Mid and South Essex Health and Care Partnership

NHS

Treatment of severe plaque psoriasis in adults AFTER the use of systemic treatments have failed (in line with NICE guidance, technology appraisals and local agreement)

This algorithm is only applicable for use in adult patients who have failed to respond to, who are intolerant of or who have contraindications to the use of standard systemic therapies i.e. ciclosporin , methotrexate and phototherapy. The treatment choices available vary depending on severity of disease (as indicated in the algorithm below).

Moderate disease
Does not qualify for treatment in this pathway

Severe disease
(PASI ≥10, DLQI >10)

Yes

Box 1 – First-line biologic agents (as per NICE TAs)
The least expensive appropriate option should be chosen. Options are listed by cost and class (least to most expensive):

1. **TNF inhibitors (TNFi)**
   a) Adalimumab (biosimilar only), TA146 **usual 1st line choice**
   Review at 16 weeks
   b) Etanercept (biosimilar only), TA103
   Review at 12 weeks
   c) Infliximab (biosimilar only), TA134
   Only if PASI ≥20 and DLQI >18
   Review at 10 weeks
   d) Certolizumab, TA574
   Review at 16 weeks

2. **IL-17 inhibitors**
   a) Brodalumab, TA511
   Review at 12 weeks
   b) Ixekizumab, TA442
   Review at 12 weeks
   c) Secukinumab, TA350
   Review at 12 weeks

3. **IL-23 inhibitors**
   a) Tildrakizumab, TA575
   Review at 28 weeks
   b) Risankizumab, TA596
   Review at 16 weeks
   c) Guselkumab, TA521
   Review at 16 weeks
   d) Ustekinumab, TA180
   (IL-12 & IL-23i inhibitor)
   Review at 16 weeks

Non- biologic agent (as per NICE TAs):
Apremilast, TA419 or dimethyl fumarate, TA475.
Review at 16 weeks
Note: Both less effective than biologics and more costly than first-line adalimumab (biosimilar). Reserved for those contra-indicated to biologics / preference for oral therapy.

Assess response – **has an adequate response been achieved (see box 2)**? Withdraw if adequate response is not maintained / intolerant and move to next stage in the pathway

No

Yes

Continue with a minimum of 12 monthly monitoring until adequate response (see box 2) is no longer maintained.

Assess response – **has an adequate response been achieved (see box 2)**? Withdraw if adequate response is not maintained / intolerant and move to next stage in the pathway

Yes

No

Biosimilars: Prescribing of biologics should be by brand. Where available, biosimilars should be prescribed as per local arrangements (new patients started on biologics where a biosimilar is available to be prescribed biosimilars; existing patients to be reviewed with a view to switching from originator to biosimilar).

Box 3 – Second line biologic agents (CG153 / local agreement, May 2021)
Consider changing to an alternative biologic drug if the psoriasis does not respond adequately (primary or secondary failure, see **box 2**) OR the drug cannot be tolerated / becomes contraindicated AND it is demonstrated that the least expensive biologic from a different class can be used.
The least expensive appropriate drug in class should be used. Where there is more than one suitable class, the least expensive option should be chosen. See **box 1** for cost order of biologics. If least expensive choice is not selected clinical rationale to be provided

Box 2 – Adequate response As per NICE, either:
- a 75% reduction in the PASI score (PASI 75) from when treatment started.
- a 50% reduction in the PASI score (PASI 50) and a 5 point reduction in DLQI from start of treatment.

Assess response – **has an adequate response been achieved (see box 2)**? Withdraw if adequate response is not maintained / intolerant and move to next stage in the pathway

Yes

No

Non- biologic agent: Consider **Apremilast, TA419 or dimethyl fumarate, TA475** (if not used earlier in the pathway). *Review at 16 weeks and then minimum of 12 monthly monitoring.*

Third line biologic agents (Local agreement, May 2021)
Consider changing to an alternative biologic drug as per **box 3**.
The least expensive appropriate drug in class should be used. Where there is more than one suitable class, the least expensive option should be chosen. See **box 1** for cost order of biologics.

