DAS28 score >5.1 AND patient has not responded after an adequate trial of intensive therapy with a combination of conventional synthetic disease-modifying drugs (csDMARDs), including methotrexate.

Carry out pre-screen tests and advise patient on the most appropriate agent (see overleaf).

If no clear indication for a specific agent, then use the most cost-effective.

Currently this is biosimilar etanercept or baricitinib.

**EULAR response criteria:**

<table>
<thead>
<tr>
<th>DAS28 improvement</th>
<th>&gt; 1.2</th>
<th>&gt; 0.6 and ≤ 1.2</th>
<th>≤ 0.6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Present DAS28 ↓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 3.2</td>
<td>Good response</td>
<td>Moderate response</td>
<td>No response</td>
</tr>
<tr>
<td>&gt; 3.2 and ≤ 5.1</td>
<td>Moderate response</td>
<td>Moderate response</td>
<td>No response</td>
</tr>
<tr>
<td>&gt; 5.1</td>
<td>Moderate response</td>
<td>No response</td>
<td>No response</td>
</tr>
</tbody>
</table>

**Rheumatoid Arthritis High Cost DMARDs Drug Treatment Pathway**

Approved by Prescribing Clinical Network - East Surrey CCG, Guildford & Waverley CCG, North West Surrey CCG, Surrey Downs CCG, Surrey Heath CCG, Crawley CCG and Horsham & Mid Sussex CCG

**Notes to the pathway and agreed definitions (Rheumatology Network meeting Nov 16 to Jun17):**

**Primary Failure** — “< occurs when > the response criteria (as defined within the NICE TA) is not fully met when response to treatment is assessed at the time interval defined within the NICE TA. Move to the NEXT treatment line.

**Secondary Failure** — “<occurs when >the response to treatment (as defined within the NICE TA) is no longer met. Move to the NEXT treatment line.

**Primary intolerance/adverse effects** — “<An occurrence that causes> discontinuation of treatment, due to inability to tolerate side-effects <of that treatment that occurs during the initial time period defined by the NICE TA>. Use another option from the SAME treatment line.

**Secondary intolerance/adverse effects** — “<An occurrence that causes> discontinuation of treatment, due to inability to tolerate side effects <of that treatment that occurs after the initial time period defined by the NICE TA>. Move to the NEXT treatment line OR discuss at RN meeting.

**Conception** — if conception plans or pregnancy indicate a change of drug is advisable, it is agreed that this does not constitute a change in line of treatment. Please update Blueteq accordingly.
When guiding on patient choice, consider the following:

**Patient considerations:** device, level of dexterity, frequency, route, adherence to drug.

**Clinical considerations:** disease characteristics, concomitant medication, IG levels, co-morbidities, antibody status, serological status (acute phase), absolute/relative contra-indications, previous history of malignancy, mode of action of chosen drug.

**Drug-specific considerations:** Bearing the above in mind, choose most appropriate agent from table below for patient and if no clear indication for a specific agent then use the least expensive.

The least expensive drugs currently for 1st line use are biosimilar etanercept and baricitinib.

<table>
<thead>
<tr>
<th>Drug</th>
<th>Mode of action</th>
<th>Below are specific circumstances that may suggest the use of a specific agent. With all biologics there may a generalised increased risk of infection. In specific circumstances such as interstitial lung disease (ILD), careful assessment prior to treatment and respiratory opinion is advised regardless of chosen biologic.</th>
</tr>
</thead>
</table>
| **#Abatacept AND methotrexate** | T-cell co-stimulation inhibitor (biologic DMARD [bDMARD]) | • Consider if injection site reactions to TNF-alpha inhibitors  
• Consider if previous hospitalised infections on TNF-alpha inhibitors/potential serious infection risk  
• Seropositive patients |
| **Adalimumab +/- methotrexate** | TNF alpha inhibitor (bDMARD) | Extra-articular features/co-existent conditions such as:  
• Uveitis  
• Psoriasis  
• Crohn’s disease  
• Ulcerative colitis  
• Hidradenitis suppurativa |
| **Certolizumab +/- methotrexate** | TNF alpha inhibitor (bDMARD) | Women planning a pregnancy in near future (low placental transfer) |
| **Etanercept +/- methotrexate** | TNF alpha inhibitor (bDMARD) | • Potential risk of TB  
• Women planning a pregnancy in near future (shortest time of discontinuation prior to conception)  
• Consider if potential serious infection risk  
• Hepatitis C (only after hepatology consultation) |
| **Golimumab AND methotrexate** | TNF alpha inhibitor (bDMARD) | Consider if patient over 100kg  
• Needle phobia/compliance issues/patient convenience*  
• Ulcerative colitis |
| **Infliximab +/- methotrexate** | TNF alpha inhibitor (bDMARD) | Body weight <60kg (potential cost saving)  
• Compliance issues/needle phobia**  
• Severely impaired manual dexterity**  
• Crohn’s disease/ulcerative colitis  
• Psoriasis  
• Rheumatoid vasculitis |
| **Rituximab AND methotrexate** | B-cell inhibitor (bDMARD) | Can be used 1st line if (ACR/EULAR recommendations):  
• Recent history of lymphoma  
• Latent TB with CIs to chemoprophylaxis  
• Previous history of demyelinating disease  
• Treated solid malignancy within last 5 years |
| **Tocilizumab +/- methotrexate** | Interleukin-6 inhibitor (bDMARD) | Features of high IL-6 mediated disease (high ESR/CRP, anaemia of chronic disease, high ferritin)  
• AA amyloidosis |
| **Sarilumab +/- methotrexate TA486** | Interleukin-6 inhibitor (bDMARD) | If rituximab is a treatment option, baricitinib and tofacitinib are not cost-effective for severe disease after biological DMARDs (bDMARDs)  
Baricitinib is once daily dosage and tofacitinib is twice daily dosage. |
| **Baricitinib +/- methotrexate TA466** | JAK inhibitor (targeted synthetic DMARD [tsDMARD] —oral preparations) | |

* monthly dosing,** intravenous infusion (IV), # subcut & IV versions available (IV should be used at clinician’s discretion)

References:
3 NICE Technical Appraisals TA195 (Aug 10), TA198 (Aug 10), TA186 (Feb 10), TA225 (Jun 11), TA247 (Feb 12), TA375 (Jan 16), TA415 (Oct 16), TA466 (Aug 17), TA480 (Oct 17), TA486 (Nov 17). Available at: www.nice.org.uk
5 High cost drugs pathway for Rheumatoid Arthritis Dec 2017, Manchester Academic Health Science Centre (MAHSC)