

Optimize management of rheumatic disorders

Labcorp offers a variety of therapeutic monitoring tests to help physicians optimize management of rheumatic disorders.

Disease-modifying anti-rheumatic drugs (DMARDs)

Methotrexate Polyglutamates (504104)

Methotrexate (MTX) is subject to wide pharmacokinetic variability. About 30% of patients do not respond to MTX treatment or experience adverse effects.¹ Testing for MTX PGs can help assess patient compliance and determine correct dosing to achieve therapeutic levels and clinical response.²

Hydroxychloroquine, Whole Blood (504814)

Hydroxychloroquine (HCQ) concentrations may be useful in achieving maximal clinical benefit while minimizing long-term retinal toxicity in lupus and other chronic autoimmune diseases. Monitoring HCQ may also improve adherence.



Drug Monitoring Benefits

Therapeutic drug monitoring may help with the following:

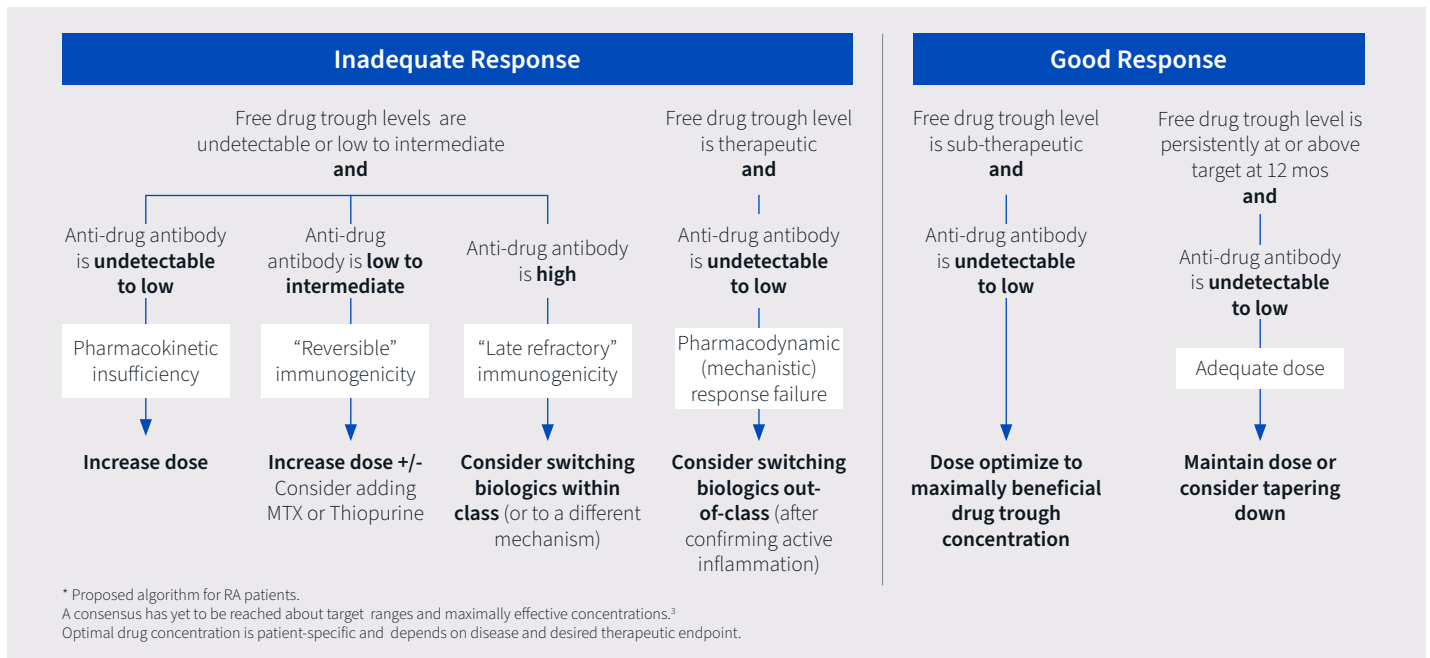
- Assist physicians in dosing and frequency of treatment
- Identify those patients who fail therapy or have diminished response
- Indicate whether or not a patient has achieved an expected therapeutic level
- Ongoing patient management

Biologic Therapy

Labcorp offers serum measurement of drug and anti-drug antibodies for patients on biologic drug therapy. Drug and anti-drug antibody levels provide the pharmacokinetic and immunogenic assessment that discerns the underlying mechanism of an inadequate response to biologic drug. Testing may be ordered at any time during therapy, though sample collection before the next infusion or injection is recommended.

Test Name	Test No.
Adalimumab and Anti-Adalimumab Antibody, <i>DoseASSURE™</i> ADL	503890
Certolizumab and Anti-Certolizumab Antibody, <i>DoseASSURE™</i> CTZ	504627
Etanercept and Anti-Etanercept Antibody, <i>DoseASSURE™</i> ETN	504245
Golimumab and Anti-Golimumab Antibody, <i>DoseASSURE™</i> GOL	504563
Infliximab and Anti-Infliximab Antibody, <i>DoseASSURE™</i> IFX	503870
Rituximab and Anti-Rituximab Antibody, <i>DoseASSURE™</i> RTX	504355
Ustekinumab and Anti-Ustekinumab Antibody, <i>DoseASSURE™</i> UST	504594
Pre-Biologic Screening Profile	144441

Patient on Biologic*



Thiopurine Drug

Thiopurine-related testing may be used to assess dosing before and during treatment, as well as to identify patients who may be at risk for drug toxicity.⁴ The FDA-approved label recommends testing consideration for the most common *TPMT* gene mutations (genotype) or *TPMT* activity (phenotype) before beginning treatment due to potentially severe bone marrow toxicity.

Thiopurine-related Test Options

TPMT and *NUDT15* Genotyping (512300)

Utilize prior to treatment to identify common mutations that cause low *TPMT* activity.

Thiopurine Methyltransferase (*TPMT*), Enzyme Activity, Erythrocytes (510750)

Utilize prior to treatment as a screen for low *TPMT* activity.

Thiopurine Metabolites (503800)

Utilize during treatment to help reach and maintain therapeutic goal.⁴

References

- Goodman S. Measuring methotrexate polyglutamates. *Clin Exp Rheumatol*. 2010 Sep-Oct;28(5 Suppl 61):S24-S26.
- De Rotte MCFJ, den Boer E, de Jong PHP, et al. Methotrexate polyglutamates in erythrocytes are associated with lower disease activity in patients with rheumatoid arthritis. *Ann Rheum Dis*. 2015 Feb;74(2):408-414. Epub 2013 Dec 2.
- Vincent FB, Morand EF, Murphy K, Mackay F, Mariette X, Marcelli C. Antidrug antibodies to tumour necrosis factor (TNF)-specific neutralizing agents in chronic inflammatory diseases: a real issue, a clinical perspective. *Ann Rheum Dis*. 2013 Feb;72(2):165-178.
- Chevaux JB, Peyrin-Biroulet L, Sparrow MP. Optimizing thiopurine therapy in inflammatory bowel disease. *Inflamm Bowel Dis*. 2011 Jun; 17(6):1428-1435.

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