Assess response at least every 6 to 12 months. Continue treatment if an **adequate response is maintained**. Withdraw if adequate response is not maintained / intolerant and **STOP**

TREATMENT REQUESTS BEYOND THE END OF THE ALGORITHM ARE NOT ROUTINELY COMMISSIONED. **Upto a maximum of 3 sequential treatments are routinely commissioned, when either a TNFi or a non-biologic agent are used first line. For further treatment follow the IFR process (only if a patient is clinically exceptional within whole group of people who have failed three treatment lines).**

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Notes:

1. **NICE Clinical Guideline 153 on the management of psoriasis states that consideration should be given to changing to an alternative biological therapy in adult patients:**

a) In primary failure where the psoriasis does not respond adequately to a first biological drug within the timescales defined in NICE technology appraisals (specified in box 1)

b) In secondary failure where the psoriasis initially responds adequately but subsequently loses this response

c) the first biological drug cannot be tolerated or becomes contraindicated. However local agreement (May 2021 applicable to all lines of therapy) where patients discontinue a drug due to adverse effects or the drug becoming contraindicated during the timescales for the assessment of efficacy at initiation defined in the respective NICE technology appraisals, this will not be regarded as one of the sequential treatment options.

2. TNF inhibitors: (local agreement May 2021)

a) In primary failure consider treatment options with a different modality

b) In secondary failure consider dose escalation (for biosimilars only) or switch to a different treatment modality.

3. Dose escalation (biosimilar anti-TNFs only- local agreement May 2021): An attempt to recapture response after secondary failure can be attempted with adalimumab biosimilar (40mg weekly), etanercept biosimilar (50mg twice weekly) or infliximab 5mg/kg every 6 weeks only.

4. Upto a maximum of 3 sequential treatments are routinely commissioned, when either a TNFi or a non-biologic agent are used first line.

References	• NICE Technology appraisal guidance 103: Etanercept for the treatment of adults with psoriasis (Published date: 26 July 2006) https://www.nice.org.uk/guidance/ta103 • NICE Technology appraisal guidance 134: Infliximab for the treatment of adults with psoriasis (Published date: 23 January 2008) https://www.nice.org.uk/guidance/ta134 • NICE Technology appraisal guidance 146: Adalimumab for the treatment of adults with psoriasis (Published date: 25 June 2008) https://www.nice.org.uk/guidance/ta146 • NICE Technology appraisal guidance 180: Ustekinumab for the treatment of adults with moderate to severe psoriasis (Published date: 03 March 2017) https://www.nice.org.uk/guidance/ta180 • NICE Technology appraisal guidance 350: Secukinumab for the treatment of adults with moderate to severe psoriasis (Published date: 22 July 2015) https://www.nice.org.uk/guidance/ta350 • NICE Technology appraisal guidance 442: Ixekizumab for treating moderate to severe plaque psoriasis (Published date: 26 April 2017) https://www.nice.org.uk/guidance/ta442 • NICE Technology appraisal guidance 511: Brodalumab for treating moderate to severe plaque psoriasis (Published date: 21 March 2018) https://www.nice.org.uk/guidance/ta511 • NICE Technology appraisal guidance 521: Guselkumab for treating moderate to severe plaque psoriasis (Published date: 13 June 2018) https://www.nice.org.uk/guidance/ta521 • NICE Technology appraisal guidance 574: Certolizumab pegol for treating moderate to severe plaque psoriasis (Published date: 17 April 2019) https://www.nice.org.uk/guidance/ta574 • NICE Technology appraisal guidance 575: Tildrakizumab for treating moderate to severe plaque psoriasis (Published date: 17 April 2019 https://www.nice.org.uk/guidance/ta575 • NICE Technology appraisal guidance 596: Risankizumab for treating moderate to severe plaque psoriasis (Published date: 21 August 2019) https://www.nice.org.uk/guidance/ta596 • NICE Technology appraisal guidance 419: Apremilast for treating moderate to severe plaque psoriasis (Published date: 23 November 2016) https://www.nice.org.uk/guidance/ta419 • Dimethyl fumarate for treating moderate to severe plaque psoriasis Technology appraisal guidance 475 (Published date: 06 September 2017) https://www.nice.org.uk/guidance/ta475 • NICE Psoriasis: assessment and management Clinical guideline [CG153] (Published date: 24 October 2012 Last updated: 01 September 2017) https://www.nice.org.uk/guidance/cg153
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