

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Appraisal consultation document

Adalimumab, etanercept, infliximab and abatacept for treating moderate rheumatoid arthritis after conventional DMARDs have failed (partial review of TA375)

The Department of Health and Social Care has asked the National Institute for Health and Care Excellence (NICE) to produce guidance on using adalimumab, etanercept, infliximab and abatacept in the NHS in England. The appraisal committee has considered the evidence submitted by the company and the views of non-company consultees and commentators, clinical experts and patient experts.

This document has been prepared for consultation with the consultees.

It summarises the evidence and views that have been considered, and sets out the recommendations made by the committee. NICE invites comments from the consultees and commentators for this appraisal and the public. This document should be read along with the evidence (see the [committee papers](#)).

The appraisal committee is interested in receiving comments on the following:

- Has all of the relevant evidence been taken into account?
- Are the summaries of clinical and cost effectiveness reasonable interpretations of the evidence?
- Are the recommendations sound and a suitable basis for guidance to the NHS?
- Are there any aspects of the recommendations that need particular consideration to ensure we avoid unlawful discrimination against any group of people on the grounds of race, gender, disability, religion or belief, sexual orientation, age, gender reassignment, pregnancy and maternity?

Note that this document is not NICE's final guidance on these technologies. The recommendations in section 1 may change after consultation.

After consultation:

- The appraisal committee will meet again to consider the evidence, this appraisal consultation document and comments from the consultees.
- At that meeting, the committee will also consider comments made by people who are not consultees.
- After considering these comments, the committee will prepare the final appraisal document.
- Subject to any appeal by consultees, the final appraisal document may be used as the basis for NICE's guidance on using adalimumab, etanercept, infliximab and abatacept in the NHS in England.

For further details, see [NICE's guide to the processes of technology appraisal](#).

The key dates for this appraisal are:

Closing date for comments: 28 April 2021

Second appraisal committee meeting: TBC

Details of membership of the appraisal committee are given in section 7

1 Recommendations

- 1.1 Adalimumab and infliximab, both with methotrexate, are recommended as options for treating active rheumatoid arthritis in adults, only if:
- disease has responded inadequately to intensive therapy with 2 or more conventional disease-modifying antirheumatic drugs (DMARDs) and
 - disease is moderate (a disease activity score [DAS28] of 3.2 to 5.1) and
 - the companies provide adalimumab and infliximab at the same or lower prices than those agreed with the Commercial Medicines Unit.
- 1.2 Adalimumab can be used as monotherapy when methotrexate is contraindicated or not tolerated, when the criteria in 1.1 are met.
- 1.3 Continue treatment only if there is a moderate response measured using European League Against Rheumatism (EULAR) criteria at 6 months after starting therapy. If this initial response is not maintained at 6 months, stop treatment.
- 1.4 Start treatment with the least expensive drug (taking into account administration costs, dose needed and product price per dose). This may vary because of differences in how the drugs are used and treatment schedules.
- 1.5 Take into account any physical, psychological, sensory or learning disabilities, or communication difficulties that could affect the responses to the DAS28 and make any appropriate adjustments.
- 1.6 Abatacept with methotrexate is not recommended, within its marketing authorisation, for treating moderate active rheumatoid arthritis in adults when disease has responded inadequately to 1 or more DMARDs.

- 1.7 Etanercept with or without methotrexate is not recommended, within its marketing authorisation, for treating moderate active rheumatoid arthritis in adults when disease has responded inadequately to DMARDs.
- 1.8 These recommendations are not intended to affect treatment with adalimumab, etanercept, infliximab or abatacept that was started in the NHS before this guidance was published. People having treatment outside these recommendations may continue without change to the funding arrangements in place for them before this guidance was published, until they and their NHS clinician consider it appropriate to stop.

Why the committee made these recommendations

This appraisal reviews some of the drugs (adalimumab, etanercept, infliximab and abatacept) recommended for severe rheumatoid arthritis in [NICE technology appraisal 375](#) and considers them for moderate rheumatoid arthritis.

