Genomic Screening Methods

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Karyotyping)

(Fluorescence

Hybridization)

(Polymerase

(Chromosomal

Microarray)

Karyotyping

NGS (Next-

Generation

Sequencing)

nCounter

Reaction)

Targeted

interest

Targeted

interest

region(s) of

Entire genome

Entire genome

Entire genome

region(s) of

FISH

In Situ

PCR

Chain

CMA



Average

Average

Excellent

Limited

Excellent

Excellent

Excellent

(<100bp)

Excellent

(≥400kb)

Poor

(Whole-

Excellent

(≥1bp)

chromosome)

(≥50-100kb)

Excellent

(≥5-10%)

Average

(≥5-30%)

Average

(≥20%)

Average

Average

(≥20%)

(≥20-30%)

Weighing each factor						
Test	Coverage	Cost	TAT	Sensitivity	Resolution	Utility
G-Banded Karyotyping	Entire genome	**	Average (7-10d)	Average (≥14%)	Poor (≥5Mb)	Excellent
SKY (Spectral	Entire genome	***	Average (7-15d)	Poor (≥14-41%)	Poor (≥5Mb)	Limited

Average

(7-10d)

Excellent

Average

(7-15d)

Excellent

(1-3d)

Poor

(Weeks)

(3-4d)