www.hiv-druginteractions.org

University of Liverpool

Cancer Therapies Treatment Selector

Charts revised December 2019. Full information available at www.hiv-druginteractions.org

	ATV/c	ATV/r	DRV/c	DRV/r	LPV/r	DOR	EFV	ETV	NVP	RPV	MVC	BIC/ F/TAF	DTG	EVG/c/ F/TAF	EVG/c/ F/TDF	RAL	ABC	FTC or 3TC	F/TAF	TDF	ZDV
Anti-tumour Antibiotics																					
Bleomycin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Daunorubicin	↔ [a]	↔ [a]	↔	↔	↔ [a]	↔	↔	↔	↔	↔ [a]	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [b]
Doxorubicin	↔ [a]	↔ [a]	↔	↔	↔ [a]	↔	↔	↔	↔	↔ [a]	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [b]
Epirubicin	↔ [a]	↓ [a]	↔	↓	↓ [a]	↔	↑	↔	↔	↔ [a]	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [b]
Alkylating Agents																					
Carboplatin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [c,d]	↔	↔	↔	↔	↔ [c,d]	↔ [b]
Chlorambucil	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [b]
Cisplatin	↑	↑	↑	↑	↑	↔	↔	↔	↔	↔	↔	↑⇑ [e]	↔	↑ [d]	↔ [c,d]	↔	↔	↑⇑ [f]	↑⇑ [e]	↔ [c,d]	↔ [b]
Cyclophosphamide	↓ [g]	↓ [g]	↓ [g]	↓ [g]	↓ [g]	↔	↓ [h]	↓ [h]	↓ [h]	↔	↔	↔	↔	↓ [g]	↓ [g]	↔	↔	↔	↔	↔	↔ [b]
Dacarbazine	↔	↓ [g]	↔	↓ [g]	↓ [g]	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [c]	↔	↔	↔	↔	↑	↔ [b]
Dactinomycin	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [b]
Ifosfamide	↑ [i]	↑ [i]	↑ [i]	↑ [i]	↑ [i]	⇓	↓ [h]	↓ [h]	↓ [h]	⇓	⇓	⇑ or ⇓ [j]	↔	↑ [c,i]	↑ [c,i]	↔	↔	↔	↔	↔ [c]	↔ [b]
Oxaliplatin	↔ ♥	↔ ♥	↔	↔	↔ ♥	↔	↔	↔	↔	↔ ♥	↔	↔ [k]	↔ [k]	↔	↔ [c]	↔	↔	I	↔	↔ [c]	↔ [b]
Procarbazine	↔	↓ [g]	↔	↓ [g]	↓ [g]	↔	↓ [g]	↔	↓ [g]	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [b]
Antimetabolite Agents																					
Capecitabine	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑?	↔	↑?	↑?	↔	↑?	↑?	↑?	↑?	↔ [b]
Cytarabine	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔		↔	↔	↔	↔ [b]
Fluorouracil	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↑?	↔	↑?	↑?	↔	↑?	↑?	↑?	↑?	↔ [b]
Gemcitabine	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [b]
Mercaptopurine	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [b]
Methotrexate	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↑ [c,m]	↔ [m]	↔ [m]	↔ [m]	↔ [m]	↑ [c,m]	↔ [b,m]
Plant Alkaloids																					
Docetaxel	↑	↑	↑	↑	↑	↔	↓	↓	↓	↑?	↑?	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔ [b]
Etoposide	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔ [b]
Irinotecan	↑ [n,o]	↑ [n,o]	↑ [n]	↑ [n]	↑ [n]	↔	↓ [p]	↓ [p]	↓ [p]	↔	↔	↔	↔	↑ [n]	↑ [n]	↔	↔	↔	↔	↔	↔ [b]
Paclitaxel	↑	↑	↑	↑	↑	⇓	↑	↓⇓	↔	⇓	⇓	⇓ [q]	⇓	↑	↑	⇓	↔	↔	↔	↔	↔ [b]
Vinblastine	↑	↑	↑	↑	↑	⇓	↓	↓⇓	↓	⇓	⇓	⇓ [q]	⇓	↑	↑	⇓	↔	↔	↔	↔	↔ [b]
Vincristine	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔ [b]
Tyrosine Kinase Inhibitors																					
Dasatinib	↑ ♥	↑ ♥	↑	↑	↑ ♥	↔	↓	↓	↓	⇑ ♥	⇑	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Erlotinib	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Gefitinib	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Imatinib	↑	↑	↑	↑	↑	⇑	↓⇑	↓⇑	↓⇑	⇑	⇑	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔ [b]
Lapatinib	↑ ♥	↑ ♥	↑ ♡	↑ ♡	↑ ♥	↔	↓	↓	↓	⇑ ♥	⇑	↔	↔	↑ ♡	↑ ♡	↔	↔	↔	↔	↔	↔
Nilotinib	↑ ♥	↑ ♥	↑ ♡	↑ ♡	↑ ♥	⇑	↓⇑	↓⇑	↓⇑	⇑ ♥	⇑	⇓ [q]	↔	↑ ♡	↑ ♡	↔	↔	↔	↔	↔	↔
Pazopanib	↑ ♥	↑ ♥	↑ ♡	↑ ♡	↑ ♥	↔	↓	↓	↓	⇑ ♥	⇑	↔	↔	↑ ♡	↑ ♡	↔	↔	↔	↔	↔	↔
Sunitinib	↑ ♥	↑ ♥	↑ ♡	↑ ♡	↑ ♥	↔	↓	↓	↓	↔ ♥	↔	↔	↔	↑ ♡	↑ ♡	↔	↔	↔	↔	↔	↔
Others																					
Bortezomib	↑ ♥	↑ ♥	↑	↑	↑ ♥	↔	↓	↓	↓	↔ ♥	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔ [b]
Cetuximab	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Everolimus	↑	↑	↑	↑	↑	↔	↓	↓	↓	↔	↔	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Sorafenib	↔ [r] ♥	↔ [r] ♥	↔ [r]	↔ [r]	↔ [r] ♥	↔	↓	↓	↓	↔ ♥	↔	↔	↔	↔ [r]	↔ [r]	↔	↔	↔	↔	↔	↔
Tamoxifen	↑ [i]	↑ [i]	↑ [i]	↑ [i]	↑ [i]	⇓	↓	↓⇓	↓	⇓	⇓	⇓ [q]	↔	↑ [i]	↑ [i]	↔	↔	↔	↔	↔	↔
Temsirolimus	↑	↑	↑	↑	↑	↔	↓ [g]	↓ [g]	↓ [g]	⇑	⇑	↔	↔	↑	↑	↔	↔	↔	↔	↔	↔
Trastuzumab	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔ [b]
Trastuzumab emtansine	↑ [s]	↑ [s]	↑ [s]	↑ [s]	↑ [s]	↔	↔	↔	↔	↔	↔	↔	↔	↑ [s]	↑ [s]	↔	↔	↔	↔	↔	↔ [b]

