NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health Technology Appraisal

Risankizumab for previously treated active psoriatic arthritis

Final scope

Remit/appraisal objective

To appraise the clinical and cost effectiveness of risankizumab within its marketing authorisation for treating active psoriatic arthritis.

Background

Psoriatic arthritis (also called psoriatic arthropathy) is an inflammatory arthritis closely associated with psoriasis. It is estimated that around 1 in 5 people with psoriasis develop psoriatic arthritis.[1] In around 70% of people psoriasis precedes psoriatic arthritis.[2] The prevalence of psoriatic arthritis in England in 2020 was estimated to be around 84,500 adults.[2,3] Men and women are equally likely to develop psoriatic arthritis with peak onset being between the ages of 30 and 50.[2]

Although psoriatic arthritis is a chronic condition that progresses in the joints, its course may be erratic, with flare-ups and remissions. Arthritis symptoms can range from inflammation of the synovial membrane surrounding a joint (synovitis), ligaments and tendons (enthesitis and tendonitis), and inflammation of digits (dactylitis) to severe progressive erosion of the joints. Axial inflammation might also occur in some cases. Skin symptoms include the presence of patchy, raised, red areas of skin inflammation with scaling. This can affect any part of the body but is most commonly found on the extensor surfaces of the elbows and knees, the scalp and ears, the navel, and around the genital areas or anus. Nail symptoms include swelling, discolouration and pitting.

The aim of treatment is to suppress joint, tendon and ligament inflammation, and to manage the skin symptoms of the disease. Current practice involves early diagnosis and early use of non-biological disease-modifying anti-rheumatic drugs (DMARDs), including methotrexate, sulfasalazine and leflunomide, in order to minimise damage to joints. Non-steroidal anti-inflammatory drugs (NSAIDs), physiotherapy and intra-articular corticosteroid injections may also be used.

In addition, biological tumour necrosis factor (TNF)-alpha inhibitors and other non-conventional DMARDs (such as Janus kinase inhibitors and IL-17 inhibitors) may be used for treating people with active psoriatic arthritis. NICE recommends adalimumab, etanercept, infliximab, golimumab, certolizumab pegol, secukinumab, apremilast, ixekizumab or tofacitinib when a person has peripheral arthritis with 3 or more tender joints and 3 or more swollen joints, and the psoriatic arthritis has not responded to at least 2 standard DMARDs, given on their own or together (NICE technology appraisal guidance 199, 220, 445, 433, 537, and 543). Certolizumab pegol is also recommended when the disease has stopped responding to a TNF-alpha inhibitor after the first 12 weeks (NICE technology appraisal guidance 445). Ixekizumab, secukinumab and tofacitinib are also recommended in people whose disease has not responded within 12 weeks or stopped responding after 12 weeks of treatment with a TNF-alpha inhibitor or when TNF-alpha inhibitors are contraindicated but would otherwise be considered (NICE technology appraisal guidance 537, 445 and 543). Ustekinumab is recommended when treatment with TNF-alpha inhibitors is contraindicated but would otherwise be considered or the

person has had treatment with 1 or more TNF-alpha inhibitors (NICE technology appraisal guidance 340). Guselkumab is recommended when a person has peripheral arthritis with 3 or more tender joints and 3 or more swollen joints, moderate to severe psoriasis and their disease has not responded well enough to, or they cannot tolerate, 2 conventional DMARDs and at least 1 biological DMARD (NICE Technology appraisal guidance 711). Biosimilar products for some of the biological therapies are also available for use in the NHS.

The technology

Risankizumab (Skyrizi, AbbVie) is an anti-interleukin-23 (IL-23) antibody drug that reduces inflammation by blocking the action of the IL-23 protein. Risankizumab is administered by subcutaneous injection.

Risankizumab does not currently have a marketing authorisation in the UK for treating active psoriatic arthritis. It has been studied in clinical trials alone compared with placebo in adults with psoriatic arthritis whose disease has not responded adequately to biological therapies or conventional synthetic DMARDs or for whom biological therapies or conventional synthetic DMARDs are not tolerated or for whom conventional synthetic DMARDs are contraindicated.

Risankizumab has a marketing authorisation in the UK for the treatment of moderate to severe plaque psoriasis in adults who are candidates for systemic therapy.

