

Precision oncology

Oncomine Dx Target Test—the right choice for your patients

Analyze all key biomarkers for *EGFR*, *ALK*, *BRAF*, and *ROS1* kinase inhibitors, and many more currently in clinical trials, from one sample, in one report, in 4 days

The Ion Torrent™ Oncomine™ Dx Target Test is the first CE-IVD solid-tumor biomarker test, based on targeted next-generation sequencing (NGS), which detects key biomarkers that are relevant to currently approved and investigative targeted therapies in solid tumors.

The only solid tumor biomarker test, which can:

- Detect 46 cancer driver gene variants, including EGFR mutations (including L858R, T790M, and exon 19 deletions); BRAF, KRAS, ERBB2, and MET exon 14 skipping mutations; and ALK, ROS1, RET, and NTRK1/2/3 fusions
- Deliver an all-in-one report to support treatment decisions—including multiple drug indication options—enabling time and cost savings
- Deliver results even for challenging small samples, meaning more patients can potentially access targeted therapies
- Enable faster treatment decisions by generating laboratory results in 4 days

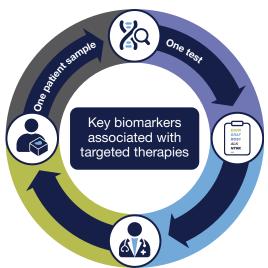


Figure 1: Oncomine Dx Target Test delivers key biomarkers associated with targeted therapies from one sample, in one test workflow, and one report.



NSCLC Colon Melanoma Ovarian Gastric AKT1 ALK ALK ALK AKT1 ALK ALK BRAF BRAF BRAF EGFR BRAF EGFR GNA11 FGFR3 ERBB2 DDR2 ERBB2 GNAQ GNA11 ERBB3 EGFR ERBB3 HRAS GNAQ FGFR2 ERBB2 HRAS KIT HRAS FGFR3 ERBB3 IDH1 KRAS KRAS MET FGFR2 KRAS MAP2K1 MAP2K1 NTRK1 FGFR3 NRAS NRAS NRAS NTRK2 GNA11 NTRK1 NTRK1 NTRK1 NTRK1 NTRK3 GNAQ NTRK2 NTRK2 NTRK2 PIK3CA HRAS NTRK3 NTRK3 NTRK3 KIT PIK3CA RAF1 KRAS ROS1 ROS1 MAP2K1 NTRK1 NTRK2 NTRK3 PDGFRA PIK3CA		M		619	١
ALK BRAF BRAF BRAF EGFR BRAF EGFR GNA11 FGFR3 ERBB2 DDR2 ERBB2 GNAQ GNA11 ERBB3 EGFR ERBB3 HRAS GNAQ FGFR2 ERBB2 HRAS KIT HRAS FGFR3 ERBB3 IDH1 KRAS KRAS MET FGFR2 KRAS MAP2K1 MAP2K1 NTRK1 FGFR3 NRAS NRAS NRAS NTRK2 GNA11 NTRK1 NTRK1 NTRK3 NTRK3 NTRK2 PIK3CA HRAS NTRK3 NTRK3 NTRK3 NTRK3 NTRK3 NTRK3 KIT PIK3CA RAF1 KRAS ROS1 ROS1 MAP2K1 MTRK2 NTRK3 NTRK1 NTRK3 NTRK3 NTRK4 NTRK5 NTRK5 NTRK3 NTRK4 NTRK5 NTRK5 NTRK5 NTRK5 NTRK5 NTRK5	NSCLC	Colon	Melanoma	Ovarian	Gastric
BRAF EGFR GNA11 FGFR3 ERBB2 DDR2 ERBB2 GNAQ GNA11 ERBB3 EGFR ERBB3 HRAS GNAQ FGFR2 ERBB2 HRAS KIT HRAS FGFR3 ERBB3 IDH1 KRAS KRAS MET FGFR2 KRAS MAP2K1 MAP2K1 NTRK1 FGFR3 NRAS NRAS NRAS NTRK2 GNA11 NTRK1 NTRK1 NTRK3 NTRK3 NTRK2 PIK3CA HRAS NTRK3 NTRK3 NTRK3 NTRK3 NTRK3 NTRK3 KIT PIK3CA RAF1 KRAS ROS1 ROS1 MAP2K1 MTRK1 NTRK3 NTRK3 NTRK1 NTRK2 NTRK1 NTRK3 NTRK3 NTRK3 NTRK3 NTRK3 NTRK3 PDGFRA PIK3CA PIK3CA PIK3CA	AKT1	ALK	ALK	AKT1	ALK
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EGFR ERBB3 HRAS GNAQ FGFR2 ERBB2 HRAS KIT HRAS FGFR3 ERBB3 IDH1 KRAS KRAS MET FGFR2 KRAS MAP2K1 MAP2K1 NTRK1 FGFR3 NRAS NRAS NRAS NTRK2 GNA11 NTRK1 NTRK3 NTRK3 NTRK2 PIK3CA HRAS NTRK3 NTRK3 NTRK3 NTRK3 KIT PIK3CA RAF1 KRAS ROS1 MAP2K1 MET MTOR NRAS NTRK1 NTRK2 NTRK3 NTRK1 NTRK3 NTRK1 NTRK3 NTRK3 NTRK1 NTRK3 NTRK3 NTRK3 NTRK3 PDGFRA PIK3CA	BRAF	EGFR	GNA11	FGFR3	ERBB2
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ERBB3 IDH1 KRAS KRAS MET FGFR2 KRAS MAP2K1 MAP2K1 NTRK1 FGFR3 NRAS NRAS NRAS NTRK2 GNA11 NTRK1 NTRK1 NTRK3 NTRK2 PIK3CA HRAS NTRK3 NTRK4 NTRK1 NTRK2 NTRK4 NTRK4 NTRK4 NTRK3 PDGFRA PIK3CA PIK3CA PDGFRA PIK3CA PDGFRA PIK3CA PDGFRA PDGFRA </th <th>EGFR</th> <td>ERBB3</td> <td>HRAS</td> <td>GNAQ</td> <td>FGFR2</td>	EGFR	ERBB3	HRAS	GNAQ	FGFR2
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FGFR3 NRAS NRAS NRAS NTRK2 GNA11 NTRK1 NTRK1 NTRK3 NTRK2 PIK3CA HRAS NTRK3 NTRK3 NTRK3 NTRK3 KIT PIK3CA RAF1 KRAS ROS1 MAP2K1 MET MTOR NRAS NTRK1 NTRK2 NTRK1 NTRK2 NTRK3 PDGFRA PIK3CA PIK3CA	ERBB3	IDH1	KRAS	KRAS	MET
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GNAQ NTRK2 NTRK2 PIK3CA HRAS NTRK3 NTRK3 NTRK3 KIT PIK3CA RAF1 KRAS ROS1 ROS1 MAP2K1 MET MTOR NRAS NTRK1 NTRK2 NTRK3 PDGFRA PIK3CA	FGFR3	NRAS	NRAS	NRAS	NTRK2
HRAS NTRK3 NTRK3 NTRK3 KIT PIK3CA RAF1 KRAS ROS1 ROS1 MAP2K1 MET MTOR NRAS NTRK1 NTRK2 NTRK3 PDGFRA PIK3CA	GNA11	NTRK1	NTRK1	NTRK1	NTRK3
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NTRK2 NTRK3 PDGFRA PIK3CA					
NTRK3 PDGFRA PIK3CA					
PDGFRA PIK3CA					
PIK3CA					
DAE1					
	RAF1				
RET					
ROS1	ROS1				

