# Shared Care of Patient on Biologic and Targeted Synthetic Disease-Modifying Antirheumatic Drugs (b/tsDMARDs)

## Rheumatology Sub-Stream

This document is available under "Resources" at https://metronorth.health.qld.gov.au/specialist_service/refer-your-patient/rheumatology

The care of rheumatology patients on b/tsDMARDs should be shared between rheumatologist and GP. Sharing care improves specialist access and enhances patient compliance and satisfaction. Biologic DMARDs are administered SC or IV and include brands such as etanercept (Enbrel/Brenzys) and adalimumab (eg. Humira/Hadlima) whereas targeted synthetics such as baricitinib (Olumiant), tofacitinib (Xeljanz) and upadacitinib (Rinvoq) are administered orally. The following information is intended to facilitate and improve shared care. Please see *H: Links* (page 2) for more information about these medications.

**Please do the following for your patient on a b/tsDMARD:**

- ❑ **Review and arrange vaccinations:**
  - COVID, pneumococcal and annual flu vaccines are advised.
  - Prior to commencement of b/tsDMARDs, patients should be considered for vaccination against Hepatitis A and B, shingles, MMR and HPV if current therapy permits.
  - Live vaccines are contraindicated with concurrent use of all b/tsDMARDs. These include:
    - On schedule: MMR, BCG, Oral Rotavirus
    - Travel: Jap. Encephalitis, Yellow Fever, Oral Typhoid
    - Table of Vaccinations for Rheumatology Patients
- ❑ **Arrange a skin check** if not done within the previous 6 months and ensure repeated annually - patients on b/tsDMARDs may be at higher risk of skin cancers.
- ❑ **Ensure pathology tests are done** and action results appropriately – *see A:Pathology testing and ongoing clinical assessment.*
- ❑ **Remind patients to store medication appropriately** – fridge (NOT freezer) for injectables and not in sun.
- ❑ **Arrange clinical reviews** as appropriate and consider software reminders for regular tasks – *see A:Pathology testing and ongoing clinical assessment.*
- ❑ **Please contact the rheumatology team if you have any concerns (Registrar via switch)**

## A: Pathology testing and ongoing clinical assessment

Regular **FBC, U/E/LFT, ESR/CRP** are required with **results to GP and rheumatologist.**

Please see clinic letter for details on monitoring frequency, additional precautions, recommendations for timing of patient assessment, possible side effects and direction on actions for abnormal results. If you do not have access to the clinic letter (such as GPs taking over care of a current rheumatology patient) or required information is lacking, please contact the treating team or obtain previous correspondence via the usual channels.

When b/tsDMARDs are co-prescribed with other DMARDs such as methotrexate (MTX) and leflunomide (LEF), blood tests may need to be performed more frequently and special measures may be necessary as guided by the treating rheumatology team.

If advice outlined below recommends a change in treatment, please forward details to the treating rheumatology team in writing or call the registrar via switch if more urgent.

Regular cardiovascular risk review, including lipids, is advisable for all patients with autoimmune disease.

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## B: Infections

Infections are more common in patients on b/tsDMARDs. They should usually be withheld in the following situations:

- Too unwell for work / study
- Fever >39$^{o}$
- Antibiotics commenced

The b/tsDMARD should be restarted once the illness has resolved or they have completed the antibiotics. If in doubt, or for complex situations such as for multiple DMARD/long-term antimicrobial use, contact the treating team.

Note: patients receiving **tocilizumab** may not develop an elevated CRP during an infection so other parameters and clinical features must be assessed carefully.

## C: Malignancy

If cancer has been previously cured, there is no clear evidence of increased risk of recurrence or new primaries with the use of b/tsDMARDs. While an interval of 5 years was previously recommended between cancer cure and starting such medications, recent data suggests this may not be required. Each patient should be assessed individually.

Smoking cessation and skin cancer prevention measures are strongly recommended.

## D: Pregnancy

A number of bDMARDs are compatible with pregnancy for both mothers and fathers. More details are available from the ARA website: Rheumatology Medications for Autoimmune Rheumatic Diseases in Pregnancy

## E: Surgery

It is recommended b/tsDMARDs are withheld prior to elective surgery (See Table 1 below for timings) and recommenced 2 weeks after, provided the wound is healing and there is no evidence of infection. Please notify the treating rheumatologist if a surgical procedure is planned and ensure the surgical team are aware that the patient is on the medication. Please also advise the treating rheumatologist if medication needs to be withheld for longer.

