RECOMMENDED MONITORING SCHEDULE FOR RHEUMATOLOGY PATIENTS TAKING DISEASE-MODIFYING ANTI-RHEUMATIC DRUGS (DMARDs)
Shared Care Protocol

This protocol provides monitoring guidance for rheumatology patients receiving DMARD therapy. It should be read in conjunction with the Summary of Product Characteristics (SPC) available on www.medicines.org.uk/emc and the BNF.

This general document illustrates the recommended DMARD blood monitoring schedule when starting or adding a new DMARD. Additional non-laboratory monitoring is also included.

This document should be read in conjunction with the rheumatology shared care protocol for the individual drug, which includes pre-treatment assessments.

Baseline assessments should include height, weight, blood pressure, FBC, U&Es, LFTs and CRP.

Standard Monitoring Schedule as per British Society of Rheumatology Guidelines[1]:

- Following initiation or dose change: Check FBC, U+Es and LFTs **every 2 weeks** until on stable dose for **6 weeks**
- Once on stable dose, check FBC, U+Es and LFTs **monthly** for **3 months**
- Thereafter, check FBC, U+Es and LFTs **every 3 months**.
- More frequent monitoring is appropriate in patients at higher risk of toxicity (extremes of body weight, CKD3 or above, pre-existing liver disease, significant other medical co-morbidity, age over 80 years and previous DMARD toxicity)

British Society of Paediatric & Adolescent Rheumatology monitoring guidelines are currently under review and will be added in when available.

Exceptions and Additions to the Monitoring Schedule:

Drug	Laboratory monitoring	Other monitoring
Azathioprine	Standard monitoring schedule	
Ciclosporin	Extend monthly monitoring longer term (reduced frequency of monitoring after 12 months on an individual patient basis)	BP and glucose at each monitoring visit. Fasting glucose is preferred but may not be practical. If conducting a non-fasting test, be aware of false positives and repeat as necessary.
Hydroxychloroquine	No routine laboratory monitoring	Request all patients to attend optometrist for visual acuity test and provide test report annually. High-risk patients (as identified by rheumatology service) should be referred to ophthalmology for retinal screening

Leflunomide	Standard monitoring schedule	BP and weight at each monitoring visit
Methotrexate	Standard monitoring schedule	In women of childbearing age: pregnancy testing should be repeated as clinically required (e.g. after any gap of contraception is reported)
Mycophenolate	Standard monitoring schedule	In women of childbearing age: pregnancy testing should be repeated as clinically required (e.g. after any gap of contraception is reported)
Sulfasalazine	Standard monitoring schedule. Once patient is stable for 12 months, routine monitoring is no longer required.	
Methotrexate/Leflunomide combined	Extend monthly monitoring longer term (at least 12 months)	BP and weight at each monitoring visit. In women of childbearing age: pregnancy testing should be repeated as clinically required (e.g. after any gap of contraception is reported)

Abnormal Laboratory Results and Action to be Taken:

Please note that in addition to absolute values for haematological indices a rapid fall or consistent downward trend in any value should prompt caution and extra vigilance.
Some patients may have abnormal baseline values; specialist will advise if so. e.g. some patients with cirrhosis will have pre-existing pancytopenia and lupus patients may have leucopenia because of lymphopenia.

Laboratory Result	**Action**
WBC less than 3 x 10^9/l	Withhold and discuss with Rheumatology. Bone marrow suppression can occur abruptly.
Neutrophils less than 1.6 x 10^9/l	Withhold and discuss with Rheumatology. Bone marrow suppression can occur abruptly.
Platelets less than 140 x 10^9/l	Withhold and discuss with Rheumatology. Bone marrow suppression can occur abruptly.
MCV greater than 110 fl	Withhold and discuss with Rheumatology. May be able to continue if chronic increase. Check folate and $B_{12.}$ If level low, start appropriate supplementation.
Creatinine increase greater than 30% over 12 months	Discuss with Rheumatology as dose adjustments or further investigations may be required.

and/or calculated GFR less than 60ml/min/1.73m^2	
Adult liver function ALT greater than 2.5 x upper limit of normal or over 100U/l	Withhold and discuss with adult rheumatology.
Paediatric liver function ALT or AST greater than 120U/l	Withhold until discussed with paediatric rheumatology. Transaminase increase 3 times the upper limit of normal is common within 2 days of drug administration and may be attributable to an asymptomatic viral infection. Consider rechecking ALT at trough level. (i.e. 0-2 days prior to dose) If LFT derangement occurs more than once, contact the paediatric rheumatology team before discontinuing.

REFERENCES

1. Ledingham J, Gullick N, Irving K, Gorodkin R, Aris M, Burke J, Gordon P, Christidis D, Galloway S, Hayes E, Jeffries A. BSR and BHPR guideline for the prescription and monitoring of non-biologic disease-modifying anti-rheumatic drugs. (2017) *Rheumatology*. Jun 1;56(6):865-8

BACK-UP INFORMATION AND ADVICE

Contact Details	**Oxford University Hospitals NHS Foundation Trust**	
Rheumatology	Rheumatology Helpline (Adult and Paediatric) Adult - Option 1 (Monday to Friday 8am - 2pm, answerphone service) Paediatric - Option 2 (Monday to Friday, answerphone service) Closed on weekends and bank holidays Rheumatology Registrar/Consultant on call Registrar on site Monday to Friday 9am-8pm Weekends and bank holidays 9am-5pm	Tel: 01865 737656 Email: Adult - rheumatology.noc@nhs.net Paediatric - cnspaedrheumatology@ouh.nhs.uk OUH switchboard number: 0300 304 7777, ask for Rheumatology on call
Medicines Information	Tel: 01865 221505 (Monday to Friday 9am - 5pm) Email: Medicines.information@ouh.nhs.uk	