G6PD Genotyping Algorithm for Therapeutic Drug Recommendations

**WHO Class I Variant**
- Positive
- Deficient with CNSHA phenotype

**WHO Class II or III Variant**
- Positive
- Deficient

**WHO Class IV Variant**
- Normal

**G6PD Deficiency Diagnosis**
- Positive
- Deficient with CNSHA phenotype

**Therapeutic Recommendation:**
Contraindication for drugs associated with hemolytic anemia in G6PD-deficient patients
See: Pharmacogenomic Associations Tables

**G6PD Normal**
- Positive
- Deficient

**Indeterminate-G6PD enzyme assay needed**
Order: G6PD / Glucose-6-Phosphate Dehydrogenase (G-6-PD), Quantitative, Erythrocytes

- <60% G6PD activity
  - Symptomatic G6PD deficiency carrier
- >60% G6PD activity
  - Unaffected G6PD deficiency carrier

CNSHA: Congenital nonspherocytic hemolytic anemia

*Variants of Uncertain (VUS) significance may be identified. If a VUS is identified, a WHO Class will not be assigned and enzyme studies are recommended.

† WHO Class I Variant: Severe G6PD enzyme deficiency (<10% activity) and chronic nonspherocytic hemolytic anemia (CNSHA)
WHO Class II/III Variant: Deficient G6PD enzyme activity (10%-60% activity)
WHO Class IV Variant: Normal G6PD enzyme activity