CPD April 2023: Infliximab

[[A person smiling for the camera

Description automatically generated with medium confidence](https://twitter.com/reesprescribe)](https://twitter.com/reesprescribe)

Day 1: Monoclonal antibody drugs (MABs) were generated in the 1970s& 1st licensed 1980s (transplant rejection). Advancing technology in the 90s led to improved B cell cloning, immunogenicity & kinetics. [#infliximab](https://twitter.com/hashtag/infliximab?src=hashtag_click) was an early TNF-alpha inhibitor, licensed I 1999 for Crohn’s disease, then RA. Costs remain high

Day 2: [#infliximab](https://twitter.com/hashtag/infliximab?src=hashtag_click) is licensed in adults & those over 6 yrs with inflammaotry bowel disease (IBD). Given by i.v infusion,then s.c injection dosed as mg/kg;intervals depending on condition e.g for RA @ baseline, then [@2](https://twitter.com/2) weeks, then 6 weeks then every 8 weeks. Used in combination with methotrexate for RA, but can be monotherapy for IBD

Day 3: Monoclonal antibodies are large proteins, which (currently) require parenteral delivery. Kinetics relate to handling of host antibodies (immunoglobulins), therefore low Vd & no clearance pathway(s) identified: no known effect of renal/hepatic impairment. Elimination can take up to 6 months

Day 4:[#infliximab](https://twitter.com/hashtag/infliximab?src=hashtag_click) is chimeric with a human constant plus murine variable regions. It attaches specifically to TNF-alpha, a ‘1st on scene’ cytokine, responsible for multiple pro-inflammatory signaling. The MAB binds to soluble & membrane bound TNF-alpha, preventing TNF receptor activation.

Day 5: Common adverse drug events for [#infliximab](https://twitter.com/hashtag/infliximab?src=hashtag_click) include blood disorders, respiratory tract infection, alopecia, GI disturbance, sepsis & infusion/skin reactions. Rarely agranulocytosis, SCARs, vasculitis, anaphylaxis (NOT exhaustive). Monitor for infections (incl TB before/during/after)

Day 6: [#infliximab](https://twitter.com/hashtag/infliximab?src=hashtag_click) is contraindicated in moderate-severe heart failure. DDIs: Synergistic action with all immunosuppressive drugs, which can lead to myelosuppression. Use with methotrexate &/or corticosteroids may reduce anti-infliximab antibody formation. No live vaccines should be used (NOT exhaustive)

D7: [#infliximab](https://twitter.com/hashtag/infliximab?src=hashtag_click) can be used long-term if there is a good response, but efficacy can wane. Immunogenicity reactions lead to anti-drug antibodies (ADAs) & loss of effect; the degree depends on patient-related factors such as genetic profile & disease duration/severity. Tests for drug levels & ADA levels guide treatment

CPD:

In addition to the tweets, read the BNF treatment summaries on Crohn’s disease and on Rheumatic disease suppressing drugs. Also, please read the monograph on infliximab and the SPC for Remicade (infliximab)

https://bnf.nice.org.uk/treatment-summaries/crohns-disease/

https://bnf.nice.org.uk/treatment-summaries/rheumatic-disease-suppressing-drugs/

https://bnf.nice.org.uk/drugs/infliximab/

https://www.medicines.org.uk/emc/medicine/3236#gref

1. Monoclonal antibody drugs were first used to prevent organ transplant rejection in the 1990’s

TRUE or FALSE

1. Greater use of monoclonal antibody drugs means they are now low cost

TRUE or FALSE

1. Infliximab is now licensed for more conditions than the original conditions of Crohn’s disease and rheumatoid arthritis

TRUE or FALSE

1. Which of the following is TRUE?
2. Infliximab is licensed for all age groups
3. Infliximab has oral formulations
4. Infliximab is fully humanized
5. Infliximab can be used as monotherapy or in combination with other immune suppressants
6. Infliximab is handled by the body in much the same manner as other immunoglobulins

TRUE or FALSE

1. Which of the following is FALSE?
2. The therapeutic targets for infliximab are the three main inflammatory cytokines
3. Infliximab specifically targets and blocks the TNF alpha cytokine
4. Infliximab can cause infusion reactions
5. Infliximab should not be used with live vaccines
6. Infliximab is contraindicated in patients with tuberculosis or other severe infections

TRUE or FALSE

1. Alopecia is a rare adverse drug event for infliximab

TRUE or FALSE

1. Antibodies against the drug infliximab can form and adversely affect the treatment response

TRUE or FALSE

1. There is no known harm from infliximab in pregnancy, but contraception is recommended for at least 6 months after the last treatment

TRUE or FALSE