

# Connecting patients everywhere to precision oncology

## Oncomine Dx Express Test (CE-IVD)

A patient's tumor profile has the potential to guide precision oncology care, but optimal treatment decisions rely on timely results [1,2].

With the Ion Torrent™ Oncomine™ Dx Express Test on the Ion Torrent™ Genexus™ Dx System, you can perform next-generation sequencing (NGS) testing for clinically relevant biomarkers in as little as 24 hours. This specimen-to-report solution is easy to implement, operates with minimal hands-on time, and offers industry-leading low sample input requirements. The proven amplicon-based technology allows ~95% sample success rates [3].

If your lab routinely tests patient samples for oncology biomarkers, the Oncomine Dx Express Test will enable you to:

- **Easily integrate NGS into your laboratory workflow.** With automated library preparation, sequencing, analysis, and reporting involving as little as 20 minutes of hands-on time, the Oncomine Dx Express Test reduces laboratory staff burden and the potential for human errors, and alleviates the need for specialized bioinformatics experience.

- **Detect clinically relevant gene targets recommended by professional guidelines for multiple solid tumors [1].** The Oncomine Dx Express Test detects substitutions, insertions and deletions, copy number variants (CNVs), and fusions and splicing variants across 46 genes, including *ALK*, *BRAF*, *EGFR*, *ERBB2*, *KRAS*, *MET*, *NTRK1/2/3*, *RET*, and *ROS1*, among others.
- **Generate results in as little as 24 hours.** This enables the integration of molecular and immunohistochemistry (IHC) results into one complete report to aid clinicians in making timely therapy decisions.
- **Help ensure that more patients receive genomic insights.** Requiring only 10 ng of DNA and 10 ng of RNA extracted from as little as two 5-micron formalin-fixed, paraffin-embedded (FFPE) slides, results can be generated from limited tissue and small biopsies. Plasma from liquid biopsy provides an additional sample type.

**Table 1. The Oncomine Dx Express Test gene list.**

DNA					RNA				
Deletions, insertions, and substitutions					Copy number alternations		Fusions and splicing variants		
AKT1	CTNNB1	FGFR4	MAP2K1	PTEN	<b>AR</b>	<b>FGFR2</b>	ALK	<b>NRG1</b>	
AKT2	EGFR	FLT3	MAP2K2	RAF1	<b>EGFR</b>	<b>FGFR3</b>	AR	NTRK1	
AKT3	ERBB2	GNAS	MET	RET	<b>ERBB2</b>	<b>KRAS</b>	<b>BRAF</b>	NTRK2	
ALK	ERBB3	HRAS	NRAS	ROS1	<b>ERBB3</b>	<b>MET</b>	<b>EGFR</b>	NTRK3	
AR	ERBB4	IDH1	NTRK1	STK11	<b>FGFR1</b>	<b>PIK3CA</b>	<b>ESR1</b>	<b>NUTM1</b>	
ARAF	ESR1	IDH2	NTRK2	TP53			<b>FGFR1</b>	RET	
<b>BRAF</b>	FGFR1	KEAP1	NTRK3				<b>FGFR2</b>	ROS1	
CDK4	FGFR2	KIT	PDGFRA				<b>FGFR3</b>	<b>RSPO2</b>	
<b>CHEK2</b>	FGFR3	KRAS	PIK3CA				MET	<b>RSPO3</b>	

Genes in bold are only available for FFPE samples.

The Oncomine Dx Express Test covers 100% of clinical routine biomarkers in non-small cell lung cancer (NSCLC) and the majority of clinical routine biomarkers for other solid tumors according to the European Society for Medical Oncology (ESMO) tier 1 scale for clinical actionability of molecular targets [1,4] (Table 1).

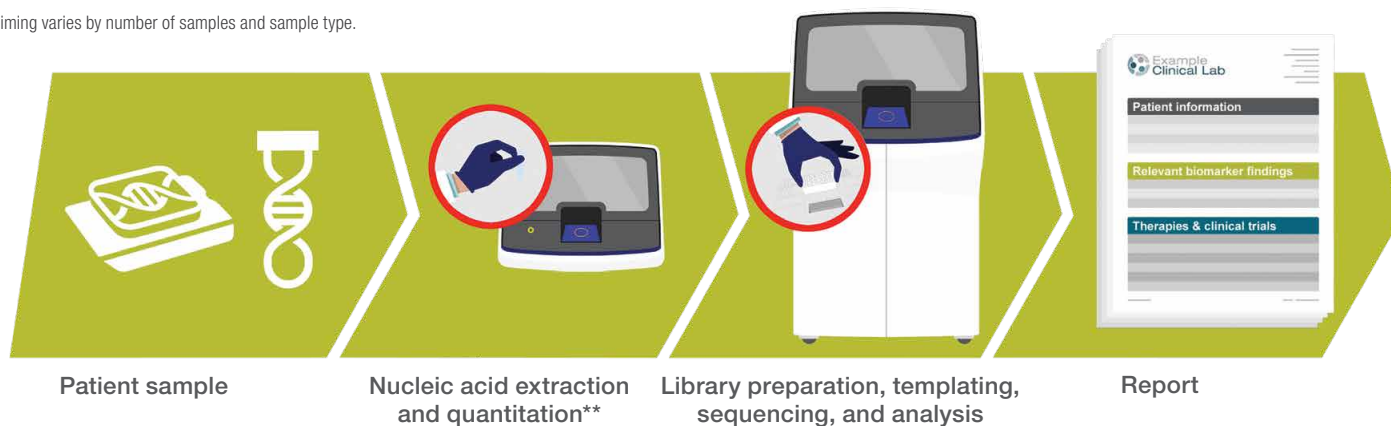
The Genexus Dx System automates the NGS workflow from patient sample to reporting and delivers results in as little as 24 hours with just two user touchpoints.\*

Compared to other NGS technologies, the Oncomine Dx Express Test reduces the manual steps commonly involved with NGS workflows, shortens the time to report, and requires less sample input (Figure 1). The Genexus Dx software facilitates tracking sample information through the workflow. Analysis is performed automatically on-instrument, and local reporting provides biomarker results matched to approved therapies, guidelines, clinical trials, and peer-reviewed literature.

\* Timing varies by number of samples and sample type.

	Oncomine Dx Express Test	Other NGS technologies
<b>Time to report</b>	<b>1</b> day	<b>4-5</b> days
<b>Hands-on time</b>	<b>20</b> minutes	<b>&gt;10</b> hours
<b>Sample input</b>	<b>10 ng</b>	<b>40 ng</b>

**Figure 1. Comparison of NGS workflows.**



\*\* The Genexus Dx Purification System will be available at a later date.

**References**

1. Mosele F et al. (2020) *Ann Oncol* 31:1491.
2. Smeltzer M et al. (2020) *J Thorac Oncol* 15:1434.
3. Volckmar AL et al. (2019) *Int J Cancer* 145:649.
4. Mateo J et al. (2018) *Ann Oncol* 29:1895.

Elevate oncology care for your patients by implementing easy NGS biomarker testing today.

Learn more at [thermofisher.com/oncomine-dxexpress](https://thermofisher.com/oncomine-dxexpress)

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