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 cancer drug
- ↓ Potential decreased exposure of the cancer 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; caution is advised with rilpivirine as supratherapeutic doses of rilpivirine (75 and 300 mg once daily) were shown to prolong the QT interval.
- ♡ Potential QT and/or PR prolongation due to the cytostatic agent. Use with caution; ECG monitoring recommended.

Notes

a Cytostatic agent may induce cardiac toxicity including arrhythmias and/or non-specific ECG abnormalities; caution is warranted in presence of other drugs with potential effects on PR and QT intervals.
b Potential additive haematological toxicity
c Potential additive nephrotoxicity
d The cytostatic agent may impair renal function: monitor creatinine clearance and adjust NRTI dosage accordingly (may require a change from a single tablet regimen).
e Coadministration may increase concentrations of cisplatin and FTC. Close monitoring of renal function is recommended.
f Concentrations of cisplatin and FTC or 3TC may increase. Close monitoring of renal function is recommended.
g Concentrations of parent drug decreased but concentrations of the active metabolite increased.
h Concentrations of parent drug decreased but concentrations of the active metabolite and toxic metabolite increased.
i Concentrations of parent drug increased but concentrations of the active metabolite decreased which may result in decreased efficacy.
j Coadministration may affect bictegravir concentrations. In addition, ifosfamide and tenofovir alafenamide may show additive renal toxicity.
k The oxaliplatin effect may be potentially antagonised due to its reduced entry into the tumour cell arising from the inhibition of OCT2.
l No interaction is expected with FTC, but concentrations of oxaliplatin and 3TC could increase if coadministered. Monitor side effects.
m Use in HIV patients is contraindicated by some manufacturers.
n Concentrations of SN-38 (active metabolite) increased.
o Coadministration is contraindicated in the atazanavir US product label, but the European product label recommends patients should be closely monitored for adverse reactions related to irinotecan.
p Conversion of SN-38 to inactive metabolite increased.
q Coadministration may decrease bictegravir concentrations, but no effect on emtricitabine or tenofovir alafenamide is expected.
r Poor tolerability has been observed in patients on ritonavir-containing regimens. (A similar effect may also occur with cobicistat-containing regimens.
s Coadministration not recommended due to the potential for an increase in exposure and toxicity of DM1 (an active component of emtansine).

Abbreviations: ATV atazanavir; BIC bictegravir; DRV darunavir; DTG dolutegravir; LPV lopinavir; EVG elvitegravir; /c cobicistat; RAL raltegravir; /r ritonavir; ABC Abacavir; DOR doravirine; F or FTC emtricitabine; EFV efavirenz; 3TC lamivudine; ETV etravirine; TAF tenofovir alafenamide; NVP nevirapine; TDF tenofovir-DF; RPV rilpivirine; ZDV zidovudine; MVC maraviroc