The Pan Mersey Area Prescribing Committee recommends the sequential use of biological agents, adalimumab, certolizumab, etanercept, golimumab, infliximab, secukinumab▼ and ustekinumab in the management of psoriatic arthritis (PsA) in accordance with the recommendations below, and the accompanying flowchart.

The Pan Mersey Area Prescribing Committee recommends that in addition to NICE-approved use in PsA, a second alternative anti-TNF agent (aTNF) can be used in patients who fit the NICE criteria but fail to respond (primary inefficacy or secondary loss of efficacy) to the first aTNF, or have side-effects to the first aTNF. If the second aTNF is not tolerated due to side-effects, a third may be tried. In addition ustekinumab is recommended as an option when treatment with an aTNF is contraindicated but would otherwise be considered or the person has had treatment with one or more aTNF, in line with NICE TA340. NICE TA445 recommends that certolizumab and secukinumab may be considered in patients who have disease that has stopped responding to an aTNF after the first 12 weeks.

NICE TA199, NICE TA220, NICE TA340 and NICE TA445 recommend adalimumab, certolizumab, etanercept, golimumab, infliximab, secukinumab and ustekinumab in psoriatic arthritis (PsA) where the following criteria are met:

- The person has peripheral arthritis with three or more tender joints and three or more swollen joints, and
- The psoriatic arthritis has not responded to adequate trials of at least two standard disease-modifying antirheumatic drugs (DMARDs), administered either individually or in combination.
- Treatment is to be discontinued in people whose psoriatic arthritis has not shown an adequate response using the Psoriatic Arthritis Response Criteria (PsARC) at 12 weeks. People whose disease has a Psoriasis Area and Severity Index (PASI) 75 response at 12 weeks but whose PsARC response does not justify continuation of treatment should be assessed by a dermatologist to determine whether continuing treatment is appropriate on the basis of skin response (see NICE TA103, NICE TA134 and NICE TA146 for guidance on the use of aTNF in psoriasis).
- Certolizumab and secukinumab are only recommended if supplied as agreed in the patient access scheme.

If more than 1 treatment is suitable, the least expensive (taking into account administration costs and patient access schemes) should be chosen.

Note: Patients who are not eligible for treatment under this statement may be considered on an individual basis where their GP or consultant believes exceptional circumstances exist that warrant deviation from the rule of this policy. In this situation, follow locally defined processes.
# Sequential Use of Biological Agents in the Management of Psoriatic Arthritis

<table>
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<tr>
<th><strong>Effectiveness</strong></th>
<th><strong>Safety</strong></th>
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<td><strong>NICE</strong> recommend certolizumab and secukinumab where a patient has had an aTNF in psoriatic arthritis but the disease has stopped responding after 12 weeks(^1). Open label studies and registry data have confirmed the potential benefits of “switching” aTNF therapies in patients with PsA(^2)(^-)(^3). The EULAR (European League against Rheumatism) recommends switching to a second biological agent, including between aTNFs, on loss of efficacy in PsA, based on studies showing good efficacy to a second aTNF and studies of ustekinumab and secukinumab included many patients previously treated with aTNFs(^10). The BSR (British Society for Rheumatology) guidance also recommends switching to an alternative aTNF in the event of failure of the first aTNF in PsA(^11).</td>
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<td>aTNF are contra-indicated in active tuberculosis or other severe infection, and in Class III or IV heart failure. Caution should be exercised as aTNF increase risk of infections, and they should be used with caution in patients with history or at increased risk of tuberculosis, hepatitis B, malignancies and lymphoproliferative disorders, skin and other cancers, heart failure, blood dyscrasias, demyelinating disease. Ustekinumab is contra-indicated in clinically important infection. It may cause serious allergic and skin reactions, headache, nasopharyngitis, and upper respiratory tract infection. Secukinumab is contra-indicated in clinically important infection. It may cause hypersensitivity reactions and exacerbate Crohn’s disease. See individual product <strong>SPCs</strong> for further details.</td>
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<th><strong>Cost</strong></th>
<th><strong>Patient Factors</strong></th>
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<td>Estimated 7.25 patients per year across Pan Mersey area, equivalent to 0.5 per 100,000 population per year. <strong>NICE TA 220</strong> Goltimumab psoriatic arthritis costing statement(^5) estimates prevalence of people with psoriatic arthritis eligible for treatment as 1448 in England = 3.6 / 100,000 population (54 in Pan Mersey area), of which 1248 would respond, leaving up to 200 = 0.5 / 100,000 population as non-responders to first anti-TNF therapy. Estimated annual cost of aTNF for these patients is £5,000 / 100,000 population. NICE states there is no significant change in resource impact anticipated specifically from use of certolizumab or secukinumab(^11).</td>
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<td>British Society for Rheumatology and British Health Professionals in Rheumatology rheumatoid arthritis guidelines on safety of anti-TNF therapies 2010 recommend monitoring for infection, and full blood count should be undertaken regularly. Renal impairment, hepatic impairment and paediatric patients – no data available on dose adjustment, but ustekinumab is licensed in children &gt;12 years. No dosage adjustment necessary for elderly patients. See individual product <strong>SPCs</strong> for further details.</td>
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### Prescribing Information
See individual product **SPCs**.

### Implementation Notes
Prescribing should be retained by the specialist. Administered (often self-administered) by subcutaneous injection via prefilled syringe (except infliximab administered by intravenous infusion), usually by “home care” arrangement. Patients should be given the special alert card.

### References
1. **NICE TA445**, Certolizumab pegol and secukinumab for treating active psoriatic arthritis after inadequate response to DMARDs. 2017