Department of Medical and Molecular Genetics  
Division of Diagnostic Genomics  
Laboratory Test Directory

Chromosome Analysis – Solid Tumor (Fresh)

CPT Code(s): 88239, 88261, 88280

Service Code (IU Health): 53100442, 53100541, 53100723

Ordering Recommendation: Detection of acquired chromosomal abnormalities to confirm or establish patient diagnosis of tumor subtypes and prognostic grouping important for subsequent therapy. Companion fluorescence in-situ hybridization (FISH) testing with appropriate probes may further delineate chromosome abnormalities.

Synonyms: Karyotype, G-bands, Solid tumor

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

Performed: Monday through Saturday

Reported: 7-10 days

Specimen Requirements

Collect: Solid tumor biopsy aseptically in a sterile, screw-top container filled with sterile transport media (provided upon request).

Specimen Volume: 0.5 cm or larger.

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

Unacceptable Conditions: Frozen specimens. Formalin-fixed specimens.

Remarks: If there is a delay in shipping, the specimen should be refrigerated.

Stability: Ambient: 48 hours; Refrigerated: 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.