www.covid19-druginteractions.org

UNIVERSITY OF LIVERPOOL

Interaction Report

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Treatment	Co-medications
Nirmatrelvir/ritonavir (5 days)	Candesartan Eprosartan Irbesartan Losartan Olmesartan Telmisartan Valsartan

This report lists the summaries of potential interactions (i.e. "red", "amber" and “yellow” classifications) for the drugs in the table above. Drug-drug interactions between Covid drugs are NOT assessed in this report.

Interactions with a "green" classification (i.e. no clinically significant interaction) have been checked and are listed at the end of this report, but summaries are not shown.

For full details of all interactions, see www.covid19-druginteractions.org.

Description of the interactions

Potential clinically significant interaction - likely to require additional monitoring, alteration of drug dosage or timing of administration (AMBER)

Nirmatrelvir/ritonavir (5 days) + Valsartan

Coadministration has not been studied. Valsartan is a substrate of the hepatic uptake transporters OATP1B1 and MRP2. Valsartan concentrations may increase due to inhibition of OATP1B1 by ritonavir and also inhibition of MRP2 by ritonavir. Patients should be advised to monitor for signs or symptoms of hypotension. Given the short duration of nirmatrelvir/ritonavir, no dose adjustment is recommended, but consider stopping valsartan for the remainder of the duration of nirmatrelvir/ritonavir treatment if symptomatic hypotension occurs.

Potential weak interaction - additional action/monitoring or dosage adjustment is unlikely to be required (YELLOW)

Nirmatrelvir/ritonavir (5 days) + Irbesartan

Coadministration has not been studied but can be considered. Irbesartan is metabolized by via glucuronidation and oxidation (mainly CYP2C9). In vitro and in vivo data indicate that ritonavir is a weak inducer of CYP2C9. Nirmatrelvir/ritonavir could potentially decrease irbesartan exposure. However, given that induction reaches maximal effect after several days and the short duration of nirmatrelvir/ritonavir treatment, no a priori dosage adjustment is recommended.

Nirmatrelvir/ritonavir (5 days) + Losartan

Coadministration has not been studied but can be considered. Losartan is converted to its active metabolite mainly by CYP2C9 in the range of clinical concentrations. In vitro and in vivo data indicate that ritonavir is a weak inducer of CYP2C9. Nirmatrelvir/ritonavir could potentially increase the conversion to the more pharmacologically active metabolite. This is unlikely to be clinically significant and no a priori dose adjustment is recommended.

No clinically significant interaction expected (GREEN)

Nirmatrelvir/ritonavir (5 days) + Candesartan

Nirmatrelvir/ritonavir (5 days) + Eprosartan

Nirmatrelvir/ritonavir (5 days) + Olmesartan

Nirmatrelvir/ritonavir (5 days) + Telmisartan