Filgotinib is the only advanced treatment option (biological and targeted synthetic DMARDs) currently available for moderate rheumatoid arthritis after 2 or more conventional DMARDs have not worked. The clinical evidence suggests that advanced treatments are likely to be similarly effective in both moderate and severe disease.

The most likely estimates suggest that adalimumab and infliximab after 2 or more conventional DMARDs are a cost-effective use of NHS resources. So, adalimumab with or without methotrexate, and infliximab with methotrexate, are recommended for people with moderate disease. The most likely cost-effectiveness estimates for etanercept and abatacept are higher than what NICE normally considers a cost-effective use of NHS resources. So, etanercept and abatacept are not recommended for treating moderate rheumatoid arthritis.

2 Partial review of NICE technology appraisal 375

2.1 This multiple technology appraisal is a partial review of [NICE technology appraisal 375](#) which recommended adalimumab, etanercept, infliximab, certolizumab pegol, golimumab, tocilizumab and abatacept (all in combination with methotrexate) as treatment options for people with severe rheumatoid arthritis only, assessed by having a disease activity score (DAS28) more than 5.1. This partial review considers people with moderate active disease, that is, with a DAS28 score between 3.2 and 5.1. Although certolizumab pegol, golimumab and tocilizumab were included in the original guidance, the manufacturers of these technologies decided not to participate in this partial review. So, the committee could only consider adalimumab, etanercept, infliximab and abatacept when making recommendations for people with moderate active disease. A partial review has been done because biosimilar versions of adalimumab and etanercept are now available, and there have been changes in the prices for some of the other technologies.

3 Information about adalimumab, etanercept, infliximab and abatacept

This technology appraisal includes 4 different biological medicines as either the originator medicine (the medicine first authorised for use) or a biosimilar product (see table 1). A biosimilar medicine is a medicine that is developed to be similar to an existing biological medicine.

Table 1 Information about the technologies

Technology	Originator (company)	Biosimilar (company)	Mechanism of action	Method of administration
Adalimumab	Humira (AbbVie)	<ul style="list-style-type: none"> • Amgevita (Amgen) • Imraldi (Biogen) • Idacio (Fresenius Kabi) • Hyrimoz (Sandoz) 	Tumour necrosis factor (TNF)-alpha inhibitor	Subcutaneous injection
Etanercept	Enbrel (Pfizer)	<ul style="list-style-type: none"> • Benepali (Biogen) • Erelzi (Sandoz) 	TNF-alpha inhibitor	Subcutaneous injection
Infliximab	–	<ul style="list-style-type: none"> • Flixabi (Biogen) • Remsima (Celltrion Healthcare) • Inflectra (Pfizer) • Zessly (Sandoz) 	TNF-alpha inhibitor	Intravenous injection
Abatacept	Orencia (Bristol-Myers Squibb)	–	Selective modulator of the T-lymphocyte activation pathway. Inhibits activation of T lymphocytes	Subcutaneous or intravenous injection

The subcutaneous formulation of Remsima was not considered in this partial review because it was not included in the final scope for [NICE technology appraisal 375](#). The originator product for infliximab (Remicade) was also not considered because the manufacturer of this technology did not participate in this appraisal.

Adalimumab

3.1 Adalimumab (Humira, AbbVie; Amgevita, Amgen; Imraldi, Biogen; Idacio, Fresenius Kabi; Hyrimoz, Sandoz), in combination with methotrexate, is indicated ‘for the treatment of moderate to severe, active rheumatoid arthritis in adult patients when the response to disease-modifying anti-rheumatic drugs including methotrexate has been inadequate’.

Adalimumab can be given as monotherapy in case of intolerance to methotrexate or when continued treatment with methotrexate is inappropriate.

3.2 The dosage schedule is available in the [summary of product characteristics](#).

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- 3.3 The list price of originator adalimumab (Humira, AbbVie) is £352.14 per 40 mg pre-filled pen or pre-filled syringe (excluding VAT; BNF online, accessed March 2021). The list price of adalimumab biosimilars per 40 mg pre-filled pen or pre-filled syringe are £316.80 (Amgevita, Amgen); £316.93 (Imraldi, Biogen); £316.93 (Idacio, Fresenius Kabi); £323.09 (Hyrimoz, Sandoz; all prices exclude VAT; BNF online, accessed March 2021).
- 3.4 The companies have each agreed a regional or nationally available price reduction for adalimumab with the Commercial Medicines Unit. The prices agreed through the framework are commercial in confidence.

