

**TDM of Cyclosporine:  
New Analytical Methods for New Clinical Concepts**

- 1) In terms of cyclosporine pharmacokinetics, C<sub>2</sub> refers to
  - a) Two times the previous drug concentration
  - b) Two hours post dose
  - c) Two hours prior to the next scheduled dose
  - d) Two hours beyond the peak drug concentration
  
- 2) Metabolism of a drug generally accomplishes the following
  - a) Less water soluble and less toxic
  - b) More toxic and less water soluble
  - c) Less toxic and more water soluble
  - d) More water soluble and more toxic
  
- 3) Because the distribution of cyclosporine into the tissue compartment includes distribution into blood cells
  - a) Specimens must be kept at room temperature until analysis
  - b) Whole blood is the specimen of choice
  - c) Serum is the specimen of choice
  - d) Specimen type is not important, since cyclosporine partitions between blood cells and plasma
  
- 4) In major Western countries, the most common organ transplanted is
  - a) Liver
  - b) Heart and heart/lung
  - c) Kidney
  - d) Intestine
  - e) Pancreas
  
- 5) The following two immunosuppressant drugs have the same mechanism (target of action)
  - a) Cyclosporine and Tacrolimus
  - b) Tacrolimus and Sirolimus
  - c) Sirolimus and Cyclosporine
  - d) Mycophenolate Mofetil and Cyclosporine
  - e) Tacrolimus and Mycophenolate Mofetil
  
- 6) Because of the shared mechanism (above), the following drug is most often dispensed as cotherapy with cyclosporine
  - a) Sirolimus
  - b) Tacrolimus
  - c) Lidocaine
  - d) Mycophenolate Mofetil
  - e) None of these; cyclosporine is never dispensed as cotherapy

- 7) If the window between subtherapeutic and toxic levels for a drug is narrow,
- Less drug should be dispensed
  - More drug should be dispensed
  - Antidotes should be made available
  - The drug must be monitored stringently
- 8) Long term immunosuppressive therapy can cause patients to be at risk for Cytomegalovirus and certain neoplasms because
- Chronic stage transplant patients are generally malnourished
  - Immune surveillance normally protects against both CMV and cancer
  - Organ transplant patients are often anemic
  - Cyclosporine-induced renal damage puts patients at risk for viral infections
- 9) Organ transplantation costs include
- Initial surgery costs
  - Immunosuppressive medication
  - Monitoring immunosuppressive medication
  - Acute and chronic rejection of the transplanted organ
  - All of the above
- 10) Which of the following are routinely monitored in a transplant recipient due to renal toxicity?
- AST, ALT, ALP, LD, Bilirubin
  - Creatinine, BUN, Uric acid, bilirubin
  - Cholesterol and triglycerides
  - glucose, BUN, Uric acid, bilirubin
- 11) Prior expert consensus had recommended, and now discourages use of what specimen timing?
- Trough
  - Peak
  - Area under the curve
  - C2

