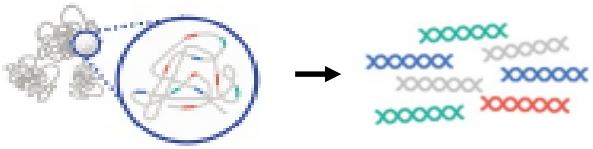
Target Enrichment Methodology Comparison

Hybridization vs PCR

Target Enrichment Methodology

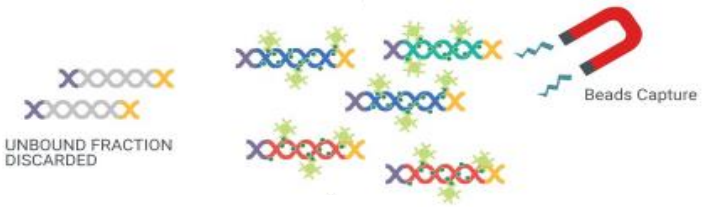
Hybridization Capture



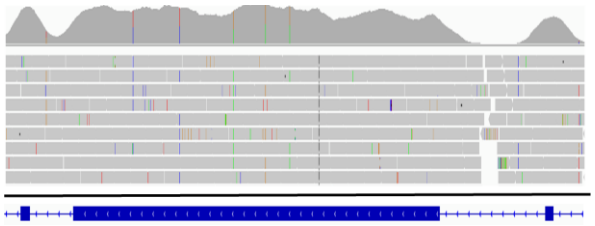
gDNA fragmentation

Hyb capture

Purification



Sequencing