Etanercept

- 3.5 Etanercept (Enbrel, Pfizer; Benepali, Biogen; Erelzi, Sandoz) in combination with methotrexate, is indicated 'for the treatment of moderate to severe active rheumatoid arthritis in adults when the response to disease-modifying antirheumatic drugs, including methotrexate (unless contraindicated), has been inadequate'. Etanercept can be given as monotherapy in case of intolerance to methotrexate or when continued treatment with methotrexate is inappropriate.
- 3.6 The dosage schedule is available in the [summary of product characteristics](#).
- 3.7 The list price of originator etanercept (Enbrel, Pfizer) is £89.38 per 25 mg pre-filled pen or pre-filled syringe (excluding VAT; BNF online, accessed March 2021). The list price of etanercept biosimilars per 25 mg pre-filled pen or pre-filled syringe are £82.00 (Benepali, Biogen); £80.44 (Erelzi, Sandoz; all prices exclude VAT; BNF online, accessed March 2021).
- 3.8 The companies have each agreed a nationally available price reduction for etanercept with the Commercial Medicines Unit. The prices agreed through the framework are commercial in confidence.

Infliximab

- 3.9 Infliximab (Flixabi, Biogen; Remsima, Celltrion Healthcare; Inflectra, Pfizer; Zessly, Sandoz), in combination with methotrexate, is indicated 'for the reduction of signs and symptoms as well as the improvement in physical function in: adult patients with active disease when the response to disease-modifying antirheumatic drugs (DMARDs), including methotrexate, has been inadequate'.
- 3.10 The dosage schedule is available in [the summary of product characteristics](#).
- 3.11 The list price of infliximab biosimilars per 100 mg vial are £377.00 (Flixabi, Biogen); £377.66 (Remsima, Celltrion Healthcare); £377.66 (Inflectra, Pfizer); £377.66 (Zessly, Sandoz; all prices exclude VAT; BNF online, accessed March 2021).
- 3.12 The companies have each agreed a nationally available price reduction for infliximab with the Commercial Medicines Unit. The prices agreed through the framework are commercial in confidence.

Abatacept

- 3.13 Abatacept (Orencia, Bristol-Myers Squibb), in combination with methotrexate, is indicated for 'the treatment of moderate to severe active rheumatoid arthritis (RA) in adult patients who responded inadequately to previous therapy with one or more disease-modifying anti-rheumatic drugs (DMARDs) including methotrexate (MTX) or a tumour necrosis factor (TNF)-alpha inhibitor'.
- 3.14 The dosage schedule is available in the [summary of product characteristics](#).
- 3.15 The list price of abatacept (Orencia, Bristol-Myers Squibb) is £302.40 per 125 mg pre-filled pen or pre-filled syringe and £302.40 per 250 mg vial (excluding VAT; BNF online, accessed March 2021).

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- 3.16 The company has a commercial arrangement. This makes abatacept available to the NHS with a discount and it would have also applied to this indication if the technology had been recommended. The size of the discount is commercial in confidence. It is the company's responsibility to let relevant NHS organisations know details of the discount.

4 Committee discussion

The [appraisal committee](#) considered evidence from a number of sources. See the [committee papers](#) for full details of the evidence.

This appraisal is a partial review of [NICE technology appraisal 375](#). The committee assessed the cost effectiveness of the technologies using the original clinical evidence and economic model developed by the assessment group for NICE technology appraisal 375. The partial review has taken a pragmatic approach, which was consulted on in [a review proposal](#), so the assessment group made only minor updates to the original model (see [section 4.4](#) and [section 4.5](#)).

