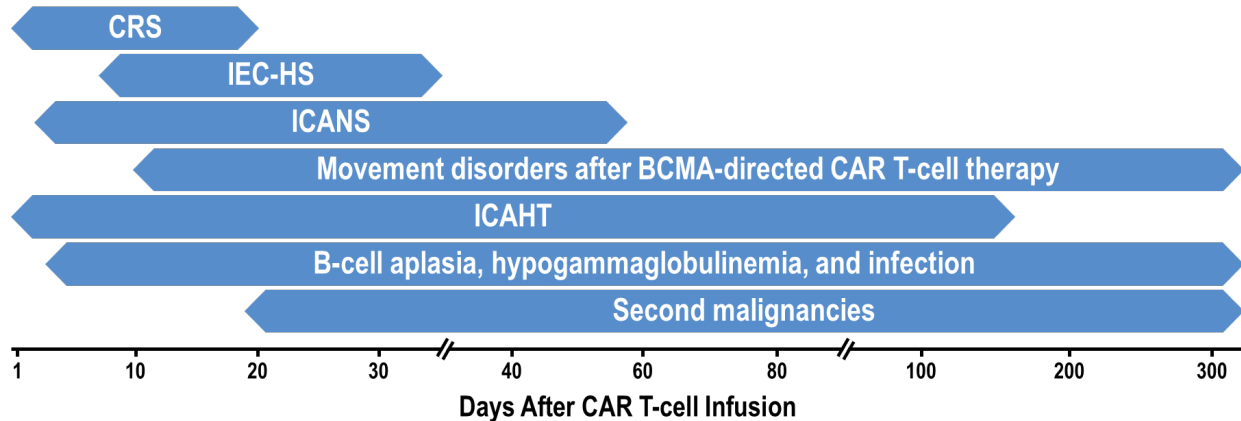


DEPARTMENTAL CHECKLIST

Managing Patients with Multiple Myeloma Who Have Received CAR T-cell Therapy

Timing of Potential CAR T-cell TEAEs¹



BCMA, B-cell maturation antigen; CAR, chimeric antigen receptor; CRS, cytokine release syndrome; ICAHT, immune effector cell-associated hematotoxicity; ICANS, immune effector cell-associated neurotoxicity syndrome; IEC-HS, immune effector cell-associated hemophagocytic lymphohistiocytosis-like syndrome; TEAE, treatment-emergent adverse event.

Long-Term Monitoring After CAR T-cell Therapy

Infection Prevention and Management

Prolonged cytopenias

- Check laboratory results weekly for 4 weeks after hospital discharge
 - Transfuse leukodepleted irradiated PRBCs for Hb <7 g/dL, or <8 g/dL if symptomatic
 - Transfuse for PLT count <20×10⁹, or active bleeding
 - Hold anticoagulation for PLT count <50×10⁹
 - Administer TPO after day 60 for PLT count consistently <20×10⁹
 - Administer G-CSF if ANC <1×10³ cells/μL; administer longer-acting G-CSF if continued ANC <1×10³ cells/μL
- After 4 weeks, check labs once monthly if the patient does not need transfusions. After 6 months, check every 3 months.

B-cell aplasia/ Hypogamma- globulinemia

- Check IgG levels every 4 weeks:
 - Administer IVIG for IgG level <400 mg/dL, continue until IgG levels normalize and any infections are resolved
- Of note, patients with IgG myeloma may have laboratory test results that look like they have normal levels, but functional IgG is the fraction that is nonmonoclonal

Infection

- Work-up for fever >100.4° F:
 - CBC, blood cultures, urinalysis/urine culture
 - CXR
 - Viral swabs (ie, influenza/COVID-19/RSV)
 - Low threshold for antibiotics and/or admission based on ANC
 - Consider growth factor based on ANC
- If patient has been having significant diarrhea for >1 or 2 weeks, call the CAR T-cell therapy center and perform further testing with GI multiplex test if available

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Antibiotic prophylaxis (herpes and PJP)

- For herpes: orally for at least 1 year:
 - Acyclovir 400 mg twice daily or valacyclovir 500 mg daily
- For PJP: for at least 1 year, until CD4 count >200 mm³:
 - Sulfamethoxazole and trimethoprim double strength, 1 tab orally Mondays/Wednesdays/Fridays if count allows
 - Alternatives:
 - ▶ Pentamidine 4 mg/kg IV every 28 days
 - ▶ Atovaquone 1500 mg orally daily

Vaccinations

Seasonal influenza

- Vaccination is recommended annually, at least 2 weeks prior to LDC or 6 months after completing therapy if not previously given

COVID-19

- Revaccination is recommended for all patients, regardless of prior vaccination. Start revaccination 6 months after completing therapy

Other recommended vaccinations

- Refer to the discharge letter or contact the CAR T-cell therapy center for details
 - Pneumococcal conjugate
 - Diphtheria, tetanus, acellular pertussis
 - *Haemophilus influenzae* type B conjugate
 - Zoster, recombinant

Recommendations for Long-Term Monitoring

Relapse

- Full myeloma laboratory tests monthly for the first 6 months, then every 3 months thereafter
 - If light chains or M protein are increasing from nadir, go back to monthly
- Imaging (PET CT, skeletal MRI, etc) as indicated (every 3-6 months for patients with history of EMD and/or oligo-/nonsecretory disease)

Secondary malignancies

- Routine CBC (check for AML, MDS)
- Routine history and clinical exams for adenopathy and B symptoms (secondary lymphomas)
- Dermatology evaluation every 6 to 12 months (cutaneous malignancies)
- All age-appropriate cancer screenings (mammogram, colonoscopy, PSA, etc)

MD Anderson CAR T-cell Therapy Center Contacts

- MDACC Main Phone Number: **713-792-2121**
- Direct Line (Page Operator): **713-792-7090**

AML, acute myeloid leukemia; ANC, absolute neutrophil count; CBC, complete blood count; CD4, cluster of differentiation 4; CXR, chest X-ray; EMD, extramedullary disease; G-CSF, granulocyte-colony stimulating factor; GI, gastrointestinal; Hb, hemoglobin; IEC, immune effector cell; IgG, immunoglobulin G; IV, intravenous; IVIG, intravenous immunoglobulin; LDC, lymphodepletion chemotherapy; M, myeloma; MDACC, MD Anderson Cancer Center; MDS, myelodysplastic syndromes; MRI, magnetic resonance imaging; PET CT, positron emission tomography computed tomography; PJP, *Pneumocystis jirovecii* pneumonia; PLT, platelet; PRBC, packed red blood cell; PSA, prostate-specific antigen; RSV, respiratory syncytial virus; TPO, thrombopoietin.

1. Brudno JN, et al. *Nat Rev Clin Oncol*. 2024;21(7):501-521; 2. NCCN. NCCN Guidelines Version 2.2026. Multiple Myeloma. www.nccn.org/professionals/physician_gls/pdf/myeloma.pdf.