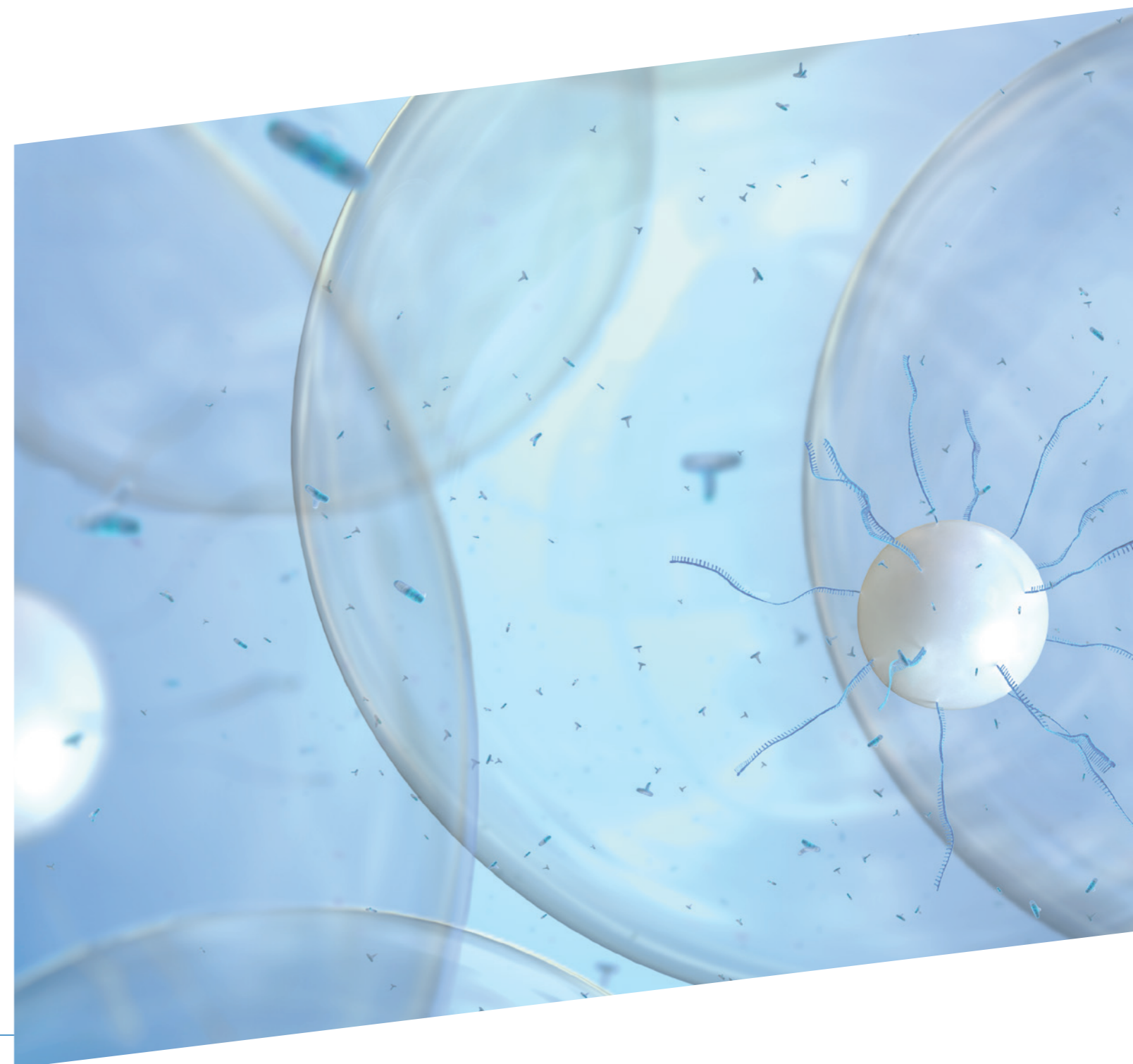


Bibliography

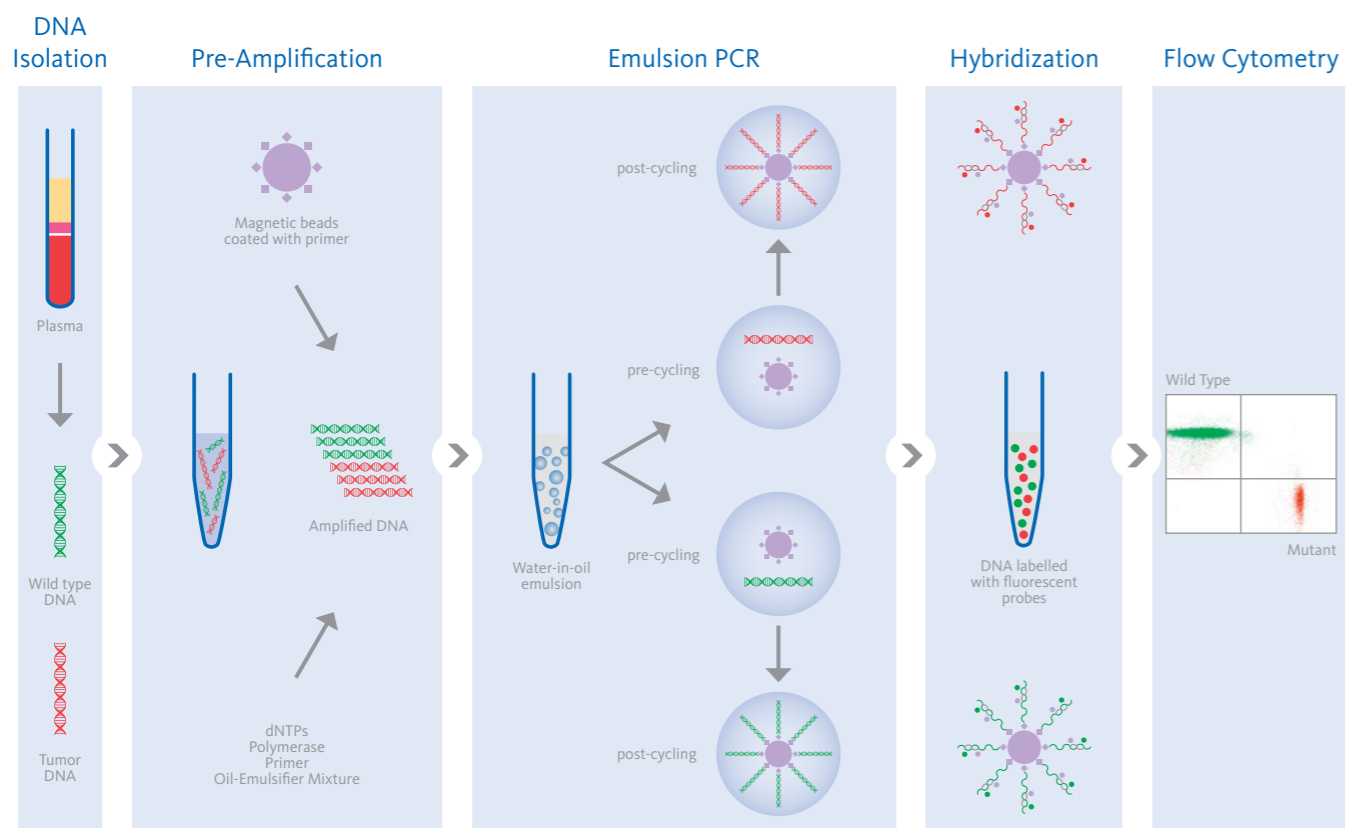
- [1] *Baselga et al. (2015): Oral presentation. San Antonio Breast Cancer Symposium, Abstract S 6 – 01.*
- [2] *Thress et al. (2014): Poster presentation. ESMO, Abstract # 1270P.*
- [3] *Graselli et al. (2016): Oral presentation. ESMO GI, Abstract O – 024.*
- [4] *Jeffers et al. (2013): Cancer Res. 73, SY11 – 02.*
- [5] *Thress et al. (2015): Lung Cancer. 90(3): 509 – 15.*
- [6] *Jones et al. (2016): J Clin Oncol 34 (suppl; Abstract 11538).*
- [7] *Higgins et al. (2012): Clin Cancer Res. 18(12): 3462 – 9.*
- [8] *Schadendorf et al. (2015): Eur J Cancer. 51: S685.*

