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NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Proposed Health Technology Appraisal

Guselkumab for treating active psoriatic arthritis after inadequate response to DMARDs ID1658

Draft scope (pre-referral)

Draft remit/appraisal objective

To appraise the clinical and cost effectiveness of guselkumab 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, although this figure may be higher in people who have severe psoriasis.[1] In around 70% of people psoriasis precedes psoriatic arthritis.[2] The prevalence of psoriatic arthritis in England in 2018 was estimated to be around 83,700 adults.[2, 3] Men and women are equally likely to develop psoriatic arthritis with the peak onset being between the ages of 30 and 50 years.[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. Skin symptoms include the presence of patchy, raised, red areas of skin inflammation with scaling, which 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.

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) may be used for treating people with active psoriatic arthritis. NICE recommends adalimumab, etanercept, infliximab, golimumab, apremilast, certolizumab pegol, ixekizumab, secukinumab 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 199, 220, 433, 445, 537, and 543). Certolizumab pegol is also recommended when the disease has stopped responding to a tumour necrosis TNF-alpha inhibitor after the first 12 weeks (NICE technology appraisal 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 (NICE Technology

appraisal guidance 537, 445 and 543). Ustekinumab is recommended when treatment with TNF-alpha inhibitors are contraindicated but would otherwise be considered or the person has had treatment with 1 or more TNF-alpha inhibitors (NICE technology appraisal 340). Biosimilar products for some of the biological therapies are available for use in the NHS.

The technology

Guselkumab (Tremfya, Janssen-Cilag Ltd) is a fully human monoclonal antibody that inhibits interleukin-23 (IL-23), a cytokine which is believed to be involved in the body's autoimmune response in diseases such as psoriasis. Guselkumab is administered by subcutaneous injection.

Guselkumab does not currently have a marketing authorisation in the UK for treating psoriatic arthritis. It has a marketing authorisation in the UK for treating moderate to severe plaque psoriasis in adults who are candidates for systemic therapy. Guselkumab has been studied alone in clinical trials compared with placebo in adults with active psoriatic arthritis whose disease has not responded to, or who are intolerant to, non-biological DMARDs, NSAID, apremilast or anti-TNF alpha therapies.

Intervention(s)	Guselkumab (alone or with methotrexate, oral corticosteroids or NSAIDs)
Population(s)	Adults with active psoriatic arthritis whose disease has not responded adequately or who have been intolerant to a previous disease-modifying antirheumatic drug therapy or biologic
Comparators	For people who have only received 1 previous standard disease modifying anti-rheumatic drug (DMARD) • Standard DMARDs For people whose disease has not responded adequately to at least 2 standard DMARDs: • Biological DMARDs (with or without methotrexate including etanercept, adalimumab, infliximab, golimumab, certolizumab pegol, ixekizumab and secukinumab) • Apremilast • Tofacitinib For people whose disease has not responded adequately to standard DMARDs and 1 or more TNF-alpha inhibitors: • Ustekinumab • Secukinumab • Certolizumab pegol • Tofacitinib • Ixekizumab

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	• Best supportive care For people in whom TNF-alpha inhibitors are contraindicated or not tolerated: • Ustekinumab • Secukinumab • Ixekizumab • Tofacitinib • Best supportive care
Outcomes	The outcome measures to be considered include: • disease activity • functional capacity • disease progression • periarticular disease (for example enthesitis, tendonitis, dactylitis) • 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 or comparator technologies and subsequent treatments will be taken into account. For the comparators the availability and cost of biosimilars should be taken into consideration.
Other considerations	If evidence allows the following subgroups will be considered: • the reason for treatment failure (for example due to lack of efficacy, intolerance or adverse events).

	• presence or severity of concomitant psoriasis (no psoriasis, mild, moderate or severe psoriasis) 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** '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). 'Golimumab for the treatment of psoriatic arthritis' (2011). NICE Technology Appraisal 220 (moved to the static list). 'Ustekinumab for treating active psoriatic arthritis' (2015). NICE Technology Appraisal 340 (moved to the static list). '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: May 2020 'Apremilast for treating active psoriatic arthritis' (2017) NICE Technology Appraisal 433 Review date: February 2020 'Ixekizumab for treating active psoriatic arthritis following inadequate response to disease-modifying anti-rheumatic drugs' (2018) NICE Technology Appraisals 537. Review date: August 2021 'Tofacitinib for treating active psoriatic arthritis after inadequate response to DMARDs' (2018) NICE Technology Appraisals 543. Review date: October 2021 'Guselkumab for treating moderate to severe plaque psoriasis' (2018) NICE Technology Appraisals 521. Review date: 2021 **Terminated appraisals** 'Abatacept for treating psoriatic arthritis after DMARDs' (terminated appraisal) (2019) NICE Technology Appraisals 568. **Related Guidelines:** 'Psoriasis: assessment and management' (2012). NICE clinical guideline 153. Last updated: September 2017. 'Spondyloarthritis in over 16s: diagnosis and management' (NG65) Published in February 2017. Last updated: June 2017 **Related Quality Standards:**

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	'Psoriasis' (2013). Quality Standard 40. Last updated: April 2017. **Related NICE Pathways:** NICE Pathway: musculoskeletal conditions, Pathway last updated July 2018.
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

Questions for consultation

Which treatments are considered to be established clinical practice in the NHS for psoriatic arthritis?

How should best supportive care be defined?

Have all relevant comparators for guselkumab been included in the scope?

Are the outcomes listed appropriate?

Where do you consider guselkumab will fit into the existing NICE pathway, musculoskeletal conditions, after how many previous lines of DMARDs?

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

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 guselkumab 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.

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

Do you consider guselkumab 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 guselkumab 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? If so, which comparator would be appropriate?
- 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]Psoriasis Association (2018) 'Psoriasis Arthritis' Accessed September 2019

[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

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[3] Office for National Statistics (2019) Population estimates mid-year 2018