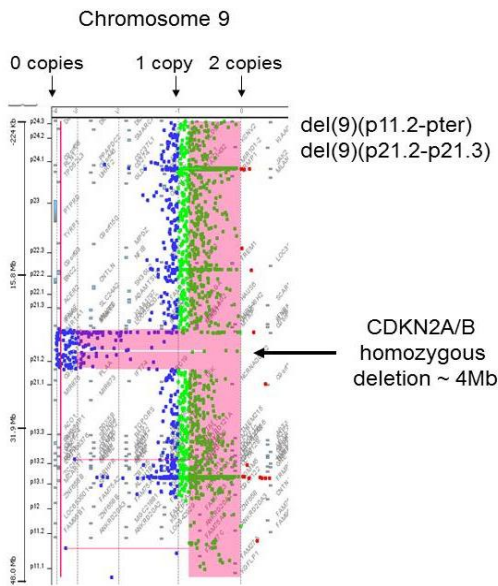


# MICROARRAY TESTING FOR HEMATOLOGIC DISORDERS

Microarray testing is available using a custom designed chip (KANCERRAY)

## PLATFORM FOR ONCOLOGY aCGH



We use the Agilent 180K custom designed oligonucleotide array platform, which was specifically designed and validated by Pittsburgh Cytogenetics Laboratory for the sole purpose of identifying acquired genomic alterations, DNA copy number gains and losses, associated with hematological cancers, such as CLL, CML, AML, T-cell and B-cell ALL.

The 180,000 oligonucleotides on the KANCERRAY cover 900 genes involved in carcinogenesis and 78 cancer syndromes with a maximum probe spacing of one probe for every 25 kb throughout the genome and one probe for every 1 kb in clinical regions ([PMID: 26299921](#); [PMID: 28214896](#)).

[CANCER RELATED GENES](#) and [CANCER SYNDROMES COVERED BY PCL KANCERRAY](#).

## CLINICAL INDICATION FOR MICROARRAY ANALYSIS

- Samples with normal Karyotype
- Samples with poor chromosomal morphology
- Samples with in vitro growth failure

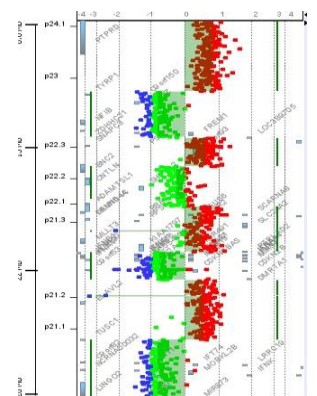
[ONCOLOGY STUDY REQUISITION FORM \(PDF TABLE\)](#)

## SPECIMENS FOR ONCOLOGY ARRAY TEST

- Bone marrow aspirate
- Oncology blood

## SPECIMEN REQUIREMENT

- 3cc of Bone marrow or peripheral blood in a sodium heparin tube (green top)  
[SPECIMEN REQUIREMENTS \(PDF TABLE\)](#)



*chromothripsis*

## ADVANTAGES AND LIMITATIONS FOR ONCOLOGY MICROARRAY ANALYSIS

- No in vitro cell culture is needed for microarray analysis.
- Microarray testing can provide copy number gain and loss when the conventional cytogenetics analysis is failure due to poor growth.
- Microarray testing can detect copy number imbalances with the resolution of 5-10 kb for the targeted gene regions.
- Microarray testing can rapidly detect and characterize numerical chromosomal abnormalities and LOH in one experiment.
- Microarray testing has high sensitivity and specificity.

## LIMITATIONS OF MICROARRAY ANALYSIS

- Array CGH will not detect balanced translocations, polyploidy or inversions
- Array CGH will not detect low level mosaicism (<20%).