Chromosome Analysis (Neoplastic) – Unstimulated Peripheral Blood

CPT Code(s): 88237, 88261, 88280, 88285

Service Code (IU Health): 53101259, 53100533, 53100723, 53100756

Ordering Recommendation: When bone marrow is not available. Detection of acquired genetic chromosomal anomalies associated with a neoplastic process. Assists in the diagnosis, classification, and follow-up of certain malignant hematological disorders. Companion fluorescent in situ hybridization (FISH) testing with appropriate probe sets may further delineate chromosome abnormalities and assess minimal residual disease.

Synonyms: Karyotype, G-bands, Leukemic blood, Hematological disorder

Methodology: Tissue culture, microscopic analysis of G-banded chromosomes. If ordered, fluorescence in situ hybridization (FISH) of interphase and/or metaphase cells.

Performed: Monday through Saturday

Reported: 5-7 days (Prelim), 7-10 days (Final)

Specimen Requirements

Patient Preparation: Swab area with alcohol and let dry. Do not swab with Betadine.

Collect: Whole blood, Green (Sodium Heparin).

Specimen Volume: 2-4 mL (infants), 7-10 mL (adults).

Storage/Transport: Room temperature. Do not freeze or expose to extreme temperatures.


Stability: Ambient: 48 hours; Frozen: Unacceptable.
Interpretive Data

**Characteristics:** Negative: A 46,XX or 46,XY karyotype indicating no apparent chromosomal abnormality is considered negative.
Positive: Identification of any numerical or structural chromosomal abnormality. A report detailing interpretation of results will be provided.

Microscopic or computer analysis of available metaphases at 400-500 bands is completed. Additional staining techniques may be utilized. Results of companion FISH testing (if requested) are reported along with the chromosome analysis.

**Limitations:** This does not eliminate the possibility of low frequency mosaicism or small structural abnormalities. Living cells are required for chromosome analysis. As such, sample quality can affect the turnaround time.