BEAMing Digital PCR Technology



© Copyright 2016 – Sysmex Inostics GmbH

OncoBEAM™ Technology: BEAMing Digital PCR



Sysmex Inostics' BEAMing Digital PCR technology combines emulsion PCR with magnetic beads and flow cytometry for the highly sensitive detection of mutant tumor DNA molecules.

OncoBEAM™: Analytical Sensitivity

Assay (Mutation Number)	Analytical Sensitivity — Cut-Off (% Mutant Fraction)
EGFR (10)	L858R / Del19: 0.03 T790M / C797S: 0.04
KRAS (15) / NRAS (18) / BRAF (2) / HRAS (2)	0.03
AKT1 (1) / ESR1 (12) / PIK3CA (9)	0.02
ALK (12) / ROS1 (3)	0.02 – 0.04*
IDH1 (5) IDH2 (5)	0.02 – 0.04*

* Depending on mutation

OncoBEAM™ Snapshot: Published Performance

Cancer	Marker	Stage	Patient No.	Tissue Analysis	Concordance (%)
NSCLC	EGFR	IV	78	SOC	99 ⁴
	KRAS	IV	78	SOC	92 ⁴
	EGFR		38	SOC	95 ⁵
mCRC	Extended RAS	IV	238	SOC	93.3 ⁶
Breast Cancer	PIK3CA	IV	34	BEAMing	100 ⁷
Melanoma	BRAF V600E	IV	42	Sanger	93 ⁸

OncoBEAM™ Advantage: Unparalleled Sensitivity with High Multiplexing Capabilities

Blood-based mutation analysis requires a sensitive technology. Our BEAMing technology delivers increased sensitivity compared to other liquid biopsy methods providing reliable molecular information for timely and non-invasive treatment selection and enhanced prediction of resistance to therapy.

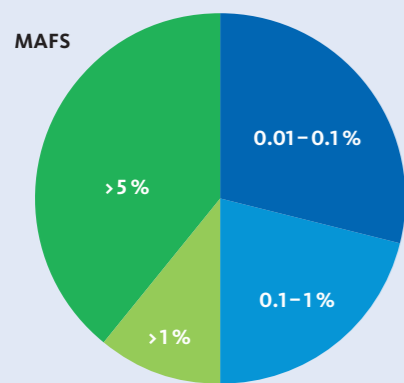


Fig. 1 In first-line treatment of metastatic colorectal cancer, 50% of patients show ctDNA at <1% fraction

- Data shown at SABCS 2015 highlighted the fact that the OncoBEAM™ PIK3CA blood test was a better predictor of therapy response than the standard of care (SOC) tissue test.¹
- In lung cancer patients, eligible for 3rd generation TKIs, the OncoBEAM™ EGFR blood test accurately identified patients who would benefit from T790M targeted therapy even when tissue as not available for treatment decisions.²
- Data presented at WCGI 2016 showed that 50% of the analyzed mCRC patients had a mutant allele fraction (MAF) of between 0.01% – 1.00% using the OncoBEAM™ 34 mutation RAS test (see Fig. 1).³

OncoBEAM™: The Gold Standard for Blood-Based Molecular Cancer Testing of ctDNA



2/3 of the top 15 global pharmaceutical oncology companies are repeat customers



35,000+ samples analyzed across multiple cancer types



Development & Commercialization of first blood-based ALL-RAS IVD KIT for mCRC patients

Chosen technology for OPUS, CRYSTAL, TIGER, CORRECT, BELLE, AURA and a multitude of other landmark trials

