Anti-tuberculosis Therapies

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	ATV/c	ATV/r	DRV/c	DRV/r	LPV/r	DOR	EFV	ETV	NVP	RPV oral	FTR	LEN	MVC	BIC/ F/TAF	CAB oral	CAB/ RPV	DTG	EVG/c/ F/TAF	EVG/c/ F/TDF	RAL	FTC/ TAF	FTC/ TDF
First line and Second line Drugs																						
Amikacin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ a	↔	↔	↔ a
Bedaquiline	↑♥	↑♥	↑	↑	↑62%♥	↔	↓18%♡	↓	↑3%	↔♥	↔♥	↑	↔	↔	↔	↔♥	↔	↑	↑	↔	↔	↔
Capreomycin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑⇑ b	↔	↔	↑ c	↑⇑ b	↑⇑ a,d	↔	↑⇑ e	↑⇑ a
Clofazimine	↔	↔	↔	↔	↔	⇑	↔♡	↔	↔	⇑♥	⇑♥	↔	⇑	⇑ f	↔	⇑♥	↔	↔	↔	↔	↔	↔
Cycloserine	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Delamanid	g	g	g	g	g	↔	↔♡ h	↔	↔	↔♥	↔♥	g	↔	↔	↔	↔♥	↔	g	g	↔	↔	↔
Ethambutol	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Ethionamide	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Isoniazid	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Kanamycin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ a	↔	↔	↔ a
Linezolid	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Moxifloxacin	↑♥	↓♥	↔	↓	↓♥	↔	↓♡	↓	↔	↔♥	↔♥	↔	↔	↔	↔	↔♥	↔	↔	↔	↔	↔	↔
Para-aminosalicylic acid	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑⇑ i	↔	↔	↑	↑⇑ i	↑⇑ j	↔	↑⇑ i	↑⇑ j
Pretomanid	↔♥	↓♥	↓	↓	↓17%♥	↔	↓35%♡	↓	↓	↔♥	↔♥	↔	↔	↔	↔	↔♥	↔	↓	↓	↔	↔	↔
Pyrazinamide	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Rifabutin	↑⇓	↑	↑⇓	↑⇑ 50%	↑	⇓ 50% k	↓38%	⇓37%	↑17%	⇓ 42% l	⇓ 30%	⇓	m	⇓ 38% n	↔	⇓	↔	↑⇓	↑⇓	⇑ 19%	⇓ o	↔
Rifampicin	⇓	⇓ 72% p	⇓	⇓ 57%	⇓ 75%	⇓88%	⇓ 26% q	⇓	⇓ 58%	⇓ 80%	⇓ 82%	⇓ 84%	⇓ r	⇓ 75% n	⇓ 59%	⇓	⇓ 54% s	⇓	⇓	⇓ 40%	⇓ o	↔
Rifapentine	⇓	⇓	⇓	⇓	⇓	⇓	⇓	⇓	⇓	⇓	⇓	⇓	⇓ r	⇓	⇓	⇓	⇓ t	⇓	⇓	⇓	⇓ o	↔
Streptomycin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ a	↔	↔	↔ a

Interactions with CAB/RPV long acting injections

Pharmacokinetic interactions shown are mostly with RPV.
QT interactions shown are with RPV.

Interactions with Lenacapavir

Residual LEN may affect exposure of sensitive CYP3A4 substrates initiated within 9 months after stopping subcutaneous LEN.

Interactions with Ibalizumab

None

Interactions with Abacavir (ABC), Lamivudine (3TC), Tenofovir-DF (TDF) or Zidovudine (ZDV)

ABC: No clinically relevant interactions expected.
3TC: 3TC and/or capreomycin exposure may increase when coadministered. Monitor renal function as appropriate.
3TC: Exposure of lamivudine and/or para-aminosalicylic acid may increase when coadministered.
TDF: Caution with nephrotoxic agents such as amikacin, kanamycin, streptomycin (a).
TDF: Caution with capreomycin as capreomycin and tenofovir-DF concentrations may increase (a).
TDF: Caution with the calcium salt of para-aminosalicylic acid. (j).
ZDV: Potentially myelosuppressive drugs such as pretomanid may increase the risk of ZDV adverse reactions. Monitor haematological parameters.
ZDV: Rifampicin decreased ZDV AUC by 47%. Coadministration is not recommended in ZDV's European label, but the US label says routine dose modification is not warranted.

Colour Legend

- No clinically significant interaction expected.
- These drugs should not be coadministered.
- Potential interaction which may require a dose adjustment or close monitoring.
- Potential interaction predicted to be of weak intensity. No *a priori* dosage adjustment is recommended.

