Nirmatrelvir retains activity against the Alpha (B.1.1.7), Beta (B.1.351), Gamma (P.1), and Delta (B.1.617.2) variants. According to the manufacturer, nirmatrelvir also inhibited the 3CL protease associated with the Omicron (B.1.1.529) variant in a biochemical assay.

Paxlovid is supplied in cartons containing nirmatrelvir 150-mg tablets copackaged with ritonavir 100-mg tablets. The recommended dosage is 300/100 mg (2 nirmatrelvir tablets and 1 ritonavir tablet taken together) twice daily for 5 days. Treatment should be started within 5 days of symptom onset. If a dose is missed by more than 8 hours, it should be skipped and the next dose should be taken at the regularly scheduled time. In patients with moderate renal impairment (eGFR ≥30 to <60 mL/min), the dosage should be reduced to nirmatrelvir 150 mg/ritonavir 100 mg twice daily. Paxlovid is not recommended for use in patients with severe renal impairment (eGFR <30 mL/min) or severe hepatic impairment (Child-Pugh C).

Paxlovid, the investigational oral antiviral drug nirmatrelvir copackaged with oral ritonavir, has received an Emergency Use Authorization from the FDA for treatment of mild to moderate COVID-19 in outpatients ≥12 years old at high risk of progression to severe disease. In one trial, the antiviral combination decreased COVID-19 related hospitalization or death by 88%. It should be started as soon as possible after diagnosis and within 5 days of symptom onset. Paxlovid appears to be well tolerated, but ritonavir is a strong inhibitor of CYP3A and interacts with many other drugs.

Correct answer is 4.

Reference: Paxlovid for Treatment of COVID-19. *Med Lett Drugs Ther*. 2022 Jan 24;64(1642):9-10.

PMID: 35134040 **Link:** https://secure.medicalletter.org/w1642a

Q2 Monoclonal antibody biologics in pregnancy

Which *one* of the following statements about the use of monoclonal antibody biologics during pregnancy is *false*?

- ❍ 1. Most monoclonal antibody biologics readily cross the placenta.
- ❍ 2. Insufficient evidence exists to support the routine use of biologics other than anti-tumour necrosis factors (TNF) agents during pregnancy.
- ❍ 3. Maternal use of anti-TNFs is a contraindication to breast feeding.
- ❍ 4. All infants exposed to biologics during pregnancy should receive inactivated immunizations according to the routine schedule.

Educational Point: Monoclonal antibody biologics, also known as biologics, have revolutionized the treatment and quality of life of many patients with inflammatory and autoimmune conditions. Women of reproductive age are increasingly using these agents to maintain disease remission because of emerging evidence of safety before conception, during pregnancy and lactation.

Most monoclonal antibody biologics readily cross the placenta, leading to concerns regarding their use during pregnancy and their impact on the fetus and infant. However, the last decade has seen a shift in disease management toward tight disease control in pregnant patients and a goal of improving both maternal and fetal outcomes. Achieving clinical remission is recognized as one of the best predictors of favourable pregnancy outcomes, and a stable disease course, especially in the 6 months before conception, has been associated with improved maternal and fetal outcomes. This has resulted in an increased use of biologics before conception, during pregnancy and post-partum, with treat-to-target objective varying for each disease. Increasingly, cohort studies, clinical registries and systematic reviews have reported safety with the use of anti-tumour necrosis factor (TNF) biologics during pregnancy, mostly reported among patients with inflammatory bowel disease (IBD).