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| **Our Question** | **Our Answers** | **Our Reasoning** | **CGPT Answer** | **CGPT Reasoning** | **Malcolm’s comments** |
| 40 year old male with newly diagnosed moderate UC and articular extraintestinal manifestations | Infliximab  Tofacitinib | IFX is ideal choice as biologically naïve with EIM.  Do not use vedolizumab | Vedolizumab  Ustekinumab | Advantages: Vedolizumab is an effective option for moderate UC and has been shown to be superior in achieving clinical remission and endoscopic improvement in moderate to severe UC. It is also a good choice for patients who have not responded to or cannot tolerate TNF inhibitors.  - Disadvantages: The main disadvantage of Vedolizumab is that it may not be feasible due to payer preference. Additionally, it may not be as effective in patients with extraintestinal manifestations.  Advantages: Ustekinumab is also an effective option for moderate UC. It is particularly beneficial for patients with extraintestinal manifestations such as psoriasis or psoriatic arthritis.  - Disadvantages: The main disadvantage of Ustekinumab is that it may not be as effective as other treatments in inducing remission in UC. It may also not be feasible due to payer preference. | Wrong on both counts. Funny though, the reasoning seems to explain why VDZ and UST may not be so good. |
| 70 year old female with newly diagnosed severe UC | Ustekinumab or Vedolizumab | Given advanced age, IFX not preferred as first choice | Infliximab  Vedolizumab | Advantages: Infliximab has been shown to be effective in inducing and maintaining remission in patients with moderate to severe UC. It is also beneficial for patients with extraintestinal manifestations of UC.  - Disadvantages: Infliximab can cause serious side effects including infections, heart failure, and liver damage. It may also increase the risk of lymphoma and other cancers.  - Advantages: Vedolizumab is a gut-selective immunosuppressant, meaning it specifically targets the gut and spares the rest of the body. This can result in fewer systemic side effects. It has been shown to be effective in inducing and maintaining remission in patients with moderate to severe UC.  - Disadvantages: Vedolizumab can cause side effects such as headache, joint pain, nausea, and fever. Serious side effects can include infections, liver damage, and allergic reactions. | Both are still acceptable, correct. |
| 35 year old male with known moderate UC with prior exposure to infliximab but has worsening colitis on endoscopy despite compliance | Tofacitinib or Ustekinumab | Testing 2nd line treatment to patients previously exposed to anti-TNFa | Ustekinumab & Tofacitinib | 1. Ustekinumab:  - Advantages: Ustekinumab has shown efficacy in inducing clinical remission in patients with prior exposure to TNF antagonists. It is also generally well-tolerated with a good safety profile.  - Disadvantages: It requires intravenous administration for the initial dose which can be inconvenient. There is also a risk of serious infections and it may not be as effective in patients who have failed multiple prior biologics.  2. Tofacitinib:  - Advantages: Tofacitinib is an oral medication which can be more convenient for patients. It has also shown efficacy in inducing clinical remission in patients with prior exposure to TNF antagonists.  - Disadvantages: Tofacitinib has been associated with an increased risk of herpes zoster infection. It may also increase the risk of cardiovascular events and malignancies. | This is correct |
| 60 year old female with newly diagnosed moderate UC with a background of congestive cardiac failure | Ustekinumab or Vedolizumab | Testing contraindications to first line IFX TFC not recommended because of increased LDL-C and MACE risk | Vedolizumab & Ustekinumab | 1. Vedolizumab:  - Advantages: Vedolizumab is a gut-selective immunosuppressant, meaning it specifically targets inflammation in the gut and has less systemic side effects. This could be beneficial for a patient with congestive cardiac failure as it reduces the risk of exacerbating this condition. It has been shown to be effective in inducing and maintaining remission in moderate to severe UC.  - Disadvantages: Vedolizumab may take longer to show effects compared to other biologics. It also requires intravenous administration which might not be convenient for all patients.  2. Ustekinumab:  - Advantages: Ustekinumab has been shown to be effective in treating moderate to severe UC. It is administered subcutaneously after the initial intravenous dose, which could be more convenient for the patient.  - Disadvantages: Ustekinumab may have potential side effects including respiratory infections, which could be a concern in an elderly patient. It is also a relatively new drug for UC, so long-term effects are not as well known compared to other biologics. | Correct |
