leak syndrome can occur in later cycles and has been associated in the literature with adult respiratory distress syndrome.</li> <li>○ <b>Oxaliplatin:</b></li> <li>○ For guidance on the assessment and management of oxaliplatin induced neuropathy see KMCC website: <a href="https://www.kmcc.nhs.uk/medicines-and-prescribing-incorporating-sact-pathways/guidelines-for-the-management-of-sact-induced-adverse-reactions/">https://www.kmcc.nhs.uk/medicines-and-prescribing-incorporating-sact-pathways/guidelines-for-the-management-of-sact-induced-adverse-reactions/</a></li> </ul> </li> </ul>
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- Symptoms of sensory or functional neuropathy may include tingling or numbness which may persist to the next pre-chemotherapy assessment.
- **Glofitamab**  
All patients must be counselled on the risk, signs and symptoms of cytokine release syndrome (CRS) and immune effector cell-associated neurotoxicity syndrome (ICANS) and advised to contact their healthcare team immediately if they experience signs and symptoms of CRS and/or ICANS.
- CRS**
  - At least 1 dose of tocilizumab, at a dose of 8mg/kg IV (dose not to exceed 800 mg), for use in the event of CRS must be available prior to glofitamab infusion, at Cycles 1 and 2. Access to an additional dose of tocilizumab within 8 hours of use of the previous tocilizumab dose must be ensured.
  - All patients must be monitored for signs and symptoms of potential CRS (pyrexia, tachycardia, hypotension, chills, hypoxia) during infusion and for 12 hours after completion of the infusion of the first glofitamab dose (2.5mg on cycle 1 day 8).
  - Patients who experienced grade  $\geq$  grade 2 CRS with their previous infusion should be monitored after the completion of the infusion (see table 2).
- ICANS**
  - Cases of immune effector cell-associated neurotoxicity syndrome (ICANS) which could be life-threatening or fatal have occurred following treatment with glofitamab.
  - The onset of ICANS can be concurrent with CRS, following resolution of CRS, or in the absence of CRS. Clinical signs and symptoms of ICANS may include but are not limited to confusion, depressed level of consciousness, disorientation, seizure, aphasia, and dysgraphia.
  - At the first signs or symptoms of ICANS (confusion, disorientation, depressed level of consciousness), manage according to the ICANS guidance provided in Table 3.
- **Dose Modification:** All treatment should be delayed to allow resolution of non-haematological toxicities to Grade  $\leq$  1.
  - **Obinutuzumab:** No dose reductions are recommended.
  - **Glofitamab:** No dose reductions are recommended, treatment should be interrupted or discontinued or infusion rate reduced to treat adverse events.
  - **Oxaliplatin:** see notes above under “management of adverse reactions” and KMCC website <https://www.kmcc.nhs.uk/medicines-and-prescribing-incorporating-sact-pathways/guidelines-for-the-management-of-sact-induced-adverse-reactions/>
  - **Gemcitabine:** If neutrophils  $< 1$  or platelets  $< 75$ , gemcitabine may be reduced to 750mg/m<sup>2</sup> at consultants’ discretion.
  - **Discontinuation of agent:**
    - **If toxicity attributable to gemcitabine or oxaliplatin (chemotherapy):** Apply chemotherapy dose reduction/delay rules. Consider omitting the offending chemotherapy agent while continuing the other(s) and continuing glofitamab if clinically appropriate and if the toxicity is not exacerbated by continuing glofitamab.
    - **If toxicity attributable to glofitamab (e.g., CRS, severe immune toxicity):** Hold or permanently discontinue glofitamab. Consider continuing gemcitabine and oxaliplatin (with dose adjustments) only if the patient is clinically well enough and the treating clinician judges benefit outweighs risks. Patient should be discussed at MDT.
    - **If unclear attribution:** consider holding glofitamab and chemo until assessment and MDT review.
- **Common drug interactions (for comprehensive list refer to BNF/SPC):**
  - No formal drug interaction studies have been performed for **obinutuzumab** or **glofitamab**. Due to the cytokine release at the start of treatment concomitant use with CYP450 substrates may lead to fluctuations in concentration, patient receiving substrates with a narrow therapeutic range (e.g. warfarin, cyclosporin) should be monitored closely.

