CONTINUING EDUCATION TEST
CMV-specific immune system monitoring for management of cytomegalovirus in HSCT
January 2019 (This form may be photocopied. It is no longer valid for CEUs after July 31, 2020.)

TEST QUESTIONS

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1. Which virus remains the main cause of morbidity and mortality in allogeneic hematopoietic stem cell transplant (allo-HSCT)?
   a. influenza
   b. parainfluenza
   c. norovirus
   d. cytomegalovirus

2. What are the main concerns with antiviral drugs that are effective at reducing viral loads?
   a. they are expensive
   b. they have significant toxicity profiles
   c. both a and b
   d. none of the above

3. In order to create a personalized risk stratification strategy to allo-HSCT patients receiving drugs for CMV, studies are being conducted that monitor CMV-specific immune response before or after the transplant.
   a. True
   b. False

4. The homeostatic balance between CMV viral replication in a host and the host's immune response to that replication is
   a. viral declination.
   b. viral reactivation.
   c. viral latency.
   d. none of the above

5. Which immune cells are responsible for keeping CMV from uncontrolled replication?
   a. T cells
   b. B cells
   c. Antigen presenting cells
   d. all of the above

6. Uncontrolled CNV viral replication can only affect the organs of the body.
   a. True
   b. False

7. Viral replication of CMV can present as all but the following:
   a. encephalitis
   b. pneumonia
   c. osteomyelitis
   d. neuropathy

8. How soon does CMV reactivation typically occur after HSCT?
   a. 1 year
   b. 3 months
   c. 6 months
   d. 3 months

9. There are several antiviral drugs that are administered routinely as a part of CMV prophylaxis strategy in post-HSCT patients.
   a. True
   b. False

10. In order for a preemptive strategy to detect viral load to be successful, the virus must be detected
    a. before the onset of disease.
    b. at the onset of disease.
    c. after the onset of disease.
    d. all of the above

11. Which two testing methods are commonly used to monitor the viral load of CMV reactivation?
    a. PCR and viral culture
    b. PCR and antibody immunoblot assay
    c. antigenemia assay and biomarker assays
    d. antigenemia assay and PCR

12. When is the likelihood of CMV viral reactivation significantly reduced?
    a. 75 days post-transplant
    b. 100 days post-transplant
    c. 250 days post-transplant
    d. 500 days post-transplant

13. A main limitation in the utility of PCR results in detecting CMV viral load is that there is a lack of assay standardization limits for this patient population.
    a. True
    b. False

14. Which cytokine plays an important role in the control of CMV infection in HSCT patients?
    a. IFN-γ
    b. IL-1
    c. TNF-α
    d. all of the above

15. Monitoring a lack of, or reconstitution of ________ cells can assist physicians in whether the patient is able to successfully control a CMV infection.
    a. CD4+ T
    b. CD4+ B
    c. CD8+ B
    d. CD8+ T

16. A study performed by Sellar et al. determined that in ________ patients, the CMV specific immune cells have originated from the recipient and was protective against CMV infection.
    a. R+/D-
    b. R+/D+
    c. R-/D-
    d. R-/D+

17. In order to provide a mechanism to establish risk stratification for the development of CMV, assessment of recipients’ T cell response to CMV should occur within ________ following HSCT.
    a. a couple of days
    b. a couple of weeks
    c. a couple of months
    d. a couple of years

18. Once algorithms are developed based on studies of CMV immune response in HSCT patients, decisions can be made about which/what factor(s)?
    a. optimal treatment standards
    b. length of treatment
    c. whom to treat
    d. all of the above

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