

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

Mirikizumab for treating moderately to severely active Crohn's disease

Draft scope

**Draft remit/evaluation objective**

To appraise the clinical and cost effectiveness of mirikizumab within its marketing authorisation for treating moderately to severely active Crohn's disease.

**Background**

Crohn's disease is a chronic inflammatory condition of the gastrointestinal tract (gut) that may affect any part of the gut from the mouth to the anus. People with Crohn's disease have recurrent relapses, with acute exacerbations ('flares') in between periods of remission or less active disease. These flares may affect any part of the gut and are defined by location (terminal ileal, colonic, ileocolic, upper gastrointestinal), or by the pattern of the disease (inflammatory, fistulising, or stricturing).

The clinical features of Crohn's disease are variable and are determined partly by the site of the disease. Common symptoms include diarrhoea, abdominal pain, extreme tiredness, unintended weight loss and blood and mucus in stools. Other symptoms may include fever, nausea, vomiting, arthritis, inflammation and irritation of the eyes, mouth ulcers and areas of painful, red and swollen skin.

Crohn's disease can be complicated by the development of strictures (a narrowing of the intestine), obstructions, fistulae and perianal disease. Other complications include acute dilation, perforation and massive haemorrhage, and carcinoma of the small bowel or colon.

It is estimated that Crohn's disease affects at least 1 in 323 people in the UK, with incidence and prevalence increasing. It is usually diagnosed before the age of 30 but may affect people of any age.<sup>1</sup> The condition has a debilitating impact on the daily lives and quality of life of those affected, including mental health and wellbeing, education, employment and relationships.

Crohn's disease is not medically or surgically curable. Treatment aims to reduce symptoms, promote mucosal healing and maintain or improve quality of life while minimising drug-related toxicity. Clinical management depends on disease activity, site, behaviour of disease, response to previous treatments, side-effect profiles of treatments and extra-intestinal manifestations, such as uveitis and arthritis.

[NICE clinical guideline 129](#) recommends monotherapy with a glucocorticosteroid (prednisolone, methylprednisolone or intravenous hydrocortisone) to induce remission in people with a first presentation or a single inflammatory exacerbation of Crohn's disease in a 12-month period. Budesonide or 5-aminosalicylates are considered for some people who decline, cannot tolerate or in whom a conventional corticosteroid is contraindicated. When 2 or more inflammatory exacerbations are experienced in a 12-month period, azathioprine, mercaptopurine and methotrexate

may be considered as add-on treatments to conventional glucocorticosteroids or budesonide to induce remission of Crohn's disease.

[NICE technology appraisal 187](#) recommends infliximab and adalimumab as treatment options for adults with severe active Crohn's disease whose disease has not responded to conventional therapy (including immunosuppressive and/or corticosteroid treatments), or who are intolerant of or have contraindications to conventional therapy.

[NICE technology appraisal 352](#) recommends vedolizumab as an option for treating moderately to severely active Crohn's disease if a tumour necrosis factor-alpha inhibitor has failed, cannot be tolerated or is contraindicated.

[NICE technology appraisal 456](#) recommends ustekinumab as an option for treating moderately to severely active Crohn's disease for adults who have had an inadequate response with, lost response to, or were intolerant to either conventional therapy or a tumour necrosis factor-alpha inhibitor, or have medical contraindications to such therapies.

[NICE technology appraisal 888](#) recommends risankizumab as an option for treating moderately to severely active Crohn's disease in people 16 years and over if the disease has not responded well enough or lost response to a previous biological treatment, a previous biological treatment was not tolerated, or tumour necrosis factor (TNF)-alpha inhibitors are not suitable.

[NICE technology appraisal 905](#) recommends upadacitinib as an option for treating moderately to severely active Crohn's disease in adults if the disease has not responded well enough or lost response to a previous biological treatment, a previous biological treatment was not tolerated, or tumour necrosis factor (TNF)-alpha inhibitors are contraindicated.

[NICE clinical guideline 129](#) states that in addition to pharmacological treatment, between 50 and 80% of people with Crohn's disease will require surgery during the course of their disease. The main reasons for surgery are strictures causing obstructive symptoms, lack of response to medical therapy, and complications such as fistulae and perianal disease.

### **The technology**

Mirikizumab (Omvoh, Eli Lilly) does not currently have a marketing authorisation in the UK for treating moderately to severely active Crohn's disease. It has been studied in clinical trials compared with ustekinumab and placebo in people with moderate to severe Crohn's disease who have had an inadequate response with, lost response to, or were intolerant to either conventional therapy or a biologic treatment.

Mirikizumab does have a marketing authorisation in the UK for treating adult patients with moderately to severely active ulcerative colitis who have had an inadequate response with, lost response to, or were intolerant to either conventional therapy or a biologic treatment.