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	<ul style="list-style-type: none"> <li>○ Patients should not receive live vaccines during treatment, and until B cell counts have normalised.</li> <li>○ <b>Oxaliplatin:</b></li> <li>○ Caution is advised when oxaliplatin treatment is co-administered with other medicinal products known to cause QT interval prolongation. In case of combination with such medicinal products, the QT interval should be closely monitored.</li> <li>○ Caution is advised when oxaliplatin treatment is administered concomitantly with other medicinal products known to be associated with rhabdomyolysis.</li> <li>○ <b>Gemcitabine</b> - No specific interaction studies have been performed.</li> <li>• <b>Missed dose</b></li> <li>• <b>Glofitamab:</b> <ul style="list-style-type: none"> <li>○ <b>During escalation</b> (weekly dosing): Following pre-treatment with obinutuzumab, if the glofitamab 2.5 mg dose is delayed by more than 1 week, then repeat pre-treatment with obinutuzumab. Following glofitamab 2.5 mg dose or 10 mg dose, if there is a glofitamab treatment-free interval of 2 to 6 weeks, then repeat the last tolerated glofitamab dose and resume the planned step-up dosing. Following glofitamab 2.5 mg dose or 10 mg dose, if there is a glofitamab treatment-free interval of more than 6 weeks, then repeat pre-treatment with obinutuzumab and glofitamab step-up dosing.</li> <li>○ <b>After Cycle 2</b> (30 mg dose): If there is a glofitamab treatment-free interval of more than 6 weeks between cycles, then repeat pre-treatment with obinutuzumab and glofitamab dose escalation and then resume the planned treatment cycle (30 mg dose).</li> </ul> </li> <li>• <b>Driving and machinery:</b> Glofitamab may have major influence on patient's ability to drive or operate machinery due to the possibility CANS/CRS. Patients should be instructed to <b>avoid driving or operating machines for 48 hours</b> after each of the first two doses during the step-up dosing and in the event of new onset of any symptoms of ICANS and/or CRS until symptoms resolve. Patients should also be aware that oxaliplatin can cause dizziness and fatigue.</li> <li>• Patients should carry the glofitamab patient card at all times.</li> </ul>
<b>References</b>	CDF list accessed online 19.11.2025 SPC glofitamab accessed online 19.11.2025 Blueteq form accessed online 19.11.2025 SPC gemcitabine, obinutuzumab and oxaliplatin accessed online 21.11.2025 KMCC proforma NHL-037 V1 KMCC protocol HAEM-NHL-094 ROCHE medical information ref 0229596 available on logicalDoc

NB for funding information, refer to CDF and NICE Drugs Funding List

**Table 1: Management of glofitamab induced neutropenia**

Event	Initial management recommendation	Action
Grade 1 (mild)	Monitor blood counts weekly. Consider growth factor support	Continue glofitamab treatment
Grade 2 (moderate)	Monitor blood counts weekly. Administer growth factor support.	Consider holding glofitamab treatment in the presence of comorbidities or complications.
Grade 3-4 (severe-life threatening)	Monitor blood counts at least twice weekly until an increase of neutrophils is noticed. Administer growth factor support.	Hold glofitamab until resolution to $\leq$ grade 2

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**Table 2 American Society for Transplantation and Cellular Therapy (ASTCT) grading and CRS management guidance for glofitamab**

