

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Appraisal

Upadacitinib for treating moderately to severely active ulcerative colitis

Draft scope

**Draft remit/appraisal objective**

To appraise the clinical and cost effectiveness of upadacitinib within its marketing authorisation for treating moderately to severely active ulcerative colitis.

**Background**

Ulcerative colitis is the most common inflammatory bowel disease. The cause of ulcerative colitis is unknown. Hereditary, infectious and immunological factors have been proposed as possible causes. It can develop at any age, but peak incidence is between the ages of 15 and 25 years, with a second, smaller peak between 55 and 65 years. It has been estimated that around 106,000 people in England have ulcerative colitis, of whom about 52% have moderate to severe disease<sup>1,2</sup>.

Ulcerative colitis usually affects the rectum, and a variable extent of the colon proximal to the rectum. The symptoms of ulcerative colitis include bloody diarrhoea, colicky abdominal pain, urgency, tenesmus, fatigue, and anaemia. Some patients may have extra-intestinal manifestations involving joints, eyes, skin, and liver. Ulcerative colitis is associated with significant morbidity; symptoms can have a debilitating impact on quality of life and daily life, including physical, social, and mental wellbeing. It is a lifelong disease, and symptoms can recur, or the disease can go into remission for months or even years. Around 50% of people with ulcerative colitis will have at least one relapse per year<sup>3</sup>. About 80% of these are mild to moderate and about 20% are severe<sup>3</sup>. Complications of ulcerative colitis may include haemorrhage, perforation, stricture formation, abscess formation and anorectal disease. Some people may also develop primary sclerosing cholangitis, osteoporosis, and toxic megacolon. People with long-standing disease have an increased risk of bowel cancer.

The aim of treatment in active disease is to address symptoms of bloody diarrhoea, urgent need to defecate and abdominal pain, and thereafter to maintain remission. Initial management depends on clinical severity, extent of disease and the person's preference, and may include aminosalicylates (sulfasalazine, mesalazine, balsalazide or olsalazine), corticosteroids (beclometasone, budesonide, hydrocortisone, or prednisolone) and biologics. An immunosuppressant (such as mercaptopurine or azathioprine) may be considered to maintain remission if aminosalicylates fail to do so.

Current treatment for moderately to severely active ulcerative colitis includes:

- [NICE technology appraisal 329](#) recommends infliximab, adalimumab and golimumab for treating moderately to severely active ulcerative colitis in adults whose disease has responded inadequately to conventional therapy including corticosteroids and mercaptopurine or azathioprine, or who cannot tolerate, or have medical contraindications for such therapies.

- [NICE technology appraisal 342](#) recommends vedolizumab for treating moderately to severe active ulcerative colitis.
- [NICE technology appraisal 547](#) recommends tofacitinib for treating moderately to severely active ulcerative colitis in adults when conventional therapy or a biological agent cannot be tolerated, or the disease has responded inadequately or lost response to treatment.
- [NICE technology appraisal 633](#) recommends ustekinumab for treating moderately to severely active ulcerative colitis in adults when conventional therapy or a biological agent cannot be tolerated, or the disease has responded inadequately or lost response to treatment, only if a tumour necrosis factor-alpha inhibitor has failed, cannot be tolerated or is not suitable.

For people admitted to hospital with acute severe ulcerative colitis NICE guideline [NG130] recommends offering intravenous corticosteroids to induce remission and assessing the need for surgery. Surgery may be considered as emergency treatment for severe ulcerative colitis that does not respond to drug treatment. People may also choose to have elective surgery for unresponsive or frequently relapsing disease that is affecting their quality of life. The scope of this appraisal does not include severe ulcerative colitis that is a medical emergency requiring intensive inpatient treatment.

### The technology

Upadacitinib (Rinvoq, AbbVie) is a selective and reversible, second generation Janus kinase (JAK) inhibitor that blocks the JAK-signal transducer and activator of transcription (STAT) pathway and inflammatory responses. It is administered orally.

Upadacitinib does not currently have a marketing authorisation in the UK for moderately to severely active ulcerative colitis. It has been studied in clinical trials compared with placebo as an induction therapy in people with moderately to severely active ulcerative colitis who are intolerant of, or whose disease has had an inadequate response or loss of response to conventional therapy (oral corticosteroids and/or immunosuppressants) or a biologic agent (a TNF-alpha inhibitor or vedolizumab), and as continued maintenance therapy in people whose disease responded to initial treatment.

