

Paxlovid Crushing & Splitting

Can Paxlovid be crushed or split?

The product monograph and manufacturer state that Paxlovid (nirmatrelvir plus ritonavir) should not be crushed or split due to lack of information. Some jurisdictions^{1,2} support these recommendations and cite studies showing decreased bioavailability with crushing Kaletra (lopinavir/ritonavir) due to disruption of the tablet matrix³. However, others, [like British Columbia](#), allow crushing and splitting due to a review and assessment of pharmacokinetic (PK) and phase I studies, where Paxlovid suspension was administered,⁴ and review literature looking at PK as well as virological outcomes in HIV populations⁵.

AHS supports crushing and splitting of Paxlovid to be administered orally with the following considerations for enteral tube administration:

- Ritonavir is classified as Biopharmaceutical Classification System (BCS) class IV medication (i.e. drugs having low permeability and poor oral availability), translating to caution required with manipulation for feeding tube administration⁴. It is unclear what class nirmatrelvir would fall into but its bioavailability is 50%⁶ and ritonavir's is 60-80%⁷.
- The minimum amount of ritonavir required to provide adequate nirmatrelvir efficacy is unknown. Ritonavir is present as a booster (vs active treatment agent) and there is evidence that a lowered amount of booster is sufficient to achieve similar virologic outcomes in HIV literature (i.e. most studies looking at virologic outcomes in HIV show virologic suppression and most studies showing insufficient plasma concentrations are in children, in whom Paxlovid is not indicated)^{5,9}.
- With these limitations in evidence, administration in enteral feeding tubes not emptying into the stomach (e.g. jejunal tubes) or that are small bore should be assessed on case by case basis, weighing risk (i.e. COVID treatment failure, tube blockage) versus benefit (i.e. enteral COVID therapy)

References

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