Grade <sup>1</sup>	CRS management	For next scheduled glofitamab infusion
<b>Grade 1</b> Fever $\geq 38^{\circ}\text{C}$	<p>If CRS occurs during infusion:</p> <ul style="list-style-type: none"> <li>• Interrupt infusion and treat symptoms</li> <li>• Restart infusion at slower rate when symptoms resolve</li> <li>• If symptoms recur, discontinue current infusion</li> </ul> <p>If CRS occurs post-infusion:</p> <ul style="list-style-type: none"> <li>• Treat symptoms</li> </ul> <p>If CRS lasts more than 48 h after symptomatic management:</p> <ul style="list-style-type: none"> <li>• Consider corticosteroids<sup>3</sup></li> <li>• Consider tocilizumab<sup>4</sup></li> </ul> <p>For CRS with concurrent ICANS, refer to Table 3.</p>	<ul style="list-style-type: none"> <li>• Ensure symptoms are resolved for at least 72 hours prior to next infusion</li> <li>• Consider slower infusion rate<sup>2</sup></li> </ul>
<b>Grade 2</b> Fever $\geq 38^{\circ}\text{C}$ and/or hypotension not requiring vasopressors and/or hypoxia requiring low-flow oxygen by nasal cannula or blow-by	<p>If CRS occurs during infusion:</p> <ul style="list-style-type: none"> <li>• Discontinue current infusion and treat symptoms</li> <li>• Administer corticosteroids<sup>3</sup></li> <li>• Consider tocilizumab<sup>4</sup></li> </ul> <p>If CRS occurs post-infusion:</p> <ul style="list-style-type: none"> <li>• Treat symptoms</li> <li>• Administer corticosteroids<sup>3</sup></li> <li>• Consider tocilizumab<sup>4</sup></li> </ul> <p>For CRS with concurrent ICANS, refer to Table 3.</p>	<ul style="list-style-type: none"> <li>• Ensure symptoms are resolved for at least 72 hours prior to next infusion</li> <li>• Consider slower infusion rate<sup>2</sup></li> <li>• Monitor patients post-infusion<sup>5</sup></li> </ul>
<p><b>For Grade 2: Tocilizumab use:</b> Do not exceed 3 doses of tocilizumab in a period of 6 weeks.</p> <p>If no prior use of tocilizumab or if 1 dose of tocilizumab was used within the last 6 weeks:</p> <ul style="list-style-type: none"> <li>• Administer first dose of tocilizumab<sup>4</sup></li> <li>• If no improvement within 8 hours, administer second dose of tocilizumab<sup>4</sup></li> <li>• After 2 doses of tocilizumab, consider alternative anti-cytokine therapy and/or alternative immunosuppressant therapy</li> </ul> <p>If 2 doses of tocilizumab were used within the last 6 weeks:</p> <ul style="list-style-type: none"> <li>• Administer only one dose of tocilizumab<sup>4</sup></li> <li>• If no improvement within 8 hours, consider alternative anti-cytokine therapy and/or alternative immunosuppressant therapy</li> </ul>		
<b>Grade 3</b> Fever $\geq 38^{\circ}\text{C}$ and/or hypotension requiring a vasopressor (with or without vasopressin) and/or hypoxia requiring high-flow oxygen by nasal cannula, face mask, non-rebreather mask, or Venturi mask	<p>If CRS occurs during infusion:</p> <ul style="list-style-type: none"> <li>• Discontinue current infusion and treat symptoms</li> <li>• Administer corticosteroids<sup>3</sup></li> <li>• Administer tocilizumab<sup>4</sup></li> </ul> <p>If CRS occurs post-infusion:</p> <ul style="list-style-type: none"> <li>• Treat symptoms</li> <li>• Administer corticosteroids<sup>3</sup></li> <li>• Administer tocilizumab<sup>4</sup></li> </ul> <p>For CRS with concurrent ICANS, refer to Table 3.</p>	<ul style="list-style-type: none"> <li>• Ensure symptoms are resolved for at least 72 hours prior to next infusion</li> <li>• Consider slower infusion rate<sup>2</sup></li> <li>• Monitor patients post-infusion<sup>5</sup></li> <li>• If Grade <math>\geq 3</math> CRS recurs at subsequent infusion, stop infusion immediately and permanently discontinue glofitamab</li> </ul>
<b>Grade 4</b> Fever $\geq 38^{\circ}\text{C}$ and/or hypotension requiring multiple vasopressors (excluding vasopressin) and/or hypoxia requiring oxygen by positive pressure (e.g., CPAP, BiPAP, intubation, and mechanical ventilation)	<p>If CRS occurs during infusion or post-infusion:</p> <ul style="list-style-type: none"> <li>• Permanently discontinue glofitamab and treat symptoms</li> <li>• Administer corticosteroids<sup>3</sup></li> <li>• Administer tocilizumab<sup>4</sup></li> </ul> <p>For CRS with concurrent ICANS, refer to Table 3.</p>	

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**For Grade 3 and Grade 4: Tocilizumab use:** Do not exceed 3 doses of tocilizumab in a period of 6 weeks.

