

RTP On Demand: The Emerging and Potential Role of Chimeric Antigen Receptor T-Cell Therapy in the Management of Hematologic Cancers

THE CORRECT ANSWER IS INDICATED WITH YELLOW HIGHLIGHTING.

1. Results of the Phase I study of 19-28z CAR T-cell therapy for adults with relapsed acute lymphocytic leukemia (ALL) suggested that _____.
 - a. Patients with low disease burden had significantly better event-free and overall survival than patients with high disease burden
 - b. Patients with low disease burden had significantly higher complete remission rates than patients with high disease burden
 - c. Subsequent allogeneic hematopoietic stem cell transplant significantly improved outcomes
2. In early trials for CAR T-cell therapy for multiple myeloma, what is the main rationale for using B-cell maturation antigen (BCMA) rather than CD19 as the target?
 - a. CD19 expression is not restricted to B cells, which leads to unacceptable toxicity
 - b. As B-cells differentiate, CD19 levels decrease and BCMA levels increase
 - c. CD19 is not expressed on the cell surface but BCMA is a cell-surface protein
3. CAR T-cell therapy will be easily adaptable to the treatment of solid tumors because of the abundance of tumor-specific cell-surface antigens.
 - a. True
 - b. False
4. After the infusion of CAR T cells into a patient who has received lymphodepleting chemotherapy, the CAR T-cell population _____.
 - a. Decreases steadily
 - b. Remains constant as long as the patient responds
 - c. Proliferates and expands
5. Which of the following statements is true of the Phase I TRANSCEND trial of JCAR17 for patients with non-Hodgkin lymphoma?
 - a. The trial excluded patients with mantle cell lymphoma and transformed follicular lymphoma
 - b. Response rates were not as high as those observed in the ZUMA-1 trial
 - c. Response rates were higher for the subset of patients who had experienced disease relapse within 12 months of autologous transplant than for the subset who had stable or progressive disease after their last chemotherapy
 - d. All of the above
6. CAR T cell-related neurologic toxicities _____.
 - a. Are generally irreversible
 - b. Follow the same time course as cytokine release syndrome (CRS)
 - c. Respond to corticosteroids
7. For patients with chronic lymphocytic leukemia who receive CAR T-cell therapy, _____.
 - a. Complete response rates are lower than the rates for patients with ALL
 - b. The frequency of disease relapse is higher than the frequency for patients with ALL
 - c. The probability of responding is higher if they have high PD-1 expression on their CD8-positive cells
 - d. All of the above
8. Concurrent infections can lead to CRS refractory to standard therapy, increasing the risk of mortality.
 - a. True
 - b. False

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9. Which of the following statements is true regarding the CRS associated with CAR T-cell therapy?

- a. Patients often present with high fever, rigors, myalgia and arthralgia
- b. CRS can lead to a capillary leak syndrome, potentially necessitating supplemental oxygen or vasopressors
- c. Treatment with tocilizumab typically results in rapid reversal of CRS
- d. All of the above

10. CAR T cells can remain detectable and circulating for years after the initial infusion.

- a. True
- b. False