

- Ceiling statin dose
- Limit nephrotoxic agents

### Case Study

1. RL is a 55 y/o, 83 kg female with ESRD 2° to HTN. The patient is scheduled to receive a living unrelated renal transplant today from her husband. The transplant team would like to implement triple immunosuppression per protocol consisting of cyclosporine, mycophenolate mofetil and prednisone. What initial dose of cyclosporine (round to nearest 25 mg) would you recommend for this patient?

225 mg po q12

RL is discharged from the hospital 5 days post-transplant, her Scr has fallen from 8mg/dl to 1.5mg/dl over the past 5 days. She returns 3 days later for a f/u visit. Her trough cyclosporine level today is 165 ng/ml (goal 200-250ng/ml). What are 2 key questions you should ask the patient prior to making any dosage changes?

- ① what time she took her medications last night
- ② Any new medications or over the counter medications used over the last 3 days

How would you adjust her dose if you deem it necessary?

↑ by 25 mg po q12  
 ∴ Recommended <sup>CSA</sup> 250 mg po q12, ✓ <sup>CSA</sup> level in 2-3 days

2. A 54 year old male received a liver transplant for treatment of HCV cirrhosis 9 months ago. His post-transplant course was uneventful until today when he was diagnosed with peritoneal tuberculosis. Currently, his medications include tacrolimus 4 mg po q 12 and mycophenolate mofetil 1000 mg po bid. Tacrolimus blood levels are being maintained in the range of 5-8 ng/ml. Today's level is 5.2 ng/ml. Liver function tests are wnl. A decision is made to initiate antitubercular therapy with ethambutol, isoniazid, rifampin and pyrazinamide.

a. What assessment can you make regarding this patient's overall drug regimen? Be specific. Include your rationale.

Assessment  $\Rightarrow$  potential drug interaction  $\bar{c}$  rifampin and tacrolimus.  
Rifampin may  $\downarrow$  TAC levels due to induction of CYP3A4 enz system.

b. Provide a therapeutic plan for this patient, including immunosuppression dose recommendations and specific monitoring parameters, as appropriate.

Plan  $\Rightarrow$  since patient level is at the low end of therapeutic range  
Prospectively  $\uparrow$  tac by 25%  
 $\therefore$  Recommend  $\uparrow$  TAC 5mg po q12  
 $\checkmark$  level in 4-7 days  
and adjust accordingly.