Inpatient Bispecific Order Set Recommendations

General Orders:

Vital signs and assessments:

Every 8 hours if patient is admitted but not to have suspected CRS/ICANS and anytime there is a change in status

If patient is located on FLOOR or ED with suspected CRS/ICANS, recommend VS hourly x4, followed by every 2 hrs x4, then per MD guidance or hospital protocol and anytime there is a change in patient status

Every 1 hour if patient is located in ICU with suspected CRS/ICANS and anytime there is a change in status

Assessment and grading of CRS

Assess every 8 hours if patient is admitted but not to have suspected CRS/ICANS for change in patient's status (see attached assessment tool)

Assessment and grading of ICANS

Assess every 8 hours if patient is admitted but not to have suspected CRS/ICANS for change in patient's status or when there is a change in patient's status (see attached assessment tool)

Daily Weight

Daily labs and as needed:

- CBC, CMP, LDH, uric acid daily and ferritin (prn)

DVT/VTE prophylaxis

Notify oncologist of any of the following:

- SBP greater than 140 or less than 90 mmHg
- Heart rate greater than 120 or less than 60 bpm or an arrhythmia
- Respiratory rate greater than 25 or less and 12 breaths/min
- Oxygen saturation less than 92% on room air
- Change in weight > 5 lbs
- Upward trend in serum creatinine or liver function test
- Tremor or jerking movement in the extremities
- Any increase in CRS or ICANS overall grade
- Temperature greater than or equal to 100.4 °F.

CRS Order Set:

Grade 1: Temp ≥ 100.4

- Vital Signs per general orders as above
- Encourage hydration
- APAP 1000 mg every 8 hours PRN for elevated temperature
- Monitor neurologic status
- Vital Signs every 2hrs while awake
    - Notify MD is BP goes less that 10mm HG below baseline AND <90mm Hg systolic, new orthostatic symptoms, weakness, confusion, dizziness or new hypoxia (<90%)

- Dexamethasone 12 mg PO daily if grade 1 CRS continues
    - Consider for administration for refractory fever, must be reviewed with clinical team or covering MD prior to administration
- Tocilizumab 8 mg/kg (max 800 mg) for high risk patients (advanced age, high tumor burden, heart failure, pulmonary disease) or fever persisting > 48hr
    - Review with MD prior to administration

Grade 2: Temp ≥ 100.4 plus hypotension not requiring a vasopressor and/or hypoxia requiring low flow nasal cannula

- Vital Signs every 2hrs
- APAP 1000 mg Q8H PRN elevated temperature
- NS 1000 ml over 30-60 minutes (may bolus as needed for BP)
- Monitor neurologic status
- O2 to maintain O2 Sats
- Dexamethasone 12 mg PO daily
    - Dexamethasone 10mg IV every 12hr if hypotension persistent
- Administer tociluzumab 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 not responsive to IV fluids or increasing supplemental oxygen

Grade 3: Temp ≥ 100.4 plus hypotension requiring one vasopressor and/or requiring high flow nasal cannula (evaluate for ICU admission)

- Vital Signs every 1hr
- Same management as grade 2
- APAP 1000 mg Q8H PRN elevated temperature
- NS 1000 ml over 30-60 minutes (may bolus as needed for BP)
- Monitor neurologic status
- O2 to maintain O2 Sats
- Vasopressor management if needed
- Dexamethasone 10 to 20 mg every 6 hours (or equivalent) & continue until event is grade 1 or less. Taper over 3 days once patient is grade 1
- Administer tociluzumab 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 not responsive to IV fluids or increasing supplemental oxygen

Grade 4: Temp ≥ 100.4 plus hypotension requiring greater than one vasopressor and/or requiring positive pressure (CPAP, BiPAP, intubation, and mechanical ventilation) (ICU management required)

- Vital Signs every 1hr
- Same management as grade 3
- APAP 1000 mg Q8H PRN elevated temperature
- NS 1000 ml over 30-60 minutes (may bolus as needed for BP)
- Monitor neurologic status
- O2 to maintain O2 Sats, mechanical ventilation as needed
- Vasopressor management if needed
- Dexamethasone 10 to 20 mg every 6 hours (or equivalent) & continue until event is grade 1 or less. Taper over 3 days once patient is grade 1
    - Alternatively may administer methylprednisolone 1000 mg IV daily X 3 days
- Administer tociluzumab 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 not responsive to IV fluids or increasing supplemental oxygen

ICANS Order set:

- Consider the need for seizure precaution
  - If patient develops seizures or status epilepticus, call neurologist
- Place on aspiration precautions for ICANS grade 3 (withhold oral intake of food, fluid and medications)
- If transferred to ICU due to presence of diffuse cerebral edema or raised intracranial pressure, refer to hospital policies as appropriate

Grade 1 (ICE Score 7-9)

- **Vital Signs/Assessment** – per as per general orders above
- If any concurrent CRS symptoms
  - Dexamethasone 12 mg PO daily
    - Dexamethasone 10mg IV every 12hr if hypotension persistent
  - Administer tociluzumab 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 concurrent CRS symptoms, supportive care and observation

Grade 2 (ICE Score 3-6)

- **Vital Signs/Assessment** – per as per general orders above
- If any concurrent CRS symptoms
  - Administer tociluzumab 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
- If no concurrent CRS symptoms
  - Supportive care
  - Dexamethasone 10mg IV
    - If no improvement, Dexamethasone 20mg IV q6hr until grade ≤1

Grade 3 (ICE Score 0-2) ICU management recommended

- **Vital Signs/Assessment** – per as per general orders above
- If any concurrent CRS symptoms
  - Administer tociluzumab 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
- If no concurrent CRS symptoms
  - 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

Grade 4 (ICE score 0) ICU Management

- **Vital Signs/Assessment** – per as per general orders above
- If any concurrent CRS symptoms
    - Administer tociluzumab 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 1 mg/kg daily x 3, followed by 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
- If no concurrent CRS symptoms
    - Methylprednisolone 1 mg/kg daily x 3, followed by 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
    - Consider mechanical ventilation