New treatment options

People with rheumatoid arthritis would welcome new treatment options for moderate disease

- 4.1 The patient experts explained that people with moderate active rheumatoid arthritis have significant disability and reduced quality of life if their disease is not adequately controlled. This can affect a person's ability to work, complete everyday activities and increases the need for continual NHS care. The patient experts described how this affects emotional wellbeing substantially, causing stress and anxiety, which can trigger further flare-ups of the disease. Although there are a range of advanced treatment options for severe rheumatoid arthritis, only filgotinib is recommended for treating moderate disease after failure of 2 or more conventional disease-modifying antirheumatic drugs (DMARDs; such as methotrexate, leflunomide, sulfasalazine and hydroxychloroquine; see

[NICE's technology appraisal guidance on filgotinib](#)). The committee noted that when this partial update started, the appraisal of filgotinib had not concluded. Therefore, filgotinib is not included in the scope as a comparator. The patient experts explained that it is important that there is a wide range of treatment options available. This is because the differing nature of rheumatoid arthritis means that a treatment may work well for one person but not another. The clinical experts explained that although the medicines appraised are similarly beneficial for treating the articular features of rheumatoid arthritis, they differ in their effectiveness in preventing particular comorbidities. This means that it is important for people with rheumatoid arthritis to have a range of different medicines available, even within the same drug class. The clinical experts explained that earlier access to advanced treatments in moderate disease would reduce disease progression and increase the likelihood of remission. The committee concluded that people with moderate rheumatoid arthritis would welcome a range of advanced treatment options.

Cycling of TNF-alpha inhibitors

This appraisal only considers first-line biological treatments in moderate disease

4.2 A company representative explained that the moderate treatment sequences modelled by the assessment group did not consider cycling of tumour necrosis factor (TNF)-alpha inhibitors (taking another TNF-alpha inhibitor after a first one). This would happen if a person does not tolerate the first treatment, or if their disease either does not respond or responds inadequately after an initial response. The clinical experts explained that because the technologies are protein-based drugs, there is a risk of developing antidrug antibodies, which reduces the treatment benefit over time. They noted that around 50% of people will stop treatment within 3 years because of loss of efficacy. The clinical experts explained that the cycling of TNF-alpha inhibitors does have a place in treating rheumatoid

arthritis. But they noted that changing the treatment to a drug with a different mechanism of action may be more appropriate if the loss of response is because of the development of antidrug antibodies. They explained that for this reason having a variety of therapeutic choices for moderate disease would benefit people. The committee noted that the scope for the appraisal includes only first-line use of biological DMARDs (after a person's disease has responded inadequately to 2 or more conventional DMARDs) as in [NICE technology appraisal 375](#). It agreed that it was appropriate to assume that after the first biological treatment has failed, NICE technology appraisal guidance for severe rheumatoid arthritis was followed.

Clinical evidence

The clinical evidence used in NICE technology appraisal 375 is appropriate for this partial review

4.3 The clinical evidence used in this review is the same as that assessed in [NICE technology appraisal 375](#). So, the treatment efficacy of the interventions and comparators (adalimumab, etanercept, infliximab, abatacept all with methotrexate, and methotrexate alone) and subsequent treatments (rituximab and tocilizumab both with methotrexate) were informed by the results of the network meta-analysis done by the assessment group in [NICE technology appraisal 375](#). The trials in the network meta-analysis included people with moderate and severe disease, so the efficacy of treatments was assumed to be the same in both populations. The committee considered the uncertainty around the midpoint estimates used when making its recommendations for treatments used in severe disease in [NICE technology appraisal 375](#). The clinical experts explained that there is long-term clinical trial evidence and real-world evidence that strongly supports using biological DMARDs for treating moderate active disease. The committee concluded that the efficacy data accepted in the original guidance was appropriate to assess

the cost effectiveness of adalimumab, etanercept, infliximab and abatacept for people with moderate active disease as part of this partial review.

