Variant Detection in Lung Cancer

Agena®
BIOSCIENCE
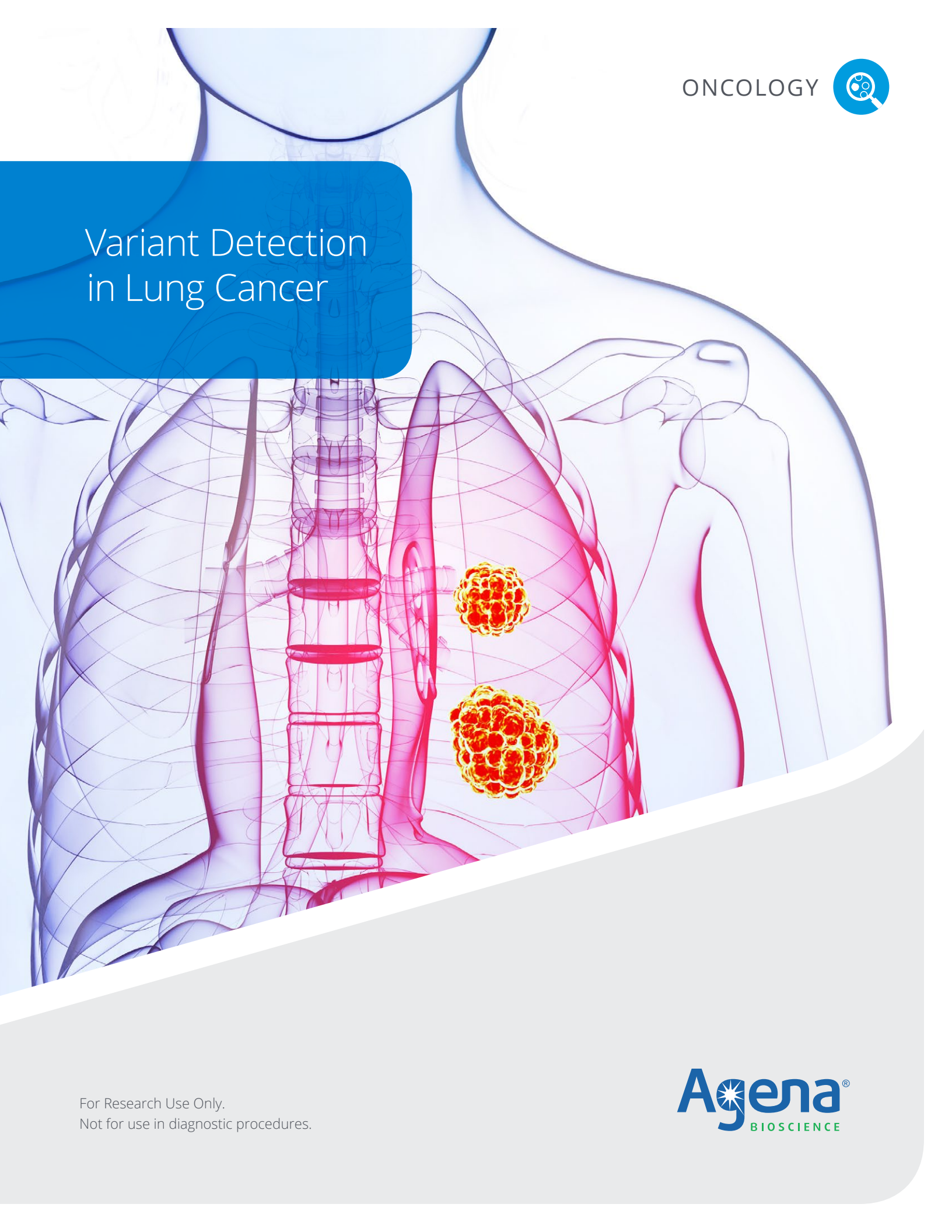
Minimize Sample Rejection

Mutation profiling of non-small cell lung cancer research samples can be challenging due to limited quantity & poor quality of the specimens. Several technologies, including next generation sequencing, require specimens with high tumor content and generally reject as many as 20% of the samples due to low tumor fraction and DNA yield.[1, 2]

AGENA'S SOLUTION

> **UltraSEEK® Lung Panel (RUO)**
> Enables study of disease progression and resistance from CTCs and ctDNA, detecting >75 variants from a single blood draw at as low as 0.1% variant allele frequency (VAF). Optimized for low and poor quality DNA, reducing sample rejection and workflow failure rate.