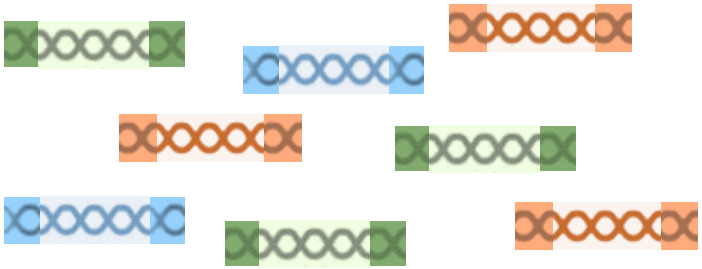


Target exon

PCR Amplification

gDNA

Amplification



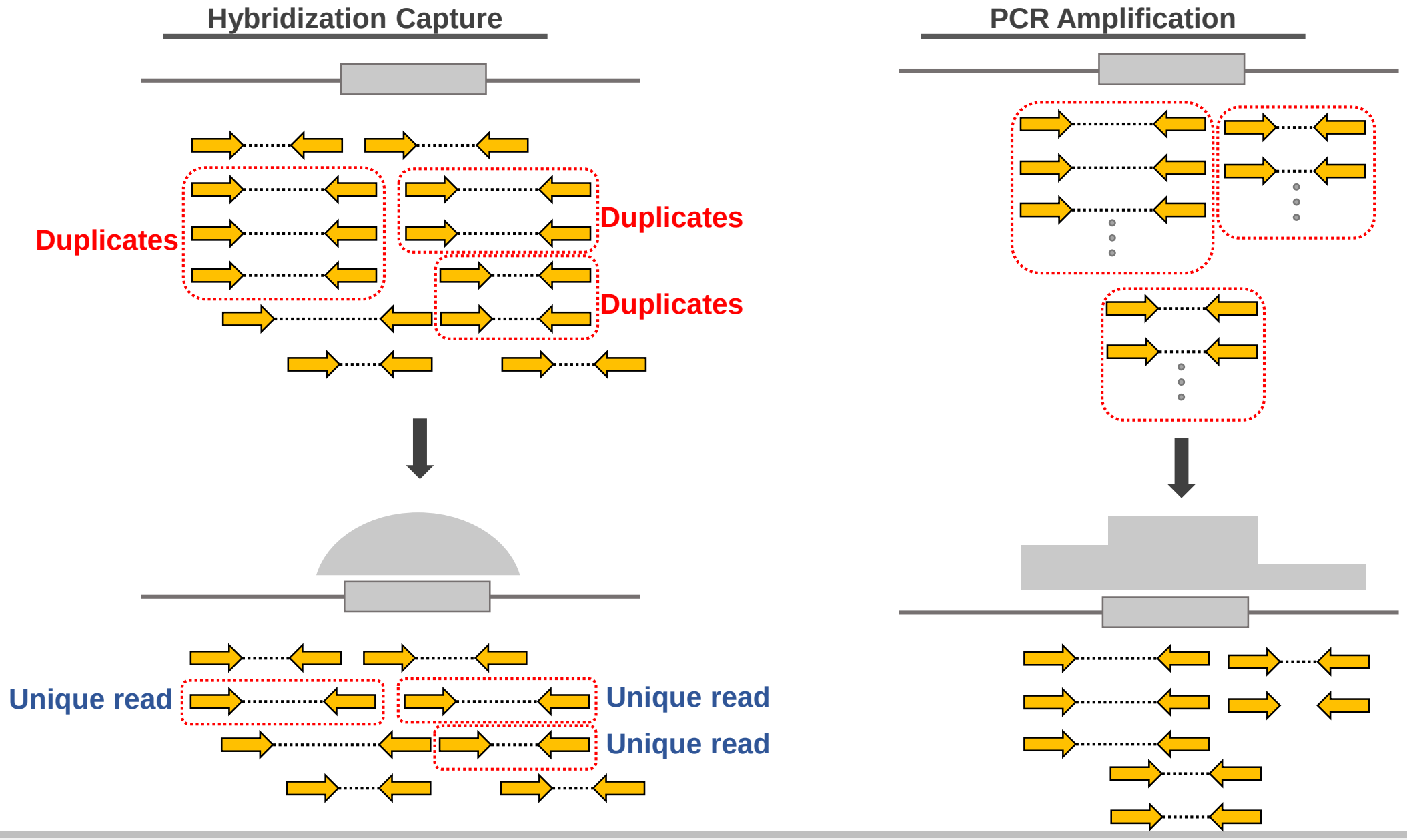
Sequencing

Target exon

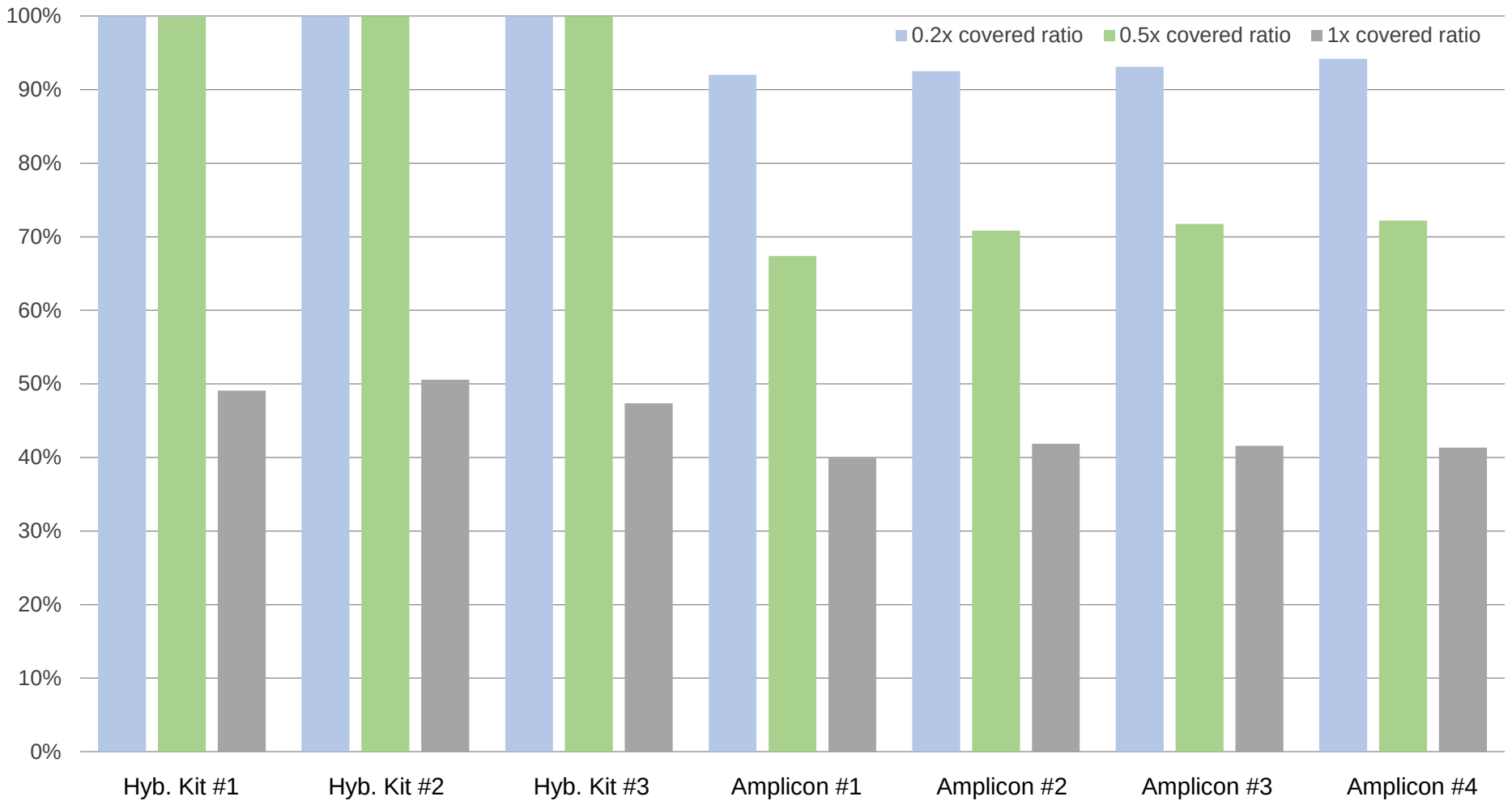
Comparison of Target Capture methodology

	Hybridization	PCR
Coverage	High, (UTR, Promoter, CDS, Splicing site)	Low (Usually CDS region)
Detectable site	Various region (Not repeated region)	Amplifiable site
Capture uniformity	High	Low
Detectable Mutant type	SNV, Indel, CNV (Exon deletion), Gene Fusion	SNV, small Indel, Restrictive CNV, Gene Fusion
Bias	Very low	High
Experimental process	Medium	Easy to assay

