NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Evaluation

Mirikizumab for treating moderately to severely active Crohn's disease

Final scope

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.[1] 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.

Intervention(s)	Mirikizumab
Population(s)	Adults with moderately 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
Comparators	At least 1 of the following treatments, according to NICE guidance: • Tumour necrosis factor-alpha inhibitors (infliximab and adalimumab) • Ustekinumab • Vedolizumab • Risankizumab • Upadacitinib
Outcomes	The outcome measures to be considered include: • disease activity (remission, response, relapse) • mucosal healing • surgery • hospitalisation rates • adverse effects of treatment • health-related quality of life.
Economic analysis	This technology has been selected to be appraised as a cost-comparison. The time horizon should be sufficient to reflect any differences in costs between the technologies being compared. Costs will be considered from an NHS and Personal Social Services perspective. The availability of any commercial arrangements for the intervention and comparator technologies will be taken into account.
Other considerations	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.
Related NICE recommendations	**Related Technology Appraisals:**

	Upadacitinib for previously treated moderately to severely active Crohn's disease (2023) NICE technology appraisal guidance 905. Risankizumab for previously treated moderately to severely active Crohn's disease (2023) NICE technology appraisal guidance 888. Darvadstrocel for treating complex perianal fistulas in Crohn's disease (2019) NICE technology appraisal guidance 556. Ustekinumab for moderately to severely active Crohn's disease after previous treatment (2017) NICE technology appraisal guidance 456. Vedolizumab for treating moderately to severely active Crohn's disease after prior therapy (2015) NICE technology appraisal 352. Infliximab and adalimumab for the treatment of Crohn's disease (2010). NICE technology appraisal 187. **Related Guidelines:** Crohn's disease: management (2019). NICE guideline 129. Irritable bowel syndrome in adults: diagnosis and management (2017). NICE clinical guideline 61. **Related Interventional Procedures:** Bioprosthetic plug insertion for anal fistula (2019). NICE interventional procedure 662. Endoscopic ablation for anal fistula (2019). NICE interventional procedure 645. Extracorporeal photopheresis for Crohn's disease (2009). NICE interventional procedure 288. **Related Quality Standards:** 'Irritable bowel syndrome in adults' (2016). NICE quality standard 114. 'Inflammatory bowel disease' (2015). NICE quality standard 81`.
Related National Policy	The NHS Long Term Plan (2019) NHS Long Term Plan NHS England (2018) NHS manual for prescribed specialist services (2018/2019)

References

1. Crohn's and Colitis UK (2021) Crohn's Disease. Accessed April 2024.