



NGS FOR ONCOLOGY: A MORE EFFICIENT TUMOR PROFILING METHOD

Those conducting translational or clinical research in oncology should have access to the most efficient way of profiling hematological and solid tumors. Next-Generation Sequencing (NGS) can help you avoid costly iterative testing while simultaneously reducing the risk of depleting your samples.

SEQUENCE JUST ONCE

Say you're investigating colorectal cancer, targeting mutations in KRAS, NRAS, and BRAF genes — NGS makes analysis simple and efficient:

KRAS

qPCR

Exon 2 (codons 12 and 13) and Exon 3 (codon 61)

PYROSEQUENCING

Exon 3 (codon 59) and Exon 4 (codons 117 and 146)



NRAS

PYROSEQUENCING

Exon 2 (codons 12 and 13), Exon 3 (codons 59 and 61), and Exon 4 (codons 117 and 146)



BRAF

qPCR

V600E, D, K, and R



That's

18 REACTION MIXTURES

across 2 different technologies



KRAS, NRAS, AND BRAF

NGS covers all of the above codons



With NGS, you could assess everything with

2 REACTION MIXTURES



SAVE ON SAMPLE MATERIAL

This leaves more sample material available for further investigation, if necessary

qPCR + Pyrosequencing:

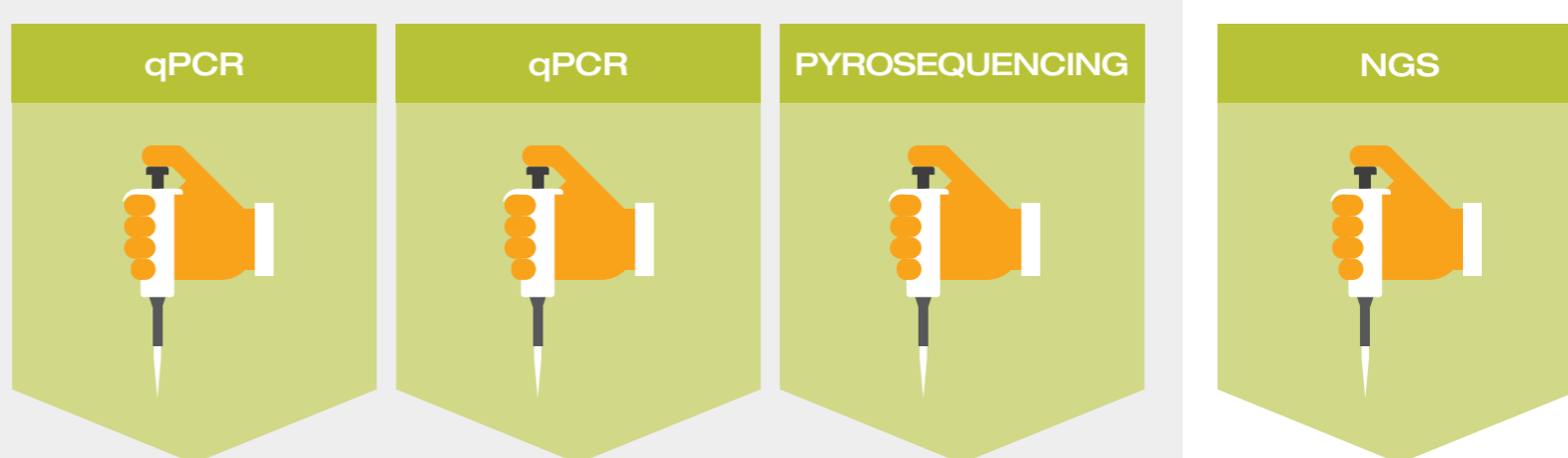


NGS:



MINIMIZE WORKFLOW PROTOCOLS

Non-NGS analysis would require maintaining 3 workflow protocols — 2 for qPCR and 1 for pyrosequencing



NGS would require maintaining only a single workflow protocol

SIMPLIFY REPORTING

Between qPCR and pyrosequencing, you would need to consolidate 3 different reports, one for each assessment