Comparison of Target Capture methodology

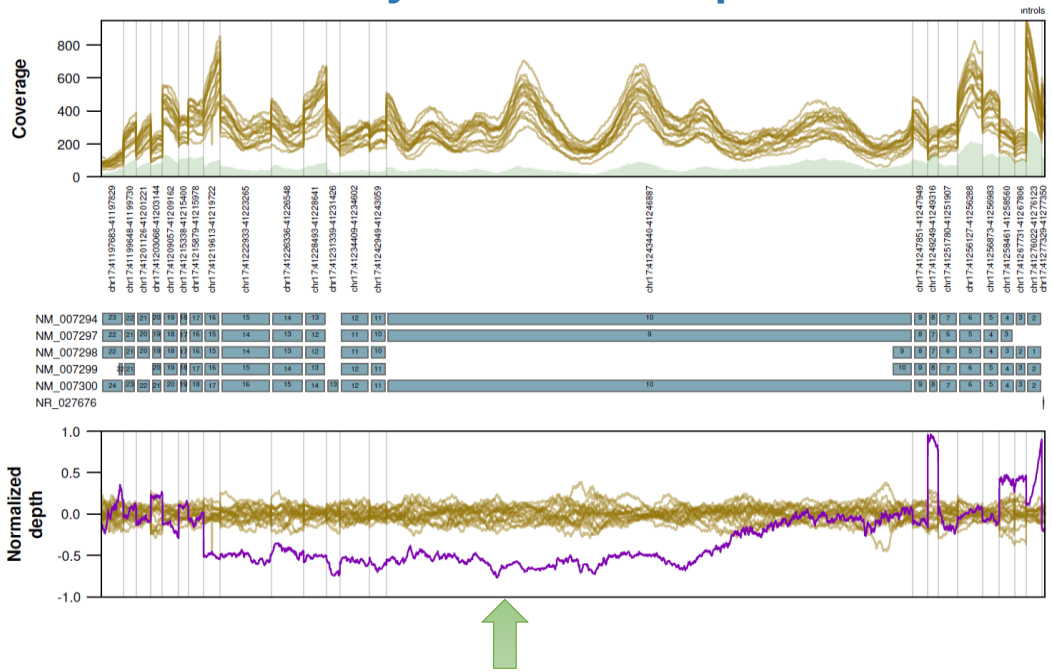


Coverage & Uniformity



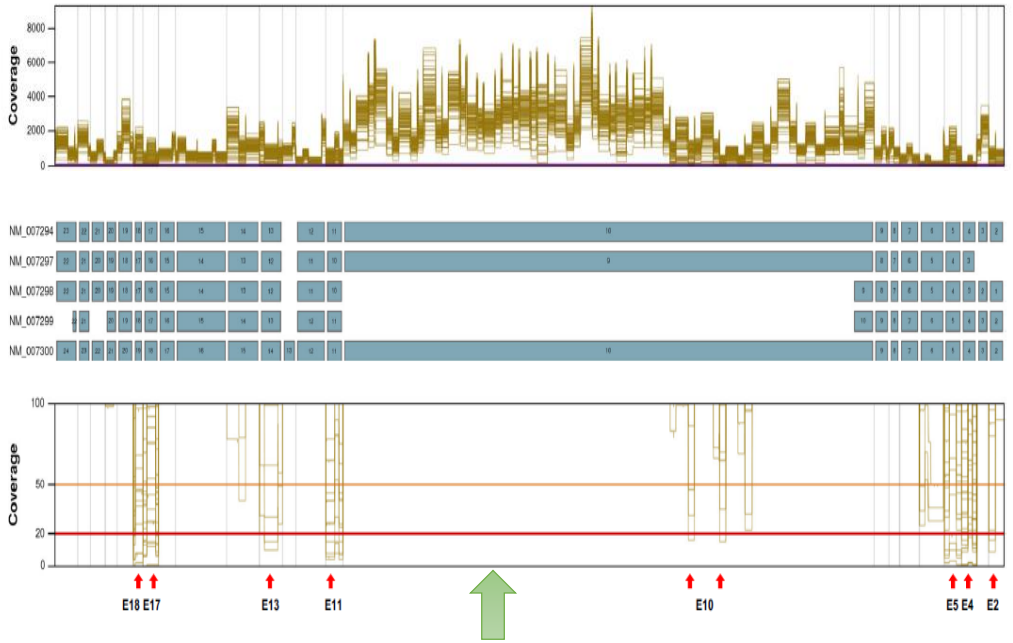
Advantage of Highly uniform data

BRCA1 - Hybridization capture based



Detectable for Exon deletion

BRCA1 - PCR amplicon based



Not Detectable for Exon deletion

Customer Testimonial

CTO of Clinical Laboratory:

"Conventional BRCA1,2 test relies on Sanger Sequencing and MLPA, which is time consuming and expensive. As need of BRCA testing is growing, we are looking for replacing conventional technology to next-generation sequencing based targeted sequencing. In the middle of validations of commercially available kits, we tested Celemics' BRCA kit with other kits and Celemics' kit produces most uniform and high coverage data. Especially, not only for ***indel and SNV****, but also* ***single exon deletion or large rearrangements*** *can be clearly detectable with* ***single NGS analysis without conventional two step process of Sanger and MLPA*** *."*