Text Legend

↑ Potential increased exposure of the anti-tuberculosis drug
↓ Potential decreased exposure of the anti-tuberculosis drug
↔ No significant effect
⇑ Potential increased exposure of HIV drug
⇓ Potential decreased exposure of HIV drug

♥ One or both drugs may cause QT and/or PR prolongation. ECG monitoring is advised if coadministered with atazanavir or lopinavir. Rilpivirine and fostemsavir were shown to prolong the QT interval at supratherapeutic doses. Caution is advised with rilpivirine. ECG monitoring is advised with fostemsavir and drugs with a known QT prolongation risk.
♡ Efavirenz has a potential risk of QT prolongation relating specifically to homozygous carriers of CYP2B6*6/*6.

Numbers refer to increase or decrease in AUC as observed in drug-drug interaction studies.

Notes

a Coadministration with tenofovir-DF should be avoided with concurrent or recent use of a nephrotoxic agent. If coadministration is unavoidable, closely monitor renal function.
b Coadministration may increase concentrations of capreomycin and emtricitabine. Renal function should be monitored as clinically appropriate.
c Aminoglycosides are nephrotoxic (risk is dose and treatment duration related). Renal function should be monitored as clinically appropriate and antiretroviral dosage adjusted accordingly.
d Coadministration may increase concentrations of capreomycin, emtricitabine and tenofovir. Renal function should be monitored as clinically appropriate.
e Coadministration may increase concentrations of capreomycin and emtricitabine. Renal function should be monitored as clinically appropriate.
f Coadministration may increase bictegravir concentrations, but this is unlikely to be clinically significant.
g Coadministration is expected to increase DM-6705 (a delamanid metabolite associated with QT prolongation) to a limited extent. The risk of QT prolongation is not expected to increase.
h A higher rate of neuropsychiatric adverse effects (e.g., euphoric mood and abnormal dreams) was observed with delamanid plus efavirenz compared to either drug alone.
i Coadministration may increase concentrations of para-aminosalicylic acid and emtricitabine.
j Coadministration may increase concentrations of para-aminosalicylic acid, emtricitabine and tenofovir. However, a clinical study performed with tenofovir and the calcium salt of para-aminosalicylic acid showed an unexpected substantial reduction in tenofovir exposure. The mechanism is unclear but could relate to reduced absorption in presence of the calcium salt of para-aminosalicylic acid. Until further data are available on the mechanism, caution is needed when coadministering tenofovir with the calcium salt of para-aminosalicylic acid.
k The product label for doravirine recommends to increase doravirine dosage to 100 mg twice daily when co-administered with rifabutin. Doravirine should be kept at 100 mg twice daily for at least another 2 weeks following cessation of rifabutin due to the persisting inducing effect upon discontinuation of a moderate/strong inducer.
l The rilpivirine dose should be increased to 50 mg once daily during coadministration (and decreased to 25 mg once daily when rifabutin is stopped). Note, it is recommended to maintain rilpivirine 50 mg once daily for at least another 2 weeks following cessation of rifabutin due to the persisting inducing effect upon discontinuation of a moderate/strong inducer.
m No dose adjustment for maraviroc in absence of PI. With PI (except tipranavir/r, fosamprenavir/r), give maraviroc 150 mg twice daily.
n Numbers refer to decrease in bictegravir AUC; decreases in the absorption of tenofovir alafenamide and thereby its plasma concentrations are also expected.
o Coadministration is expected to decrease the exposure of tenofovir alafenamide; no effect on emtricitabine is expected.
p A PK study in people living with HIV showed double-dose atazanavir/ritonavir (300/100 mg twice daily) overcame the interaction with rifampicin (600 mg or 1200 mg once daily).
q Efavirenz should be used at 600 mg once daily in the presence of rifampicin. In the absence of rifampicin, efavirenz can be used at 400 mg once daily or 600 mg once daily.
r Give maraviroc 600 mg twice daily
s A dose adjustment of dolutegravir to 50 mg twice daily is recommended in treatment-naïve or INSTI-naïve patients. Alternatives to rifampicin should be used where possible for INSTI-experienced patients with certain INSTI-associated resistance substitutions or clinically suspected INSTI resistance.
t Based on dolutegravir interaction studies with rifabutin and rifampicin, consider administering dolutegravir at 50 mg twice daily in the presence of rifapentine.

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Abbreviations ATV atazanavir DRV darunavir LPV lopinavir /c cobicistat /r ritonavir DOR doravirine EFV efavirenz ETV etravirine NVP nevirapine RPV rilpivirine
FTR fostemsavir LEN lenacapavir MVC maraviroc BIC bictegravir CAB cabotegravir DTG dolutegravir EVG elvitegravir RAL raltegravir F or FTC emtricitabine TAF tenofovir alafenamide TDF tenofovir-DF

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