| 38 year old female with newly diagnosed moderate UC and psoriasis | Ustekinumab | Test treatment of specific EIM and IBD | Ustekinumab  Infliximab | Ustekinumab:  - Advantages: Effective in treating both UC and psoriasis, lower risk of serious infections compared to other biologics, convenient dosing schedule.  - Disadvantages: May not be as effective as other biologics for UC, potential for injection site reactions, risk of serious infections although lower.  Infliximab:  - Advantages: Proven effectiveness in treating moderate to severe UC, can induce and maintain remission, may work more quickly than other biologics.  - Disadvantages: Risk of serious infections, potential for infusion reactions, regular infusions required which may be inconvenient for some patients. | Correct, both UST and IFX are ideal for this. |
| 25 year old pregnant woman with severe distal ulcerative colitis. | Infliximab  Vedolizumab  Ustekinumab | Infliximab has best safety data in pregnancy (due to experience) | Infliximab  Vedolizumab | 1. Infliximab (Remicade)  Advantages: Infliximab is a TNF-alpha inhibitor that has been shown to be effective in treating moderate to severe ulcerative colitis. It can reduce inflammation and achieve remission in many patients. Infliximab has been widely studied and is generally well-tolerated.  Disadvantages: Infliximab can have side effects including risk of infection, allergic reactions, and potential complications for the baby. It should be used with caution in pregnant women and only if the potential benefit justifies the potential risk to the fetus.  2. Vedolizumab (Entyvio)  Advantages: Vedolizumab is a gut-selective immunosuppressant, meaning it specifically targets inflammation in the gut, potentially reducing side effects elsewhere in the body. It has been shown to be effective in treating moderate to severe ulcerative colitis.  Disadvantages: Vedolizumab is a relatively new drug, so long-term safety data is not as robust as for some other drugs. It can have side effects including risk of infection, headache, joint pain, nausea, and fever. The effects of Vedolizumab on pregnant women and their babies are not well-studied, so it should be used with caution in pregnant women. | Correct |
| 56 year old man with moderate to severe ulcerative colitis and ankylosing spondylitis | Infliximab or Adalimumab | Dual indications | Infliximab & Adalimumab | Infliximab:  - Advantages: Infliximab has been shown to be effective in inducing and maintaining remission in patients with moderate to severe ulcerative colitis. It is also effective in treating ankylosing spondylitis.  - Disadvantages: Infliximab can cause serious infections and diseases, including tuberculosis and hepatitis B. It can also cause allergic reactions, heart failure, liver problems, and lupus-like syndrome.  Adalimumab:  - Advantages: Adalimumab is also effective in treating both ulcerative colitis and ankylosing spondylitis. It can be self-administered as an injection under the skin.  - Disadvantages: Similar to Infliximab, Adalimumab can cause serious infections and diseases. It can also cause allergic reactions, heart failure, liver problems, and lupus-like syndrome. | Correct |
| 38 year old man with severe ulcerative colitis and has lost response to vedolizumab | Tofacitinib or ustekinumab | Biologic failure | Tofacitinib or ustekinumab | 1. Ustekinumab: This drug has been ranked highest in patients with prior exposure to TNF antagonists for induction of remission and endoscopic improvement.  Advantages: Ustekinumab has shown high efficacy rates in inducing and maintaining clinical remission in patients with moderate to severe ulcerative colitis. It is also beneficial for patients who have had a prior failure with Anti-TNF agents.  Disadvantages: The drug may have potential side effects including serious infections, allergic reactions, and increased risk of certain types of cancer.  2. Tofacitinib: This is a small molecule drug that inhibits Janus kinases, enzymes that mediate the effects of inflammatory cytokines.  Advantages: Tofacitinib has been shown to be effective in inducing and maintaining remission in patients with moderate to severe ulcerative colitis. It is taken orally, which may be more convenient for some patients compared to injectable drugs.  Disadvantages: Tofacitinib can increase the risk of serious infections, malignancies, and cardiovascular events. It may also cause elevated cholesterol levels and liver enzyme elevations. | Correct |
| 28 year old woman who has severe extensive ulcerative colitis and has a history of lymphoma which was treated 4 years ago | Vedolizumab or ustekinumab | Anti-TNFs and JAK inhs have associations/concerns with malignancies | Vedolizumab or ustekinumab | 1. Vedolizumab:  - Advantages: Vedolizumab is a gut-selective immunosuppressant, which means it specifically targets the gut and has less systemic side effects. It has been shown to be effective in treating moderate to severe ulcerative colitis.  - Disadvantages: It may take several weeks to see the effects of Vedolizumab. Side effects can include headache, joint pain, nausea, and fever. Serious side effects can include infections and liver problems.  2. Ustekinumab:  - Advantages: Ustekinumab is another option that could be considered. It is typically used for patients who have not responded to or cannot tolerate other medications. It works by inhibiting a specific pathway of the immune system.  - Disadvantages: Potential side effects include upper respiratory infections, fatigue, and headache. It's also usually considered after other treatments have failed, so it may not be a first-line option. | Correct |