The assessment group's model

The cost-effectiveness model used in NICE technology appraisal 375 is appropriate for this partial review

4.4 The assessment group developed an individual patient-based discrete event simulation model for its economic evaluation in [NICE technology appraisal 375](#). The scope for this appraisal included only the first-line use of biological DMARDs after an inadequate disease response to 2 or more conventional DMARDs. So, in the economic model, after the first biological treatment had failed, NICE technology appraisal guidance for severe rheumatoid arthritis was followed. For all analyses it was assumed that methotrexate was used in combination with the biological DMARD, and that the results for combination therapy could be generalised to biological DMARD monotherapy (if monotherapy use was included in the marketing authorisation). This assumption was also made in [NICE technology appraisal 375](#). The model incorporated a response criterion based on European League Against Rheumatism (EULAR) response at 6 months to reflect UK clinical practice. If there was no EULAR response to a biological DMARD after 6 months then the next treatment in the strategy was used. Further details about the assessment group's original economic model can be found in the final guidance for [NICE technology appraisal 375](#). The committee concluded that the cost-effectiveness model accepted in the original guidance was appropriate to use in this partial review, with some updates to the model (see [section 4.5](#)).

The changes to the assessment group's model are appropriate for decision making and reflect current NICE guidance

4.5 The assessment group's analyses included the same assumptions preferred by the committee in [NICE technology appraisal 375](#). There were several updates to its original model:

- Updating the prices of interventions and subsequent treatments to reflect any changes to the prices of technologies.
- Amending the model so people with moderate disease who only have treatment with conventional DMARDs can have biological DMARDs after progression to severe disease (disease activity score [DAS28] more than 5.1). The committee understood that this treatment pathway was not an option in the original model but that it reflected current clinical practice. To include this change in the model, the assessment group estimated the relationship between changes in Health Assessment Questionnaire (HAQ) score, which was the measure used in the modelling, and changes in DAS28 score, which is the measure used to determine severity of disease. The assessment group did a systematic review to identify the best estimate of change in DAS28 score associated with a 0.125 change in HAQ score, which was considered to be 0.48. The assessment group also did sensitivity analyses using a lower estimate (the exact figure is confidential and cannot be reported here) and a higher estimate of 0.70.
- After stakeholder consultation, 1 company commented that the moderate treatment sequence used in the assessment group's updated model did not align with current NICE guidance recommendations for treating rheumatoid arthritis or with the sequences modelled in [NICE's guidance on filgotinib for treating moderate to severe rheumatoid arthritis](#). In response, the assessment group further updated the treatment sequences used in the model to reflect current NICE guidance (see [table 2](#)). The model assumed that for the treatment arm, a person with moderate disease would initially have a biological

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DMARD (either adalimumab, etanercept, infliximab or abatacept) followed by conventional DMARDs. For the comparator arm, the model assumed that a person would have initial treatment with methotrexate followed by conventional DMARDs. Once disease progressed to severe (DAS28 more than 5.1) they would then move through a series of subsequent treatments.

Table 2 Treatment sequences used in the updated assessment group model

Treatment arm	First treatment for moderate disease	Second treatment for moderate disease	First treatment for severe disease	Second treatment for severe disease	Third treatment for severe disease
Treatment	Biological DMARD	Conventional DMARDs	Adalimumab (infliximab if adalimumab is used in moderate disease)	Rituximab	Tocilizumab
Comparator	Methotrexate	Conventional DMARDs	Adalimumab	Rituximab	Tocilizumab

Abbreviations: DMARDs, disease-modifying antirheumatic drugs.

The treatment sequences in the updated economic model are appropriate

4.6 The trials included in the network meta-analysis showed people’s disease responded to methotrexate (a conventional DMARD) when it is used as the first treatment. Therefore, the assessment group included a response to methotrexate when used as a first treatment in the comparator arm of the model. The committee noted that this assumption was accepted in [NICE technology appraisal 375](#). The trials also showed a response with methotrexate following treatment with tocilizumab (in both treatment arms) and this efficacy was also included in the model in the treatment sequence for severe disease. The efficacy of conventional DMARDs when used later in the treatment pathway for moderate disease and at the end of the pathway in severe disease was assumed to be zero for both arms.

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The assessment group confirmed that the length of treatment sequence was the same in both arms. The committee concluded that the assessment group's model was previously considered acceptable in [NICE technology appraisal 375](#) and that the updates made to reflect current NICE guidance are appropriate for decision making.

