

Our Lady of the Lake Regional Medical Center
Pharmacy Anticoagulation Stewardship

Direct Oral anticoagulant (DOAC) pertinent drug interactions recommendation

1. DOAC interaction with strong CYP3A4 and P-glycoprotein inducers

- a. Co-administration of **Apixaban** with a strong CYP3A4 and P-glycoprotein inducer such as Carbamazepine, Phenobarbital, Phenytoin or Rifampin may decrease the serum concentration of Apixaban by about 40%. This could increase the patient risk of thromboembolic event.
- b. Co-administration of **Rivaroxaban** with a strong CYP3A4 and P-glycoprotein inducer such as Carbamazepine, Phenobarbital, Phenytoin or Rifampin may decrease the serum concentration of rivaroxaban by about 22%. This could increase the patient risk of thromboembolic event.
- c. Co-administration of **Dabigatran** with a strong P-glycoprotein inducer such as Carbamazepine, Phenytoin or Rifampin may decrease the serum concentration of dabigatran by about 67%. This could increase the patient risk of thromboembolic event.

Pharmacy will recommend avoiding combination of both medications and the use of warfarin for anticoagulation while on the above strong CYP3A4 and P-glycoprotein inducers.

OR

Continue with DOAC therapy and discontinue/replace the strong CYP3A4 and P-glycoprotein inducers with alternative medication if possible.

Incidence of thromboembolic event has been reported in a patient on concurrent DOAC and strong CYP3A4/ P-glycoprotein inducer at OLOLRMC.

Therefore, prior to verification of any order of DOAC with a strong CYP3A4 and P-glycoprotein inducers; all pharmacist should inform the ordering physician about the above drug-drug interactions and the possibility of increased risk of thromboembolic event.

Provide the above recommendation and document the physician response accordingly.