With NGS, you would get one report inclusive of all relevant genes



COVERING WHAT YOU NEED

NGS makes all this possible by covering what you need — take KRAS, for example:

qPCR assays generally only cover a limited number of codons, like 12 and 13

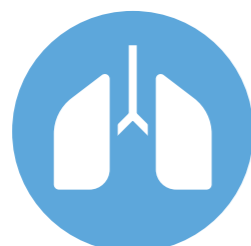


The TruSight® Tumor 15 NGS assay, on the other hand, covers RAS codons 12, 13, 59, 61, 117, and 146



A SINGLE ASSAY, A SINGLE WORKFLOW

The TruSight® Tumor 15 NGS assay enables you to report on any of the following genes with a single workflow:



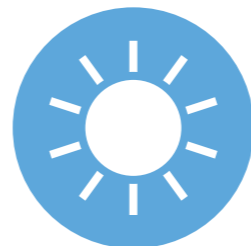
LUNG

EGFR, BRAF, KRAS, ERBB2



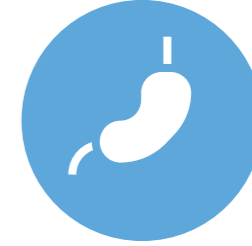
COLON

BRAF, KRAS, NRAS



MELANOMA

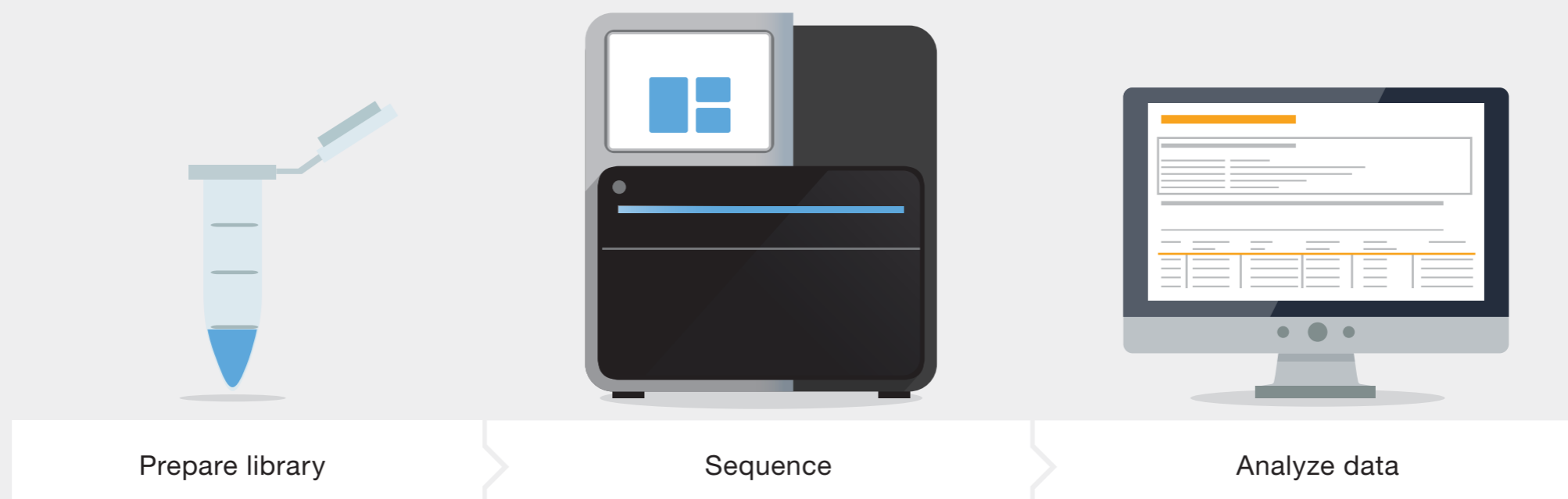
BRAF, KIT



GASTRIC

KRAS, KIT, PDGFRα

TruSight® Tumor 15 interrogates a broad range of solid tumor cancer genes — not just one biomarker or a limited set of mutations



Learn more about how NGS is being applied in oncology:
www.illumina.com/cancer