Intervention(s)	Risankizumab
Population(s)	Adults with active psoriatic arthritis whose disease has not responded adequately to previous biological therapies or conventional synthetic DMARDs, or for whom biological therapies or conventional synthetic DMARDs are not tolerated or for whom DMARDs are contraindicated.
Comparators	For people who have only received 1 previous conventional disease modifying anti-rheumatic drug (DMARD) • Conventional DMARDs For people whose disease has not responded adequately to at least 2 conventional DMARDs: • Biological DMARDs (with or without methotrexate including etanercept, adalimumab, infliximab, golimumab, certolizumab pegol, ixekizumab and secukinumab) • Apremilast • Tofacitinib • Upadacitinib (*subject to ongoing NICE appraisal*) For people whose disease has not responded adequately to conventional DMARDs and 1 or more TNF-alpha inhibitors: • Ustekinumab • Secukinumab • Certolizumab pegol

	• Tofacitinib • Ixekizumab • Guselkumab • Best supportive care • Upadacitinib (*subject to ongoing NICE appraisal*) For people in whom TNF-alpha inhibitors are contraindicated or not tolerated: • Ustekinumab • Secukinumab • Ixekizumab • Tofacitinib • Guselkumab • Best supportive care • Upadacitinib (*subject to ongoing NICE appraisal*) For people whose disease has not responded adequately to conventional DMARDs and 1 or more biological DMARDs, or for whom these are not tolerated: • Guselkumab • Best supportive care • Upadacitinib (*subject to ongoing NICE appraisal*)
Outcomes	The outcome measures to be considered include: • disease activity • functional capacity • disease progression • periarticular disease (for example enthesitis, tendonitis, dactylitis) • axial outcomes • mortality • adverse effects of treatment • health-related quality of life.
Economic analysis	The reference case stipulates that the cost effectiveness of treatments should be expressed in terms of incremental cost per quality-adjusted life year. 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. 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. Costs will be considered from an NHS and Personal Social Services perspective. The availability of any commercial arrangements for the intervention, comparator and subsequent treatment technologies will be taken into account.
Other considerations	If evidence allows the following subgroups will be considered: • the reason for previous treatment failure (for example due to lack of efficacy, intolerance or adverse events) • mechanism of action or number of previous treatments • presence or severity of concomitant psoriasis (no psoriasis, mild, moderate or severe psoriasis) • presence or severity of axial involvement The availability and cost of biosimilar and generic products should be taken into account. 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 and NICE Pathways	**Related Technology Appraisals** 'Guselkumab for treating active psoriatic arthritis after inadequate response to DMARDs' (2021) NICE Technology Appraisal 711. Review date: 2024. 'Risankizumab for treating moderate to severe plaque psoriasis' (2019) NICE Technology Appraisal 596. Review date: 2022. 'Ixekizumab for treating active psoriatic arthritis following inadequate response to disease-modifying anti-rheumatic drugs' (2018) NICE Technology Appraisals 537. Review date: 2021. 'Tofacitinib for treating active psoriatic arthritis after inadequate response to DMARDs' (2018) NICE Technology Appraisals 543. Review date: 2021. 'Certolizumab pegol and secukinumab for treating active psoriatic arthritis following inadequate response to disease modifying anti-rheumatic drugs' (2017) NICE Technology Appraisals 445. Review date: 2020. 'Apremilast for treating active psoriatic arthritis' (2017) NICE Technology Appraisal 433. Review date: 2020. 'Ustekinumab for treating active psoriatic arthritis' (2015).

	NICE Technology Appraisal 340 (moved to the static list). 'Golimumab for the treatment of psoriatic arthritis' (2011). NICE Technology Appraisal 220 (moved to the static list). 'Etanercept, infliximab and adalimumab for the treatment of psoriatic arthritis (review of technology appraisal guidance 104 and 125)' (2010). NICE Technology Appraisal 199 (moved to the static list). **Terminated appraisals** 'Abatacept for treating psoriatic arthritis after DMARDs (terminated appraisal)' (2019) NICE Technology Appraisals 568. **Appraisals in development** Upadacitinib for treating active psoriatic arthritis after inadequate response to DMARDs NICE technology appraisals guidance [ID2690]. Publication expected: To be confirmed. **Related Guidelines** Spondyloarthritis in over 16s: diagnosis and management (NG65) Published in February 2017. Last updated: June 2017 Psoriasis: assessment and management (2012). NICE clinical guideline 153. Last updated: September 2017 **Related Quality Standards** Spondyloarthritis (2018) NICE Quality Standard 170. Psoriasis (2013). NICE Quality Standard 40. **Related NICE Pathways** NICE Pathway: Spondylarthritis. Pathway last updated November 2020. NICE Pathway: Psoriasis. Pathway last updated November 2020.
Related National Policy	The NHS Long Term Plan, 2019. NHS Long Term Plan NHS England (2018/2019) NHS manual for prescribed specialist services (2018/2019) Chapter 5, Adult highly specialist rheumatology services Department of Health and Social Care, NHS Outcomes Framework 2016-2017: Domains 2 to 5. https://www.gov.uk/government/publications/nhs-outcomes-framework-2016-to-2017

References

1. Psoriasis Association (2018) Psoriasis Arthritis. Accessed July 2020

2. Ogdie, A., Langan, S., Love, T., Haynes, K., Shin, S., Seminara, N., Mehta, N., Troxel, A., Choi, H., Gelfand, J. (2013) 'Prevalence and treatment patterns of psoriatic arthritis in the UK'. Rheumatology (Oxford) Mar 52(3): 568-75

3. Office for National Statistics (2021) Population estimates mid-year 2020. Accessed November 2021