If no prior use of tocilizumab or if 1 dose of tocilizumab was used within the last 6 weeks:

- Administer first dose of tocilizumab<sup>4</sup>
- If no improvement within 8 hours or rapid progression of CRS, administer second dose of tocilizumab<sup>4</sup>
- After 2 doses of tocilizumab, consider alternative anti-cytokine therapy and/or alternative immunosuppressant therapy

If 2 doses of tocilizumab were used within the last 6 weeks:

- Administer only one dose of tocilizumab<sup>4</sup>
- If no improvement within 8 hours or rapid progression of CRS, consider alternative anti-cytokine therapy and/or alternative immunosuppressant therapy

<sup>1</sup> American Society for Transplantation and Cellular Therapy (ASTCT) consensus grading criteria (Lee DW et al ASTCT Consensus Grading for Cytokine Release Syndrome and Neurologic Toxicity Associated with Immune Effector Cells. Biol Blood Marrow Transplant. 2019;25:625-38.

<sup>2</sup> Duration of infusion may be extended up to 8 hours, as appropriate for that cycle (see Table 2).

<sup>3</sup> Corticosteroids (e.g., 10 mg intravenous dexamethasone, 100 mg intravenous prednisolone, 1-2 mg/kg intravenous methylprednisolone per day, or equivalent).

<sup>4</sup> Tocilizumab 8 mg/kg intravenously (not to exceed 800 mg), as administered in Study NP30179.

<sup>5</sup> See section 4.8 for frequency and time to onset of Grade  $\geq 2$  CRS following Columvi 10mg and 30mg doses

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**Table 3. ICANS grading and management guidance**

