INDICATION FOR TESTING
Microcytic anemia (low MCV)

ORDER
Blood Smear - with Interpretation
Abnormal RBCs on peripheral smear

No
Elevated RDW

No
Check RBC count
Low
Evaluate for anemia of chronic disease/inflammation
HbA2 not elevated
Consider hemoglobin analysis

Normal or high
HbA2 elevated
Evaluate for thalassemia

Yes
Consider thalassemia, hemolytic anemias, sideroblastic anemia, hemoglobinopathies

ORDER
Ferritin
AND
Iron and Iron Binding Capacity

No
Low SF
Increased TIBC, low serum iron, low Tsat
IDA

Normal or high
Nondiagnostic SF
Decreased TIBC, high serum iron, low Tsat
Evaluate for other types of anemia
IDA

Yes
High SF
Other results
Consider inflammatory disease, sideroblastic anemia, aplastic anemia, bone marrow failure

ORDER
Soluble Transferrin Receptor
STR not elevated
IDA

STR elevated
Evaluate for other types of anemia

ORDER
Erythrocyte Porphyrin (EP), Whole Blood
EP not elevated
Consider bone marrow biopsy

EP elevated
IDA

Abbreviations

EP Erythrocyte porphyrin
HbA2 Hemoglobin A2
IDA Iron deficiency anemia
MCV Mean corpuscular volume
RBC Red blood cell
RDW Red blood cell distribution width
SF Serum ferritin
STR Soluble transferrin receptor
TIBC Total iron binding capacity
Tsat Transferrin saturation