<b>Intervention(s)</b>	Upadacitinib
<b>Population(s)</b>	People with moderately to severely active ulcerative colitis who have had an inadequate response, lost response or were intolerant to either conventional therapy or a biologic agent.

<p><b>Comparators</b></p>	<ul style="list-style-type: none"> <li>• TNF-alpha inhibitors (infliximab, adalimumab and golimumab)</li> <li>• Filgotinib (subject to ongoing NICE appraisal)</li> <li>• Tofacitinib</li> <li>• Ustekinumab</li> <li>• Vedolizumab</li> <li>• Conventional therapies (including aminosalicylates, oral corticosteroids and/or immunomodulators), without biological treatments</li> </ul>
<p><b>Outcomes</b></p>	<p>The outcome measures to be considered include:</p> <ul style="list-style-type: none"> <li>• mortality</li> <li>• measures of disease activity</li> <li>• rates of and duration of response, relapse, and remission</li> <li>• rates of hospitalisation (including readmission)</li> <li>• rates of surgical intervention</li> <li>• endoscopic healing</li> <li>• mucosal healing (combines endoscopic and histological healing)</li> <li>• corticosteroid-free remission</li> <li>• achieving mucosal healing</li> <li>• adverse effects of treatment</li> <li>• health-related quality of life.</li> </ul>

<p><b>Economic analysis</b></p>	<p>The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year.</p> <p>If the technology is likely to provide similar or greater health benefits at similar or lower cost than technologies recommended in published NICE technology appraisal guidance for the same indication, a cost-comparison may be carried out.</p> <p>The reference case stipulates that the time horizon for estimating clinical and cost effectiveness should be sufficiently long to reflect any differences in costs or outcomes between the technologies being compared.</p> <p>Costs will be considered from an NHS and Personal Social Services perspective.</p> <p>The availability of any commercial arrangements for the intervention, comparator and subsequent treatment technologies will be taken into account. The availability of any managed access arrangement for the intervention will be taken into account.</p>
<p><b>Other considerations</b></p>	<p>If the evidence allows the following subgroups will be considered:</p> <ul style="list-style-type: none"> <li>• people who have been previously treated with 1 or more biologics.</li> <li>• and people who have not received a prior biologic.</li> </ul> <p>The availability and cost of biosimilar products should be taken into account.</p> <p>Guidance will only be issued in accordance with the marketing authorisation. Where the wording of the therapeutic indication does not include specific treatment combinations, guidance will be issued only in the context of the evidence that has underpinned the marketing authorisation granted by the regulator.</p>
<p><b>Related NICE recommendations and NICE Pathways</b></p>	<p><b>Related Technology Appraisals:</b></p> <p><i>Published:</i></p> <p><a href="#">Ustekinumab for treating moderately to severely active ulcerative colitis</a> (2020). Technology appraisal guidance TA633. Review date: 2023.</p> <p><a href="#">Tofacitinib for treating moderately to severely active ulcerative colitis</a> (2018). Technology appraisal guidance TA547. Review date: November 2021.</p> <p><a href="#">Vedolizumab for treating moderately to severely active ulcerative colitis</a> (2015). Technology appraisal guidance TA342. Review date: June 2018.</p> <p><a href="#">Infliximab, adalimumab and golimumab for treating moderately to severely active ulcerative colitis after the failure</a></p>