Grade <sup>1</sup>	Presenting symptoms <sup>2</sup>	ICANS management	
		Concurrent CRS	No concurrent CRS
<b>Grade 1</b>	ICE <sup>3</sup> score 7-9 Or depressed level of consciousness <sup>4</sup> : awakens spontaneously	<ul style="list-style-type: none"> <li>• Manage CRS per Table 2.</li> <li>• Monitor neurologic symptoms and consider neurology consultation and evaluation, per physician discretion.</li> </ul>	<ul style="list-style-type: none"> <li>• Monitor neurologic symptoms and consider neurology consultation and evaluation, per physician discretion.</li> </ul>
		Withhold glofitamab until ICANS resolves. Consider non-sedating, anti-seizure medicinal products (e.g., levetiracetam) for seizure prophylaxis.	
<b>Grade 2</b>	ICE <sup>3</sup> score 3-6 Or depressed level of consciousness <sup>4</sup> : awakens to voice	<ul style="list-style-type: none"> <li>• Administer tocilizumab per Table 2 for management of CRS.</li> <li>• If no improvement after starting tocilizumab, administer dexamethasone<sup>5</sup> 10 mg intravenously every 6 hours if not already taking other corticosteroids. Continue dexamethasone use until resolution to Grade 1 or less, then taper.</li> </ul>	<ul style="list-style-type: none"> <li>• Administer dexamethasone<sup>5</sup> 10 mg intravenously every 6 hours.</li> <li>• Continue dexamethasone use until resolution to Grade 1 or less, then taper.</li> </ul>
		Withhold glofitamab until ICANS resolves. Consider non-sedating, anti-seizure medicinal products (e.g., levetiracetam) for seizure prophylaxis. Consider neurology consultation and other specialists for further evaluation, as needed	
<b>Grade 3</b>	ICE <sup>3</sup> score 0-2 Or depressed level of consciousness <sup>4</sup> : awakens only to tactile stimulus; Or seizures <sup>4</sup> , either: <ul style="list-style-type: none"> <li>• any clinical seizure, focal or generalised that resolves rapidly, or</li> <li>• non-convulsive seizures on electroencephalogram (EEG) that resolve with intervention;</li> </ul> Or raised intracranial pressure: focal/local oedema on neuroimaging <sup>4</sup>	<ul style="list-style-type: none"> <li>• Administer tocilizumab per Table 2 for management of CRS.</li> <li>• In addition, administer dexamethasone<sup>5</sup> 10 mg intravenously with the first dose of tocilizumab, and repeat dose every 6 hours, if not already taking other corticosteroids. Continue dexamethasone use until resolution to Grade 1 or less, then taper.</li> </ul>	<ul style="list-style-type: none"> <li>• Administer dexamethasone<sup>5</sup> 10 mg intravenously every 6 hours.</li> <li>• Continue dexamethasone use until resolution to Grade 1 or less, then taper.</li> </ul>
		Withhold glofitamab until ICANS resolves. For Grade 3 ICANS events which do not improve within 7 days, consider permanently discontinuing glofitamab Consider non-sedating, anti-seizure medicinal products (e.g., levetiracetam) for seizure prophylaxis. Consider neurology consultation and other specialists for further evaluation, as needed	
<b>Grade 4</b>	ICE <sup>3</sup> score 0 Or depressed level of consciousness <sup>4</sup> , either: <ul style="list-style-type: none"> <li>• patient is unarousable or requires vigorous or repetitive tactile stimuli to arouse, or</li> <li>• stupor or coma;</li> </ul> Or seizures <sup>4</sup> , either: <ul style="list-style-type: none"> <li>• life-threatening prolonged seizure (&gt; 5 minutes), or</li> <li>• repetitive clinical or electrical seizures without return to baseline in between;</li> </ul> Or motor findings <sup>4</sup> : <ul style="list-style-type: none"> <li>• deep focal motor weakness such as hemiparesis or paraparesis;</li> </ul> Or raised intracranial pressure/cerebral oedema <sup>4</sup> , with signs/symptoms, such as:	<ul style="list-style-type: none"> <li>• Administer tocilizumab per Table 2 for management of CRS.</li> <li>• As above, or consider administration of methylprednisolone 1 000 mg per day intravenously with first dose of tocilizumab, and continue methylprednisolone 1 000 mg per day intravenously for 2 or more days.</li> </ul>	<ul style="list-style-type: none"> <li>• Administer dexamethasone<sup>5</sup> 10 mg intravenously every 6 hours.</li> <li>• Continue dexamethasone use until resolution to Grade 1 or less, then taper.</li> <li>• Alternatively, consider administration of methylprednisolone 1 000 mg per day intravenously for 3 days; if symptoms improve, then manage as above.</li> </ul>
		Permanently discontinue glofitamab. Consider non-sedating, anti-seizure medicinal products (e.g., levetiracetam) for seizure prophylaxis. Consider neurology consultation and other specialists for further evaluation, as needed. In case of raised intracranial pressure/cerebral oedema, refer to institutional guidelines for management.	

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<ul style="list-style-type: none"> <li>• diffuse cerebral oedema on neuroimaging, or</li> <li>• decerebrate or decorticate posturing, or</li> <li>• cranial nerve VI palsy, or</li> <li>• papilloedema, or</li> <li>• Cushing's triad</li> </ul>	
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1 ASTCT consensus grading criteria for ICANS (Lee 2019).

