Cytogenetics Test List

- **Chromosomes (G-bands)**
- **FISH**

FISH Probes	Examples of Clinical Use
1p36/19q13	[1p/19q deletions; Brain tumors]
ABL1/BCR	[t(9;22)]
AneuVision	[Assess aneuploidy (trisomy/monosomy) for X, Y, 13, 18, or 21]
ATM	[-11/11q deletion (or gain)]
BCL2	[18q rearrangements]
BCL6	[3q rearrangements]
CBFB	[inv(16) or t(16;16)]
CDKN2A/Cen9	[-9/9p deletion or +9]
CCND1/IGH	[t(11;14)]
Cen4/Cen10/Cen17	[Peds cases; Hyper- or Hypodiploidy]
Cen8	[+8 (trisomy)]
Cen12	[+12 (trisomy)]
Cen 18	[+18 (trisomy 18)]
CenX/CenY	[Male/Female cell population; sex chromosome mosaicism]
C-MYC & C-MYC/IGH/D8Z1	[8q24 rearrangements and t(8;14)]
D7522/Cen7	[-7/7q deletion]
D13S319/D13S1825	[-13/13q deletion]
D15S10	[Prader Willi syndrome; 15q11-15q13 deletions]
D20S108	[20q deletion]
EGR1	[-5/5q deletion]
ELN	[Williams syndrome; 7q11.23 deletion]
ETV6/RUNX1	[t(12;21)]
EWSR1	[22q12 rearrangements; Ewing sarcoma]
FGFR3/IGH	[t(4;14)]
HER2/Cen17	[17q amplification; Breast cancer, gastric cancer, others]
IGH	[14q32 rearrangements]
IGH/BCL2	[t(14;18)]
IGH/MALT1	[t(14;18)]
LIS	[Miller- Dieker syndrome/Lissencephaly; 17p13.3 deletions]
MALT1	[18q rearrangements]
MLL	[11q23 rearrangements]
MYB/Cen6	[-6/6q deletions]
MYC	[8q24 rearrangements]
MYC/IGH/D8Z1	[t(8;14)]
PML/RARA	[t(15;17)]
RUNX1	[+21 (trisomy 21)]
RUNX1T1/RUNX1	[t(8;21)]
SHMt1/TOP3A	[Smith-Magenis syndrome; 17p11.2 deletions]
SNRPN	[Prader Willi syndrome; 15q11-15q13 deletions]
SRY	[Male sex determining region]
STS	[Sterioid sulfatase region]
Sub-telomere probes	[Detect cryptic rearrangements]
SYT	[18q rearrangements; Synovial sarcoma]
TUPLE1	[DiGeorge syndrome; 22q11.2 deletions]
TP53/Cen17	[17p deletion]
****Others may be available upon request (please contact the lab to inquire at 804-628-2986**	

- **SKY** (requires chromosomes)
- **Tissue culture only** (cell culture established with no cytogenetic analysis)
- **Microarray** (DNA copy number [gains/losses])
    - Fresh tissue (blood; bone marrow; products of conception)
    - FFPE