Ulcerative Colitis and Crohn Disease
Therapeutic Drug Monitoring Algorithm

Diagnosis of ulcerative colitis (UC) or Crohn disease (CD)

Biologic therapy initiated

If considering thiopurine therapy, order both of the following:
- TPMT3 / Thiopurine Methyltransferase Activity Profile, Erythrocytes
- TPNUQ / Thiopurine Methyltransferase (TPMT) and Nudix Hydrolase (NUDT15) Genotyping, Varies

Consider monitoring biologic therapies
(American Gastroenterological Association recommendations)

No enzyme activity. Thiopurine therapy contraindicated.

Decreased enzyme activity. Reduced thiopurine dosing appropriate.

Normal enzyme activity. Appropriate for weight-based dosing.

Perform monitoring for thiopurine therapies (not useful for monitoring patients with a NUDT15 variant)

For individuals receiving adalimumab or biosimilar therapy, order ADALX / Adalimumab Quantitative with Reflex to Antibody, Serum

For individuals receiving infliximab or biosimilar therapy, order INFXR / Infliximab Quantitation with Reflex to Antibodies to Infliximab, Serum

For individuals receiving ustekinumab therapy, order USTEK / Ustekinumab Quantitation with Antibodies, Serum

For individuals receiving vedolizumab therapy, order either VEDOZ / Vedolizumab Quantitation with Antibodies, Serum OR VEDOL / Vedolizumab Quantitation with Reflex to Antibodies, Serum

Order THIO / Thiopurine Metabolites, Whole Blood
If patient is also on biologic therapy, perform monitoring for the biologic.