2 Management is determined by the most severe event, not attributable to any other cause.

3 If patient is arousable and able to perform Immune Effector Cell-Associated Encephalopathy (ICE) Assessment

4 Attributable to no other cause.

5 All references to dexamethasone administration are dexamethasone or equivalent.

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**Cycle 1: 21 days (pre-treatment and dose escalation schedule)**

Day	Drug	Dose	Route	Infusion Duration	Administration Details
1	Methylprednisolone	80mg	IV	Over 15 min	In 100ml Sodium Chloride 0.9%. Infusion <b>must be completed at least 1 hour prior to the obinutuzumab infusion.</b>
	Paracetamol	1g	PO	stat	Given at least 30 minutes before the obinutuzumab infusion.
	Chlorphenamine	4mg	PO	stat	
	Ensure adequate hydration is given 12-24 hours prior to starting obinutuzumab infusion to patients with lymphocyte counts > 25 x 10 <sup>9</sup> /L to reduce the risk of TLS.				
	<b>OBINUTUZUMAB</b>	1000mg	IV inf	See below	In 250ml Sodium Chloride 0.9%. Flush line pre and post infusion with Sodium Chloride 0.9%
	Obinutuzumab infusion rate notes: Administer at 50 mg/hr. In the absence of any infusion related reactions or hypersensitivity, the rate of infusion may be escalated in increments of 50 mg per hour every 30 minutes to a maximum rate of 400 mg per hour.				
2	Ondansetron	<75yrs 16mg >=75yrs 8mg	IV	15 min	Sodium Chloride 0.9% 50ml
	Dexamethasone	8mg	PO		
	<b>GEMCITABINE</b>	<b>1000mg/m<sup>2</sup></b>	IV	30 min	Diluted in 0.9% sodium chloride to a final concentration of 0.1mg/ml – 10mg/ml. Consider extending infusion duration if final volume >500ml
	<b>FLUSH WITH 5 % GLUCOSE BEFORE AND AFTER ADMINISTRATION OF OXALIPLATIN</b>				
	<b>OXALIPLATIN</b>	<b>100mg/m<sup>2</sup></b>	IV	2- 6 hrs	500ml 5% glucose (to give a concentration between 0.2 mg/ml and 0.70 mg/ml)
8	Dexamethasone	20mg	IV	Bolus	<b>Given at least 1 hour prior to the glofitamab infusion.</b>
	Paracetamol	1g	PO	stat	Given at least 30 minutes before the glofitamab infusion.
	Chlorphenamine	4mg	PO	stat	
	Ensure adequate hydration is given 12-24 hours prior to starting glofitamab infusion				
	<b>GLOFITAMAB</b>	<b>2.5mg</b>	IV	4 hours**	In 25ml Sodium Chloride 0.9% Final concentration must be between 0.1mg/ml and 0.6mg/ml
15	Dexamethasone	20mg	IV	Bolus	<b>Given at least 1 hour prior to the glofitamab infusion.</b>
	Paracetamol	1g	PO	stat	Given at least 30 minutes before the glofitamab infusion.
	Chlorphenamine	4mg	PO	stat	
	Ensure adequate hydration is given 12-24 hours prior to starting glofitamab infusion				
	<b>GLOFITAMAB</b>	<b>10mg</b>	IV	4 hours**	In 50ml Sodium Chloride 0.9% Final concentration must be between 0.1mg/ml and 0.6mg/ml

\*\* For patients who experience CRS with their previous dose of glofitamab, the duration of infusion may be extended up to 8 hours

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**TTO Cycle 1 to 12**

TTO	Drug	Dose	Route	Directions
Day 1	Metoclopramide	10mg	PO	Take 10mg up to TDS when required. Do not take for more than 5 days continuously.
	Aciclovir	400mg	PO	BD continuously (plus 3 more months after completion of last glofitamab treatment dose)
	Co-trimoxazole	480mg	PO	TWICE daily on Mondays, Wednesdays and Fridays (plus 3 more months after completion of last glofitamab treatment dose)
	Allopurinol	300mg	PO	OD, starting 24hrs before first cycle and reviewed after 4 weeks. Prescribe continuing supply if required from cycle 2 onwards
	Filgrastim	300 micrograms or consider dose of 480 micrograms if patient >80kg	Sub cut	OD from <b>Day 5</b> for 5 days – cycles <b>1 to 8</b> only.
	Consider antifungal prophylaxis			

