OncoBEAM EGFR Kit v2 (RUO)

Highly sensitive liquid biopsy for the detection of EGFR mutations

www.sysmex-europe.com/oncobeam

Go beyond biopsy with blood

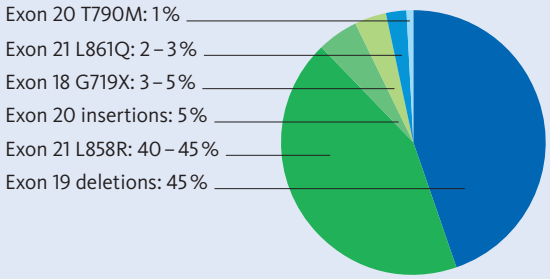
Reliable detection of EGFR mutations in plasma from metastatic non-small cell lung cancer (NSCLC) patients

- Highly sensitive BEAMing digital PCR technology combining digital PCR and flow cytometry
- Detection of 36 EGFR mutations based on cell-free tumour DNA, including T790M and C797S
- A more rapid and minimally invasive assessment of EGFR mutations, as compared to tissue biopsy[1]

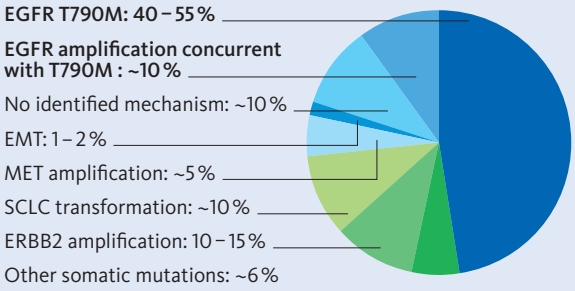
Quick. Whenever. Just blood.

EGFR mutation frequency in non-small cell lung cancer

Frequency in newly diagnosed patients



Mechanisms of resistance to EGFR TKIs



- Assessment of the EGFR mutation status is required to select NSCLC patients eligible for EGFR tyrosine kinase inhibitor (TKI) therapy.[2,3]
- 40 – 55 % of acquired resistance to first- and second-generation EGFR TKI-targeted therapies is based on T790M mutation.[4] Therefore, reliable assessment of T790M is required before applying third-generation EGFR TKI therapy.
- Clinical studies have demonstrated high concordance for T790M-positive plasma samples compared with T790M-positive tissue-based results.[5] In plasma-negative samples, a tissue biopsy is recommended if feasible.[5]
- EGFR C797S mutation is associated with resistance to osimertinib in EGFR T790M-positive patients.[6]

	Type of mutation	EGFR exon	Mutations
OncoBEAM EGFR Kit v2 (RUO*) 36 EGFR mutations	Sensitising	18	G719A, G719S, G719C
		19	ΔK745, ΔE746, ΔL747
		21	L858R, L861Q
	Resistance	20	T790M, C797S

*For research use only. Any in vitro diagnostic purpose has not been established by the manufacturer. Not available in the USA.

*[1] **Sacher AG et al.** (2016): Prospective validation of rapid plasma genotyping for the detection of EGFR and KRAS mutations in advanced lung cancer. JAMA Oncol. 2(8):1014 – 1022.*

*[2] **NCCN** (2017): Clinical Practice Guidelines in Oncology. Non-Small Cell Lung Cancer Version 6.*

*[3] **Novello S et al.** (2016): Metastatic Non-Small-Cell Lung Cancer. ESMO Clinical Practice Guidelines. Ann Oncol. 27(suppl 5):v1 – v27.*

*[4] **Westover D et al.** (2018): Mechanisms of acquired resistance to first- and second-generation EGFR tyrosine kinase inhibitors. Ann Oncol; 29 (suppl 1):i10 – i19.*

*[5] **Oxnard GR et al.** (2016): Association between plasma genotyping and outcomes of treatment with osimertinib (AZD9291) in advanced non-small-cell lung cancer. J Clin Oncol. 34(28):3375 – 3382.*

*[6] **Thress KS et al.** (2015): Acquired EGFR C797S mutation mediates resistance to AZD9291 in non-small cell lung cancer harboring EGFR T790M. Nat Med. 21(6):560 – 562.*

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