## **Oncology Microarray:** SNP Microarray Testing on Blood or Bone Marrow

# Cincinnati Children's

**Human Genetics** 



The SNP (single nucleotide polymorphism) microarray platform has comprehensive coverage with markers across the human genome that can detect gains (duplications) or losses (deletions) of genetic material as well as regions of homozygosity (ROH)/loss of heterozygosity.

Genomic gains, losses, and ROH are common in malignancies. This array is designed to detect cytogenetic (genomic) imbalances that are smaller than what can be detected through routine chromosome analysis. This testing may also be helpful in further delineating chromosomal abnormalities that are difficult to discern by routine karyotype analysis alone.

Clinical significance of the findings may be unclear as not all of the imbalances detected will be well described in the literature. Testing will only detect the loss (deletion) or gain (duplication) of chromosomal regions covered by the markers on the beadchip. This technology cannot identify low level mosaicism or balanced chromosome changes.

### **Indication:**

SNP array testing may be appropriate for patients with a suspected malignancy.

# **Testing Methodology:**

Microarray analysis is performed using a SNP based microarray chip with approximately 850,683 markers. This test is designed to identify chromosomal imbalances throughout the human genome including deletions, duplications, aneuploidy, and ROH. Our laboratory has established criteria for reporting abnormalities based on size, gene content, and clinical significance.



### Accuracy:

The performance characteristics of this test have been developed and validated by the Cincinnati Children's Hospital Cytogenetics Laboratory. This test can identify chromosomal imbalances throughout the genome including deletions, duplications and aneuploidy and identify genes within these regions that may be associated with malignancy. In addition, the majority of known microdeletion/duplication syndromes can be detected using the SNP microarray technology. However, conditions that may be caused by other genetic changes cannot be clinically ruled out based on a normal SNP microarray result.

If a specific genetic diagnosis is suspected, please contact the laboratory for additional testing.

See details at our website: www.cincinnatichildrens.org/cytogenetics

### Specimen:

# Bone Marrow (un-clotted, first draw preferred)

*For chromosomes, FISH and SNP Microarray:* 5 mL in green top (Sodium Heparin) tube AND 3 mL in lavender top (EDTA) tube.

*For SNP Microarray only:* 3 mL in lavender top (EDTA) tube.

Oncology Blood

*For chromosomes, FISH and SNP Microarray:* 5 mL in green top (Sodium Heparin) tube AND 3 mL in lavender top (EDTA) tube.

*For SNP Microarray only:* 3 mL in lavender top (EDTA) tube. Label tube with patient's name, birth date, and date of collection.

### **Turn Around Time:**

14-21 days.

# Cost & CPT Codes:

Please call 1-866-450-4198 for current pricing and CPT codes, or with any other billing questions.

#### **Results:**

Results will be reported to the referring physician and/or genetic counselor as specified on the requisition form.

# **Shipping Instructions:**

Please enclose the cytogenetic test requisition with sample. All information must be completed before sample can be processed.

Place samples in Styrofoam mailer and ship at room temperature by overnight Federal Express to arrive Monday through Friday. Saturday delivery is available. Please call for specific information and instructions for Saturday delivery.

Ship to:

Cytogenetics and Molecular Genetics Laboratories 3333 Burnet Avenue NRB 1042 Cincinnati, OH 45229 513-636-4474

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