

## CAR T-cell Grading and Management: Cytokine Release Syndrome

| General Guidance for CRS Management  |  |  |   |  |
|--|--|--|---|--|
| Grading  |  |  |   |  |
| CRS Parameter  | Grade 1                                    | Grade 2  | Grade 3   | Grade 4  |
| Fever  | $\geq 38^{\circ}\text{C}$                  |  |   |  |
| Hypotension  | None                                       | Present, but no vasopressor requirement  | Vasopressors required (excluding vasopressin)   | Multiple vasopressors required (with or without vasopressin)                 |
| Hypoxia  | None                                       | Low flow NC  | HFNC, face mask, NRBM   | Positive pressure (CPAP, BIPAP, mechanical ventilation)                      |
| Management   |  |  |   |  |
| Diagnostic   | Fever workup                               | Tele, continuous pulse ox, fever workup  | ECHO, tele, continuous pulse ox, fever workup   |  |
| Supportive   | Fever management, seizure prophylaxis      | Fever management, seizure prophylaxis; fluid bolus, consider vasopressors if continuous hypotension; supplemental O2 as needed | Fever management, seizure prophylaxis; fluid boluses and vasopressors as needed for pressure support; supplemental O2 as needed |  |
| Anti-CAR T-cell Therapy  | Consider tocilizumab if fever for > 3 days | Dexamethasone 4 – 10 mg IV x1 (or methylprednisolone equivalent); tocilizumab x1 dose  | Dexamethasone 10 mg x1 IV (or methylprednisolone equivalent); tocilizumab x1  | Dexamethasone 20 mg x1 IV (or methylprednisolone equivalent); tocilizumab x1 |
| CRS: cytokine release syndrome; NC: nasal cannula; HFNC: high flow nasal cannula; NRBM: non-rebreather mask; CPAP: continuous positive airway pressure; BIPAP: biphasic positive airway pressure |  |  |   |  |