## Appendix B

<b>Intervention(s)</b>	Mirikizumab
<b>Population(s)</b>	People with moderate to severely active Crohn's disease who have had an inadequate response with, lost response to, or were intolerant to either conventional therapy or a biologic treatment
<b>Subgroups</b>	If evidence allows, subgroups defined by the location of Crohn's disease (ileal, colonic and perianal) may be considered
<b>Comparators</b>	<ul style="list-style-type: none"> <li>• Tumour necrosis factor-alpha inhibitors (infliximab and adalimumab)</li> <li>• Ustekinumab</li> <li>• Vedolizumab</li> <li>• Risankizumab</li> <li>• Upadacitinib</li> </ul> <p>For people for whom tumour necrosis factor-alpha inhibitors, vedolizumab, ustekinumab, risankizumab and upadacitinib have been ineffective, are contraindicated or are not tolerated:</p> <ul style="list-style-type: none"> <li>• Best supportive care</li> </ul>
<b>Outcomes</b>	<p>The outcome measures to be considered include:</p> <ul style="list-style-type: none"> <li>• disease activity (remission, response, relapse)</li> <li>• mucosal healing</li> <li>• surgery</li> <li>• hospitalisation rates</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.</p>
<p><b>Other considerations</b></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</b></p>	<p><b>Related Technology Appraisals:</b></p> <p><a href="#">Upadacitinib for previously treated moderately to severely active Crohn's disease</a> (2023) NICE technology appraisal guidance 905.</p> <p><a href="#">Risankizumab for previously treated moderately to severely active Crohn's disease</a> (2023) NICE technology appraisal guidance 888.</p> <p><a href="#">Darvadstrocel for treating complex perianal fistulas in Crohn's disease</a> (2019) NICE technology appraisal guidance 556.</p> <p><a href="#">Ustekinumab for moderately to severely active Crohn's disease after previous treatment</a> (2017) NICE technology appraisal guidance 456.</p> <p><a href="#">Vedolizumab for treating moderately to severely active Crohn's disease after prior therapy</a> (2015) NICE technology appraisal 352.</p> <p><a href="#">Infliximab and adalimumab for the treatment of Crohn's disease</a> (2010). NICE technology appraisal 187.</p> <p><b>Related Guidelines:</b></p> <p><a href="#">Crohn's disease: management</a> (2019). NICE guideline 129.</p> <p><a href="#">Irritable bowel syndrome in adults: diagnosis and management</a> (2017). NICE clinical guideline 61.</p>

	<p><b>Related Interventional Procedures:</b></p> <p><a href="#">Bioprosthetic plug insertion for anal fistula</a> (2019). NICE interventional procedure 662.</p> <p><a href="#">Endoscopic ablation for anal fistula</a> (2019). NICE interventional procedure 645.</p> <p><a href="#">Extracorporeal photopheresis for Crohn's disease</a> (2009). NICE interventional procedure 288.</p> <p><b>Related Quality Standards:</b></p> <p>'Irritable bowel syndrome in adults' (2016). <a href="#">NICE quality standard 114</a>.</p> <p>'Inflammatory bowel disease' (2015). <a href="#">NICE quality standard 81</a>.</p>
<p><b>Related National Policy</b></p>	<p>The NHS Long Term Plan (2019) <a href="#">NHS Long Term Plan</a></p> <p>NHS England (2018) <a href="#">NHS manual for prescribed specialist services (2018/2019)</a></p>

### Questions for consultation

Where do you consider mirikizumab will fit into the existing care pathway for Crohn's disease? Would it be used as an alternative to:

- Tumour necrosis factor-alpha inhibitors (infliximab and adalimumab); or
- Vedolizumab, ustekinumab, risankizumab and upadactinib

Or would mirizikumab be used after these treatments already available in the NHS?

Would mirikizumab be a candidate for managed access?

Do you consider that the use of mirikizumab can result in any potential 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 committee to take account of these benefits.

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 mirikizumab will be 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.

NICE is considering evaluating this technology through its cost comparison evaluation process.

Please provide comments on the appropriateness of appraising this topic through this process.

(Information on NICE's health technology evaluation processes is available at <https://www.nice.org.uk/about/what-we-do/our-programmes/nice-guidance/nice-technology-appraisal-guidance/changes-to-health-technology-evaluation>).

Technologies can be evaluated through the cost-comparison process if they are expected to provide similar or greater health benefits, at a similar or lower cost, compared with technologies that have been previously recommended (as an option) in published NICE guidance for the same indication. Companies can propose cost-comparison topics to NICE at any stage during topic selection and scoping. NICE will route technologies for evaluation through the cost-comparison process if it is agreed during scoping that the process is an appropriate route to establish the clinical and cost effectiveness of the technology.

NICE's [health technology evaluations: the manual](#) states the methods to be used where a cost comparison case is made.

- Is the technology likely to be similar in its clinical effectiveness and resource use to any of the comparators? Or in what way is it different to the comparators?
- Will the intervention be used in the same place in the treatment pathway as the comparator(s)? Have there been any major changes to the treatment pathway recently? If so, please describe.
- Will the intervention be used to treat the same population as the comparator(s)?
- Overall is the technology likely to offer similar or improved health benefits compared with the comparators?
- Would it be appropriate to use the cost-comparison methodology for this topic?

### References

1. Crohn's and Colitis UK (2021) [Crohn's Disease](#). Accessed November 2023.