	<p><a href="#">of conventional therapy</a> (2015). Technology appraisal guidance TA329. Review date: TBC.</p> <p><i>In development:</i></p> <p><a href="#">Filgotinib for treating moderately to severely active ulcerative colitis [ID3736]</a> NICE technology appraisal guidance. Publication expected December 2021</p> <p><a href="#">Etrolizumab for treating moderately to severely active ulcerative colitis</a>. NICE technology appraisal guidance. Publication date to be confirmed.</p> <p><a href="#">Ozanimod for treating moderately to severely active ulcerative colitis</a> NICE technology appraisal guidance. Publication date to be confirmed.</p> <p><b>Related Guidelines:</b></p> <p><a href="#">Ulcerative colitis: management</a>. NICE guideline NG130. Published date: May 2019. Review date: TBC.</p> <p>Related Interventional Procedures:</p> <p><a href="#">Leukapheresis for inflammatory bowel disease</a> (2005). NICE interventional procedures guidance 126.</p> <p><a href="#">Transanal total mesorectal excision of the rectum</a> (2015) NICE interventional procedures guidance 514.</p> <p><b>Related Quality Standards:</b></p> <p><a href="#">Inflammatory bowel disease</a> (2015). NICE quality standard 81</p> <p><b>Related NICE Pathways:</b></p> <p><a href="#">Ulcerative colitis overview</a> (2019). NICE pathway</p>
<p><b>Related National Policy</b></p>	<p>NHS England (2019) <a href="#">The NHS long term plan</a></p> <p>NHS England (2013) <a href="#">2013/14 NHS standard contract for colorectal: complex (adult) particulars, schedule 2- the services, A - service specifications. Reference: A08/S/c</a></p> <p>Department of Health and Social Care, NHS Outcomes Framework 2016-2017 (published 2016): Domains 1, 2</p> <p><a href="https://www.gov.uk/government/publications/nhs-outcomes-framework-2016-to-2017">https://www.gov.uk/government/publications/nhs-outcomes-framework-2016-to-2017</a></p>

Have all relevant comparators for upadacitinib been included in the scope? Which treatments are considered to be established clinical practice in the NHS for ulcerative colitis? It may be appropriate to ask whether a specific comparator should be included or not.

Are the outcomes listed appropriate?

Are the subgroups suggested in 'other considerations appropriate? Are there any other subgroups of people in whom upadacitinib is expected to be more clinically effective and cost effective or other groups that should be examined separately?

Where do you consider upadacitinib will fit into the existing NICE pathway, Ulcerative colitis: management?

NICE is committed to promoting equality of opportunity, eliminating unlawful discrimination and fostering good relations between people with particular protected characteristics and others. Please let us know if you think that the proposed remit and scope may need changing in order to meet these aims. In particular, please tell us if the proposed remit and scope:

- could exclude from full consideration any people protected by the equality legislation who fall within the patient population for which upadacitinib is licensed;
- could lead to recommendations that have a different impact on people protected by the equality legislation than on the wider population, e.g. by making it more difficult in practice for a specific group to access the technology;
- could have any adverse impact on people with a particular disability or disabilities.

Please tell us what evidence should be obtained to enable the Committee to identify and consider such impacts.

Do you consider upadacitinib to be innovative in its potential to make a significant and substantial impact on health-related benefits and how it might improve the way that current need is met (is this a 'step-change' in the management of the condition)?

Do you consider that the use of upadacitinib can result in any potential significant and substantial health-related benefits that are unlikely to be included in the QALY calculation?

Please identify the nature of the data which you understand to be available to enable the Appraisal Committee to take account of these benefits.

To help NICE prioritise topics for additional adoption support, do you consider that there will be any barriers to adoption of this technology into practice? If yes, please describe briefly.

NICE intends to appraise this technology through its Single Technology Appraisal (STA) Process. We welcome comments on the appropriateness of appraising this topic through this process. (Information on the Institute's Technology Appraisal processes is available at <http://www.nice.org.uk/article/pmg19/chapter/1-Introduction>).

NICE has published an addendum to its guide to the methods of technology appraisal (available at <https://www.nice.org.uk/Media/Default/About/what-we-do/NICE-guidance/NICE-technology-appraisals/methods-guide-addendum-cost-comparison.pdf>), which states the methods to be used where a cost comparison case is made.

- Would it be appropriate to use the cost comparison methodology for this topic?

- Is the new technology likely to be similar in its clinical efficacy and resource use to any of the comparators?
- Is the primary outcome that was measured in the trial or used to drive the model for the comparator(s) still clinically relevant?
- Is there any substantial new evidence for the comparator technology/ies that has not been considered? Are there any important ongoing trials reporting in the next year?

### References

1. National Institute for Health and Care Excellence (2015), Technology Appraisal 342; [Costing statement](#) [online; accessed 20 July 2020].
2. Office for National Statistics, Clinical commissioning group population estimates; [Mid 2018](#) [online; accessed 20 July 2020].
3. National Institute for Health and Care Excellence (2014), Quality standards and indicators; [Briefing Paper](#) [online; accessed 20 July 2020].