

## Monoclonal antibodies used for IBD

Drugs	MOA	Uses	Side effects
<b>Infliximab</b>	<p>Chimeric mouse-human monoclonal antibody. 25% murine – 75% human.</p> <p><b>Directed against TNF-<math>\alpha</math>.</b></p> <p>Binds to soluble or membrane –bound TNF-<math>\alpha</math> &amp; neutralizes its activity. Therefore it is TNF-<math>\alpha</math> blocker.</p> <p>Given as infusion <b>I.V only</b> (5-10 mg/kg).</p> <p><b>long half life (8-10 days). (MCC)</b></p> <p>2 weeks to give response.</p>	<p>In patient with moderate to severe <b>Crohn's disease</b> &amp; <b>ulcerative colitis</b> (if not responding to immunomodulators or glucocorticoids).</p> <p>Because it is <b>very expensive</b>.</p> <p>Psoriasis, ankylosing spondylitis, psoriatic arthritis, rheumatoid arthritis.</p>	<p>Adverse acute infusion reaction (<b>Allergic reaction</b>).</p> <p>Delayed infusion reaction (serum sickness-like reaction).</p> <p><b>Management by:</b></p> <p>Pretreatment with diphenhydramine, acetaminophen, corticosteroids is recommended.</p> <p><b>Latent infection complication</b> (tuberculosis, sepsis, reactivation of hepatitis B), Lymphoma &amp; cancers.</p> <p>Bacterial, viral &amp; other infections due to opportunistic pathogens.</p> <p><b>Loss of response to infliximab</b> over time due to the development of <b>antibodies</b> to infliximab (termed human anti-chimeric antibodies).</p>
<b>Adalimumab</b> (HUMIRA)	<p>Fully humanized <b>IgG antibody to TNF-<math>\alpha</math>.</b></p> <p>It binds to TNF<math>\alpha</math>, preventing it from activating TNF receptors.</p> <p>Has an advantage that it is given by <b>subcutaneous</b> injection.</p>		
<b>Cetrolizumab</b>	<p>A recombinant, humanized antibody Fab' fragment (<b>Fragment antigen-binding</b>), with specificity for human tumor necrosis factor alpha (TNF<math>\alpha</math>), conjugated to an approximately 40kDa polyethylene glycol (PEG2MAL40K) to <math>\uparrow</math> its half-life in circulation.</p> <p>Given <b>subcutaneously</b>.</p>	<p><b>Used</b> for treating signs &amp; symptoms of moderate to severe <b>Crohn's disease</b> &amp; maintaining response in adults unresponsive to usual treatment. It is also used for treating <b>rheumatoid arthritis</b>. It may be used alone or combined with <b>methotrexate</b> (Rheumatrex, Trexall) or other drugs used for treating rheumatoid arthritis.</p>	