Solutions to Test Your Knowledge: Kidney Transplantation and the HIV

1E. A&B only
Ritonavir and other protease inhibitors (PI) can significantly increase calcineurin inhibitor levels. Ritonavir is a potent inhibitor of the hepatic microsomal enzyme CYP (450) 3A4, of which cyclosporine and tacrolimus are substrates. Conversely, efavirenz strongly induces the CYP 3A4 system. As a result, serum cyclosporine and tacrolimus levels may decrease with efavirenz therapy. Careful immunosuppression monitoring is recommended with initiation or dose changes of concomitant efavirenz therapy in transplant recipients.

2. False.
As Chandran and colleagues describe in their AJKD article, the suppression of viral replication does not seem sufficient to prevent all HIV-mediated immunologic injury.

3C. Higher.
In the landmark article by Peter Stock and colleagues, early and aggressive rejection was surprisingly higher in HIV-infected recipients despite low CD4 T-cell counts and control of viral replication.

4D. **Has been explored as a possible option in HIV endemic areas.**
Muller and colleagues describe in a letter to the editor in the *New England Journal of Medicine* four HIV-infected recipients who received kidney transplant from two HIV-infected deceased donors. These recipients had successful outcomes after the first year with regards to allograft function, HIV viral load, and CD4 cell count. To their credit, performing such a procedure took courage and saved four recipients from certain death in an area where dialysis therapies were not available. Uncertain is the possibility of co-HIV infection or viral mutation.