Insufficient evidence exists to support the routine prescribing of biologics other than anti-TNF agents during pregnancy despite emerging data. Although some prospective studies of 100-200 pregnant patients with stable IBD disease activity have reported that anti-TNF therapy can be stopped safely without adverse complications, others have reported that stopping therapy during pregnancy increases the risk of disease relapse, with associated poor outcomes for the infant, such as preterm delivery and low birth weight.

All societies agree that use of anti-TNF agents during breastfeeding presents a low risk given the minimal IgG1 secretion and biologic transfer in breast milk. In general, the use of biologics should not influence the decision to breastfeed, and breastfeeding should not influence the decision to use these medications.

Should infants exposed to biologics be immunized? **All exposed infants should receive inactivated immunizations according to the routine schedule.** Most guidelines recommend avoiding all live vaccines for the first 6-12 months of life.

Correct answer is 3.

Reference: Pham-Huy A, Top KA, Constantinescu C, Seow CH, El-Chaâr D. The use and impact of monoclonal antibody biologics during pregnancy. *CMAJ*. 2021 Jul 26;193(29):E1129-E1136.

PMID: 34312166 **Link:** https://www.cmaj.ca/content/193/29/E1129.long

Q3 Epinephrine and Defibrillation in In-Hospital Cardiac Arrest

In in-hospital cardiac arrest due to a shockable rhythm, treatment with epinephrine before defibrillation is associated with worse survival.

❍ 1. True
❍ 2. False

Educational point: Use of epinephrine for cardiac arrest remains controversial, and it is not recommended as first line treatment for cardiac arrest due to a shockable rhythm because immediate defibrillation is highly effective in achieving return of spontaneous circulation for most patients with ventricular fibrillation or pulseless ventricular tachycardia. Despite this, one Get With The Guidelines-Resuscitation study found that 51% of patients with in-hospital cardiac arrest with an initial shockable rhythm that was refractory to first defibrillation within two minutes were treated with epinephrine before the second defibrillation, contrary to current guidelines. Treatment with epinephrine in these patients was associated with 30% lower odds of survival. The authors used data from a large multicenter registry of in-hospital cardiac arrest in the US, to examine the frequency of use of epinephrine before first defibrillation in patients with a shockable in-hospital cardiac arrest; and the association between epinephrine before defibrillation with survival to discharge, favorable neurological survival, and survival after acute resuscitation. They used 2000-2018 data from 497 hospitals participating in the American Heart Association's Get With The Guidelines-Resuscitation registry. Participants were adults with an index in-hospital cardiac arrest due to an initial shockable rhythm treated with defibrillation. Propensity-matched analysis was performed to evaluate the independent association of epinephrine before defibrillation with study outcomes.

Among 34,820 patients, 9630 (27.6%) were treated with epinephrine before defibrillation, contrary to current guidelines. In comparison with participants treated with defibrillation first, treatment with epinephrine was strongly associated with delayed defibrillation (median 3 minutes v 0 minutes). **Epinephrine before defibrillation was associated with lower odds of survival to discharge (25.2% v 29.9%; adjusted OR 0.81, 95% CI 0.74 to 0.88; P<0.001),** favorable neurological survival (18.6% v 21.4%; 0.85, 0.76 to 0.92; P<0.001), and survival after acute resuscitation (64.4% v 69.4%; 0.76, 0.70 to 0.83: P<0.001).