# ART Drug-Drug Interactions

**Updated February 2021**

## Table 13: Tenofovir Disoproxil Fumarate (TDF) and Tenofovir Alafenamide (TAF) Interactions
(Also see drug package inserts)

<table>
<thead>
<tr>
<th>Class or Drug</th>
<th>Mechanism of Action</th>
<th>Clinical Comments</th>
</tr>
</thead>
</table>
| Adefovir [Jafari, et al. 2014] | • Similar mechanisms of action and elimination, and thus, similar adverse event profiles.  
• Competitive inhibition of elimination results in additive adverse events. | Avoid concomitant use to avoid increased risk of hepatic steatosis and lactic acidosis. |
• Avoid concomitant use or use the lowest effective dose of other drug to avoid renal impairment and kidney dysfunction.  
• May be preferable to use TAF in these instances because TAF is less nephrotoxic. |
| Sofosbuvir/velpatasvir/voxilaprevir [brand name Vosevi] [Garrison, et al. 2017] | • TDF and TAF are substrates for BCRP and P-gP.  
• Voxilaprevir is a BCRP inhibitor.  
• Velpatasvir inhibits BCRP and P-gP. |  
• Avoid concomitant use if possible to avoid TDF-associated adverse events.  
• May be preferable to use TAF in these instances. |
| Potent CYP3A4 or P-gP inducers (phenytoin, rifampin, carbamazepine, St. John’s wort, etc.) [Gibson, et al. 2016] | • CYP3A4 is a minor metabolic pathway for TAF, and as such, potent inducers of this enzyme may modestly reduce concentrations.  
• TAF is also a substrate of P-gP, and inducers may decrease TAF concentrations. | Avoid coadministration of TAF with potent inducers of CYP3A4 or P-gP |
| Zonisamide | TDF may increase concentration of zonisamide. | Monitor for adverse events of zonisamide with TDF. |
| Topiramate | No significant interactions noted. | Monitor renal function when coadministered (topiramate may cause kidney stones; TDF is associated with renal toxicity). |

**Abbreviations:** BCRP, breast cancer resistance protein; CYP, cytochrome P450; P-gP, P-glycoprotein.

**No significant interactions/no dose adjustments necessary:** Common oral antibiotics (Table 15); drugs used as antihypertensive medicines (Table 16); anticoagulants (Table 17); antiplatelet drugs (Table 18); statins (Table 19); antidiabetic drugs (Table 20); acid-reducing agents (Table 21); polyvalent cations (Table 22); asthma and allergy medications (Table 23); long-acting beta agonists (Table 24); inhaled and injected corticosteroids (Table 25); antidepressants (Table 26); benzodiazepines (Table 27); sleep medications (Table 28); antipsychotics (Table 29); non-opioid pain medications (Table 31); opioid analgesics and tramadol (Table 32); hormonal contraceptives (Table 33); erectile and sexual dysfunction drugs (Table 34); tobacco and smoking cessation products (Table 35); alcohol, disulfiram, and acamprosate (Table 36); methadone, buprenorphine, naloxone, and naltrexone (Table 37); immunosuppressants (Table 38); gender-affirming hormones (Table 40).