Cost-effectiveness estimates

The most plausible ICERs for adalimumab and infliximab are below £20,000 per QALY gained

4.7 [NICE's guide to the methods of technology appraisal](#) notes that above a most plausible incremental cost-effectiveness ratio (ICER) of £20,000 per quality-adjusted life year (QALY) gained, judgements about the acceptability of a technology as an effective use of NHS resources will take into account the degree of certainty around the ICER. The committee will be more cautious about recommending a technology if it is less certain about the ICERs presented. The committee agreed that an acceptable ICER would be within the range NICE normally considers a cost-effective use of NHS resources (£20,000 to £30,000 per QALY gained). Because of the confidential discounts for the treatments and some of the subsequent therapies, the exact ICERs are confidential and cannot be reported here. The assessment group's base-case analyses used the cheapest formulation of each intervention and prices included homecare support (when available). The assessment group's base-case ICER for adalimumab and infliximab compared with conventional DMARDs were both substantially lower than £20,000 per QALY gained. The assessment group's base-case ICER for etanercept compared with conventional DMARDs was higher than £30,000 per QALY gained, and for abatacept (intravenous and subcutaneous formulations) was substantially higher than £30,000 per QALY gained.

The assessment group's sensitivity analyses do not change the cost-effectiveness conclusions

4.8 The assessment group did several sensitivity analyses including using lower (the exact figure is confidential and cannot be reported here) and higher values (0.70) for change in DAS28 score when HAQ score increases (see [section 4.5](#)). These did not affect the cost-effectiveness conclusions. Another sensitivity analysis was done to remove methotrexate after tocilizumab in the treatment sequences following progression to severe disease (in line with [NICE's guidance on filgotinib for treating moderate to severe rheumatoid arthritis](#)), which also had little impact on the ICERs. The committee understood that there was some uncertainty about the efficacy estimates used in the model, which may have influenced the cost-effectiveness results. However, it agreed that these estimates were considered acceptable by the committee in [NICE technology appraisal 375](#). The committee discussed that there are multiple biosimilars for adalimumab, and the availability of these differs regionally in England, unlike etanercept and infliximab biosimilars, which are nationally available. The committee considered a further sensitivity analysis using the highest price that any region would need to pay for adalimumab. It was reassured that this did not change the cost-effectiveness conclusions for adalimumab.

Adalimumab and infliximab are cost-effective treatment options for moderate disease but etanercept and abatacept are not recommended

4.9 The committee accepted the assessment group's base-case analyses. The assessment group's base-case ICERs for adalimumab and infliximab were both below the range NICE considers to be an acceptable use of NHS resources. Therefore, the committee recommended adalimumab and infliximab as first-line biological treatments for moderate active rheumatoid arthritis that has had an inadequate response to intensive therapy with 2 or more conventional DMARDs. The assessment group's base-case

ICERs for etanercept and abatacept were both above the range NICE considers to be an acceptable use of NHS resources. The committee therefore did not recommend etanercept or abatacept as treatment options for moderate active rheumatoid arthritis.

Adalimumab monotherapy is also recommended for people who cannot take methotrexate

4.10 The committee agreed that people with moderate active rheumatoid arthritis who cannot tolerate methotrexate should not be treated differently from other people with moderate disease, as far as possible. The committee concluded that based on the marketing authorisation and the cost-effectiveness estimates only adalimumab could be recommended as monotherapy for moderate active disease previously treated with conventional DMARDs.

Equality considerations

Healthcare professionals should consider any disabilities or communication difficulties when using the DAS28 measure

4.11 A potential equality issue was raised in [NICE's technology appraisal guidance on upadacitinib for treating severe rheumatoid arthritis](#), about people with rheumatoid arthritis who have difficulty communicating. For these people, it may be more difficult to assess outcomes when using the DAS28 measure. The committee agreed that this equality issue was also important to consider for this appraisal. The committee concluded that healthcare professionals should consider any physical, psychological, sensory or learning disabilities, or communication difficulties that could affect the responses to the DAS28 and make any appropriate adjustments.