**Cycle 2: 21 days**

Day	Drug	Dose	Route	Infusion Duration	Administration Details
1	Dexamethasone	20mg	IV	Bolus	<b>Given at least 1 hour prior to the glofitamab infusion.</b>
	Paracetamol	1g	PO	stat	Given at least 30 minutes before the glofitamab infusion.
	Chlorphenamine	4mg	PO	stat	
	Ensure adequate hydration is given 12-24 hours prior to starting glofitamab infusion				
	<b>GLOFITAMAB</b>	<b>30mg</b>	IV	4 hours**	In 100ml Sodium Chloride 0.9% Final concentration must be between 0.1mg/ml and 0.6mg/ml
	Ondansetron	<75yrs 16mg >/=75yrs 8mg	IV	15 min	Sodium Chloride 0.9% 50ml
	<b>GEMCITABINE</b>	<b>1000mg/m<sup>2</sup></b>	IV	30 min	Diluted in 0.9% sodium chloride to a final concentration of 0.1mg/ml – 10mg/ml. Consider extending infusion duration if final volume >500ml
	<b>Flush with 5% glucose before and after oxaliplatin administration</b>				
	<b>OXALIPLATIN</b>	<b>100mg/m<sup>2</sup></b>	IV	2- 6 hrs	500ml 5% glucose (to give a concentration between 0.2 mg/ml and 0.70 mg/ml)

\*\* For patients who experience CRS with their previous dose of glofitamab, the duration of infusion may be extended up to 8 hours

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**Cycle 3 to 8: Repeat every 21 days**

Day	Drug	Dose	Route	Infusion Duration	Administration Details
1	Dexamethasone	20mg	IV	Bolus	<b>CYCLE 3: Given at least 1 hour prior to the glofitamab infusion.</b>  <b>CYCLE 4 onwards:</b> only required by patients who experienced CRS with previous dose. <b>Given at least 1 hour prior to glofitamab infusion</b>
	Paracetamol	1g	PO	stat	Given at least 30 minutes before the glofitamab infusion.
	Chlorphenamine	4mg	PO	stat	
	Ensure adequate hydration is given 12-24 hours prior to starting glofitamab infusion				
	<b>GLOFITAMAB</b>	<b>30mg</b>	IV	2 hours***	In 100ml Sodium Chloride 0.9% Final concentration must be between 0.1mg/ml and 0.6mg/ml
	Ondansetron	<75yrs 16mg ≥/75yrs 8mg	IV	15 min	Sodium Chloride 0.9% 50ml
	Dexamethasone	8mg	PO	stat	Only to be administered from <b>cycle 4 to cycle 8</b> if IV dexamethasone dose not administered as pre-med to glofitamab
	<b>GEMCITABINE</b>	<b>1000mg/m<sup>2</sup></b>	IV	30 min	Diluted in 0.9% sodium chloride to a final concentration of 0.1mg/ml – 10mg/ml. Consider extending infusion duration if final volume >500ml
	<b>Flush with 5% glucose before and after oxaliplatin administration</b>				
	<b>OXALIPLATIN</b>	<b>100mg/m<sup>2</sup></b>	IV	2- 6 hrs	500ml 5% glucose (to give a concentration between 0.2 mg/ml and 0.70 mg/ml)

\*\*\*if the previous infusion was well tolerated. If the patient experienced CRS with a previous dose, the duration of infusion should be maintained at 4 hours.

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**Cycle 9 to 12: repeat every 21 days**

Day	Drug	Dose	Route	Infusion Duration	Administration Details
1	Dexamethasone	20mg	IV	Bolus	<b>CYCLE 9 onwards:</b> only required by patients who experienced CRS with previous dose. <b>Given at least 1 hour prior to glofitamab infusion</b>
	Paracetamol	1g	PO	stat	Given at least 30 minutes before the glofitamab infusion.
	Chlorphenamine	4mg	PO	stat	
	Ensure adequate hydration is given 12-24 hours prior to starting glofitamab infusion				
	<b>GLOFITAMAB</b>	<b>30mg</b>	IV	2 hours***	In 100ml Sodium Chloride 0.9% Final concentration must be between 0.1mg/ml and 0.6mg/ml

\*\*\*if the previous infusion was well tolerated. If the patient experienced CRS with a previous dose, the duration of infusion should be maintained at 4 hours

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