> **iPLEX® HS Lung Panel (RUO)**
> Facilitates variant detection as low as 1% VAF from poor quality and degraded samples such as FFPE tissue, fine needle aspirates, core needle biopsies, smears, pleural fluid and cytology blocks.

> **UltraSEEK EGFR Panel (RUO)**
> Conduct a focused study across an array of variants in the *EGFR* gene including p.T790M, p.C797S , p.E746_A750del and p.L858R.

For Research Use Only. Not for use in diagnostic procedures.

Genes & Variants for Lung Research Panels

Pre-designed panels with content across 5 genes for comprehensive profiling of lung cancer research samples.

UltraSEEK Lung Panel (RUO)

Gene	Coverage*
BRAF	Codons 469 (exon 11), 594, 600 (exon 15)
EGFR	Exon 19 indels, exon 20 insertions and substitutions across exons 18, 19, 20 and 21
ERBB2	Exon 20 insertions
KRAS	Codons 12, 13 (exon 2) and 61 (exon 3)
PIK3CA	Codons 542, 545 (exon 9) and 1047 (exon 20)

iPLEX HS Lung Panel (RUO)

| Gene	Coverage*
BRAF	Codons 469 (exon 11), 594, 600 (exon 15)
EGFR	Exon 19 indels, exon 20 insertions and substitutions across exons 18, 19, 20 and 21
ERBB2	Exon 20 insertions
KRAS	Codons 12, 13 (exon 2) and 61 (exon 3)
PIK3CA	Codons 542, 545 (exon 9) and 1047 (exon 20)

UltraSEEK EGFR Panel (RUO)

Gene	Coverage*
EGFR	Exon 19 deletions and substitutions across Exon 20 & 21

* Complete variant list available upon request

ASSAY WORKFLOW

DNA to data in as little as 8 hours with minimal manual processing time enables greater lab efficiency. Simplified reporting with automated software generates data that does not require in-depth bioinformatics analysis.
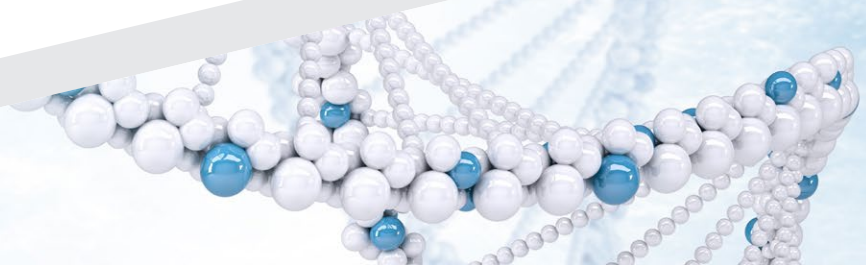
ORDERING INFORMATION

Catalog No.	Item	Sample Type	# Samples	Chip Format
13263F	UltraSEEK EGFR Panel (RUO) Set - CPM (2x96)	Plasma	192	CPM 96
13264F	UltraSEEK Lung Panel (RUO) Set - CPM (5x96)	Plasma	40	CPM 96
13267F	iPLEX HS Lung Panel (RUO) Set - CPM (5x96)	Tissue	60	CPM 96
13334D	iPLEX HS Lung Panel (RUO) Set - CPM (2x384)	Tissue	96	CPM 384
13335D	iPLEX HS Lung Panel (RUO) Set - CPM (10x384)	Tissue	480	CPM 384

The panel sets contain assay-specific primers and all the required reagents to process DNA samples on the MassARRAY® System.

References

1. R. Avula et al. Assessment of UltraSEEK Colon Cancer Panel for Detection of Low Frequency Somatic Mutations in Blood. Poster session presented at: Association of Molecular Pathology Annual Meeting; 2017 Nov 16-18; Salt Lake City, UT.

2. R.T. Birse, D. Irwin. Reliable Detection of Low Abundance Somatic Mutations of EGFR, KRAS, BRAF, NRAS and PIK3CA in Metastatic Colorectal Adenocarcinomas Using iPLEX HS, a New Highly Sensitive Assay for MassARRAY. Poster session presented at Association of Molecular Pathology Annual Meeting; 2016 Nov 10-12; Charlotte, NC.

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