No other equality issues have been identified that can be addressed in this technology appraisal

4.12 The patient experts explained that certolizumab pegol, another TNF-alpha inhibitor, is often used to treat rheumatoid arthritis in women who are planning to start a family or who are pregnant. They described how not having this as a treatment option for people with moderate disease could potentially discriminate against women of childbearing age. The clinical experts explained that certolizumab pegol does not easily cross the placenta so is usually the preferred treatment choice during pregnancy. However, they explained that other TNF-alpha inhibitors can be used in different stages of pregnancy but that there is a risk of active transport across the placenta, which often means that treatment is stopped. The committee concluded that this issue could not be addressed in this technology appraisal, because the company manufacturing certolizumab pegol decided not to participate in this partial review. So, the committee could not make recommendations on its use for moderate disease.

Other factors

Healthcare professionals should choose the most appropriate treatment after discussing the options with the person having treatment

4.13 The committee understood that having a range of treatment options is important in treating moderate rheumatoid arthritis. It understood that [NICE recommended filgotinib for treating moderate to severe rheumatoid arthritis](#) and noted [NICE's ongoing technology appraisal on upadacitinib for previously treated moderate active rheumatoid arthritis](#). The committee concluded that healthcare professionals should choose the most appropriate treatment after discussing the advantages and disadvantages of the treatments available with the person having treatment. If more than 1 treatment is suitable, they should start treatment with the least expensive drug (taking into account administration costs, dose needed

and product price per dose). This may vary because of differences in how the drugs are used and treatment schedules.

The benefits of the technologies were adequately captured in the cost-effectiveness analysis

4.14 The patient and clinical experts explained that biological DMARDs are highly effective in reducing disease progression and improving quality of life in people with rheumatoid arthritis. The committee noted that biological DMARDs were considered to be innovative in [NICE technology appraisal 375](#) for people with severe disease. It discussed that while filgotinib is the only advanced treatment option currently available for people with moderate disease, its mechanism of action is different to the biological DMARDs, of which none are currently available for people with moderate disease. The committee agreed that the technologies are important treatment options for these people. It concluded that all the benefits of the technologies were adequately captured in the model.

5 Implementation

5.1 [Section 7 of the National Institute for Health and Care Excellence \(Constitution and Functions\) and the Health and Social Care Information Centre \(Functions\) Regulations 2013](#) requires clinical commissioning groups, NHS England and, with respect to their public health functions, local authorities to comply with the recommendations in this appraisal within 3 months of its date of publication.

5.2 The Welsh ministers have issued directions to the NHS in Wales on implementing NICE technology appraisal guidance. When a NICE technology appraisal recommends the use of a drug or treatment, or other technology, the NHS in Wales must usually provide funding and resources for it within 2 months of the first publication of the final appraisal document.

5.3 When NICE recommends a treatment 'as an option', the NHS must make sure it is available within the period set out in the paragraphs above. This means that, if a patient has moderate active rheumatoid arthritis and the doctor responsible for their care thinks that adalimumab or infliximab are the right treatment, it should be available for use, in line with NICE's recommendations.

6 Proposed date for review of guidance

6.1 NICE proposes that the guidance on this technology is considered for review by the guidance executive 3 years after publication of the guidance. NICE welcomes comment on this proposed date. The guidance executive will decide whether the technology should be reviewed based on information gathered by NICE, and in consultation with consultees and commentators.

Stephen O'Brien
Chair, appraisal committee
March 2021

7 Appraisal committee members and NICE project team

Appraisal committee members

The 4 technology appraisal committees are standing advisory committees of NICE. This topic was considered by [committee C](#).

Committee members are asked to declare any interests in the technology to be appraised. If it is considered there is a conflict of interest, the member is excluded from participating further in that appraisal.

The [minutes of each appraisal committee meeting](#), which include the names of the members who attended and their declarations of interests, are posted on the NICE website.

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NICE project team

Each technology appraisal is assigned to a team consisting of 1 or more health technology analysts (who act as technical leads for the appraisal), a technical adviser and a project manager.

Anita Sangha

Technical lead

Alexandra Filby

Technical adviser

Louise Jafferally

Project manager

ISBN: [to be added at publication]