| 36 year old woman with moderate ulcerative colitis and multiple sclerosis. | Ozanimod or etrasimod | Dual indications | Vedolizumab  Ustekinumab | Vedolizumab specifically targets the gut and has been shown to be effective in treating moderate to severe ulcerative colitis. It has a good safety profile and is less likely to cause systemic side effects. However, it may take longer to see the effects of the drug and it requires intravenous administration.  Ustekinumab is another option that could be considered. It is used in the treatment of multiple sclerosis as well as moderate to severe ulcerative colitis. It can be administered subcutaneously and may offer the convenience of home administration. However, it may have more systemic effects compared to Vedolizumab. | Wrong. Maybe the guidelines don’t have ozanimod or etraismod yet (not much experience) |
| 39 year old male with moderate to severe extensive ulcerative colitis who had malignant melanoma which was treated 3 years agp | Vedolizumab or ustekinumab | Anti-TNFs and JAK inhs have associations/concerns with malignancies |  |  |  |
| 52 year old woman with moderate to severe distal ulcerative colitis that had a successful induction with vedolizumab. What would be the maintenance therapy? | Vedolizumab  Any other biologic possible but not ideal | Same maintenance biologic as induction biologic |  |  |  |
| 24 year old man with moderate to severe extensive ulcerative colitis previously in clinical remission with infliximab develops loss of response due to antibody formation | Adalimumab  Other anti-TNF | Immunogenic failure. Can consider changing to another anti-TNF class |  |  |  |
| 44 year old woman with moderate to severe extensive ulcerative colitis and rheumatoid arthritis | Infliximab or Adalimumab or tofacitinib | Dual use |  |  |  |
| 55 year old man with moderate to severe extensive ulcerative colitis who values convenience and limited time spent in hospital | Ustekinumab or Adalimumab or Tofacitinib | Subcutaneous and oral options |  |  |  |
| 60 year old woman with severe ulcerative colitis that has loss of response to anti-TNF, vedolizumab, Ustekinumab | Upadacitinib  Tofacitinib  Or dual biologics use | Last line agents  (this one may be difficult because upada is not in the guidelines yet.  Alternatively, dual biologics use is possible (but not in our guidelines as well) |  |  |  |
| 36 year old man with moderate to severe extensive ulcerative colitis and spondylarthritis | Infliximab  Tofacitinib | Dual indications |  |  |  |
| 42 year old woman with moderate ulcerative colitis on azathioprine and not responding to therapy | Anti-TNF | For combination therapy |  |  |  |
| 53 year old man with moderate to severe extensive ulcerative colitis and low albumin levels | Tofacitinib, vedolizumab or ustekinumab | Low serum albumin associated with poorer response to anti-TNFs (esp. IFX) |  |  |  |
| 42 year old woman with severe ulcerative colitis and rare fistulating disease | Infliximab or Adalimumab | No real data on UC – related fistula |  |  |  |

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| 68 year old man with extensive moderate to severe UC who has prostate cancer which has been treated 5 years ago | Vedolizumab or ustekinumab | Anti-TNFs and JAK inhs have associations/concerns with malignancies |  |  |  |
| 25 year old man with extensive moderate to severe ulcerative colitis and primary sclerosing cholangitis with decompensated cirrhosis | Vedolizumab (or ustekinumab) | Low/No evidence here |  |  |  |
| 48 year old woman with distal moderate to severe ulcerative colitis who prioritises a rapid response to treatment | Infliximab or tofacitinib | IFX and TFC have the quickest response |  |  |  |
| 36 year old woman with moderate to severe ulcerative colitis who has lost response to tofacitinib | Infliximab or ustekinumab | VDZ doesn’t do well as 2nd line |  |  |  |
| 18 year old man with moderate to severe extensive ulcerative colitis and pyoderma gangrenosum | Infliximab or adalimumab | Dual indications |  |  |  |
| 58 year old woman with moderate to severe distal ulcerative colitis and optic neuritis | Vedolizumab or ustekinumab | Anti-TNFs are contraindicated |  |  |  |
| 55 year old man with moderate to severe extensive ulcerative colitis and colonic polyps with high grade dysplasia found 2 years ago | Vedolizumab or ustekinumab | ?? no idea |  |  |  |
| 27 year old woman with moderate to severe extensive ulcerative colitis who prefers medication with oral formulation | Tofacitinib | Only oral formulation |  |  |  |
| 41 year old man with moderate to severe distal ulcerative colitis and alopecia areata | Tofacitinib | JAK Inhibitors can be used for AA |  |  |  |
| 38 year old woman with moderate to severe ulcerative colitis and pulmonary tuberculosis which was treated 2 years ago. | Vedolizumab or ustekinumab | Anti-TNFs and JAK inhs have associations/concerns with infections |  |  |  |