## F: Treatment Interruption

If a b/tsDMARD is stopped for more than 1-2 weeks, please ensure the treating rheumatologist is alerted via letter or phone call as appropriate. **Failure to do so may mean continued treatment will no longer be PBS-subsidised.**

## G: Other Possible Adverse Effects

**Common:**

**Injection site reactions** can be reduced by applying ice +/- topical corticosteroid to the site. If severe, advise the patient to take a photograph and withhold the medication, then contact the treating rheumatology team. Many injection site reactions stop occurring over time.
**Hyperlipidaemia** occurs with some products. Fasting lipid profile 3 months post initiation then annually is advisable.

**EXTREMELY rare but important:**

**Neutropaenia and liver dysfunction**
**Neurological** – demyelinating illnesses (MS, optic neuritis or Guillain-Barre syndrome) and peripheral neuropathy
**Congestive cardiac failure**
**Drug-induced lupus**

## H: Links

The ARA website (rheumatology.org.au) has more information including COVID advice and vaccine information:
Medications: Rheumatology Medication Information
Pregnancy: Rheumatology Medications for Autoimmune Rheumatic Diseases in Pregnancy
Vaccines: Table of Vaccinations for Rheumatology Patients

HealthPathways is a valuable GP decision-support tool which includes sections on all major rheumatology conditions:
HealthPathways Brisbane North (communityhealthpathways.org) Username: Brisbane Password: North

## Further Information

Most doctors are familiar with conventional synthetic DMARDs **(csDMARDs)** such as low dose weekly methotrexate, hydroxychloroquine, sulfasalazine, and leflunomide. Treatment of rheumatic disease has been enhanced with the PBS funding of biological DMARDs **(bDMARDs)** and targeted synthetic DMARDs **(tsDMARDs**).

tsDMARDs are synthesized like csDMARDs but differ because they block precise pathways inside immune cells.

**Biological medications** are manufactured in living systems such as cells or microorganisms. bDMARDs are large, complex molecules produced using recombinant DNA technology.

**Biosimilars** are biological medications that are almost an identical copy of an original bDMARD, often made by a different company. They are officially approved versions of original "innovator" products, manufactured when the patent expires. Unlike common, generic small-molecule drugs, biologics are more complex and may be sensitive to changes in manufacturing processes.

Biological medications are also used in other inflammatory conditions such as vasculitis and IBD. Those used in rheumatology include medications in Table 1.

**Table 1**: Biological and Targeted Synthetic DMARD bio originator/biosimilar names and surgery recommendations:

| Name | Mode of Action | Trade name bio originator | Trade name PBS funded biosimilar | Interval between last dose and elective surgery |
|---|---|---|---|---|
| **biological DMARD (bDMARD) (IV/SC)** | | | | |
| abatacept | T-cell signalling interruption | Orencia | | 2 weeks if SC<br>5 weeks if IV |
| adalimumab | TNF inhibition | Humira | Abrilada<br>Adalicip<br>Amgevita<br>Hadlima<br>Hyrimoz<br>Idacio<br>Yuflyma | 3 weeks if 2 week dosing |
| bimekizumab | IL-17 inhibition | Bimzelx | | |
| certolizumab | TNF inhibition | Cimzia | | 3 weeks if 2 week dosing<br>5 weeks if 4 week dosing |
| etanercept | TNF inhibition | Enbrel | Brenzys | 2 weeks |
| golimumab | TNF inhibition | Simponi | | 5 weeks |
| guselkumab | IL-23 inhibition | Tremfya | | 9 weeks if 8 week dosing |
| infliximab | TNF inhibition | Remicade | Inflectra<br>Renflexis<br>Remsima | 7 weeks if 6 week dosing<br>9 weeks if 8 week dosing<br>2 weeks for s/c Remsima |
| ixekizumab | IL-17 inhibition | Taltz | | 5 weeks |
| rituximab | B-cell inhibition | Mabthera | Riximyo | 7 months |
| secukinumab | IL-17 inhibition | Cosentyx | | 3 weeks if 2 week dosing<br>5 weeks |
| tocilizumab | IL-6 inhibition | Actemra | | 2 weeks if SC<br>5 weeks if IV |
| ustekinumab | IL 12/23 inhibition | Stelara | | 13 weeks if 12 week dosing |
| **Targeted Tynthetic DMARD (tsDMARD) (oral)** | | | | |
| apremilast | PDE-4 inhibition | Ortezla | | 4 days after last dose |
| baricitinib | Janus Kinase inhibition | Olumiant | | 4 days after last dose (data lacking) |
| tofacitinib | Janus Kinase inhibition | Xeljanz | | 4 days after last dose |
| upadacitinib | Janus Kinase inhibition | Rinvoq | | 4 days after last dose (data lacking) |