Figure 2. Examples of genes with cancer driver variants associated with different tumor types.

	All genes included in the Oncomine Dx Target Test					
DNA panel, hotspot genes	AKT1 ALK AR BRAF CDK4 CTNNB1 DDR2 EGFR ERBB2 ERBB3 ERBB4 ESR1	FGFR2 FGFR3 GNA11 GNAQ HRAS IDH1 IDH2 JAK1 JAK2 JAK3 KIT KRAS	MAP2K1 MAP2K2 MET MTOR NRAS PDGFRA PIK3CA RAF1 RET ROS1 SMO			
RNA panel, fusion drivers	ABL1 ALK AXL BRAF ERBB2 ERG ETV1	ETV4 ETV5 FGFR1 FGFR2 FGFR3 MET NTRK1	NTRK2 NTRK3 PDGFRA PPARG RAF1 RET ROS1			

Figure 3. All genes covered by the Oncomine Dx Target Test.

With the Oncomine Dx Target Test, you and your care team are ready for the future

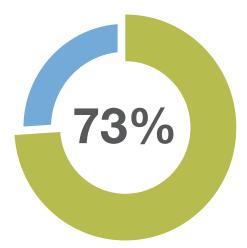


Figure 4. 73% of oncology drugs in development are personalized medicines.*

In oncology, most of the drugs in development are precision medicines associated with molecular testing. As such, fast, broad, and accessible genomic profiling is becoming one of the key factors to ensure patients' access to the therapies they could potentially benefit from.

The 46 gene targets included in the Oncomine Dx Target Test are cancer driver genes which, based on their role in cancer pathogenesis, have the potential to be therapy targets. Many of them are already targets of approved or investigational therapies for solid tumors.

The Oncomine Dx Target Test can help ensure that your lab will be ready to provide you with all of these biomarkers as they become relevant, without the need for additional resources to implement new and emerging tests.



 $^{^{\}star}$ The Personalized Medicine Report by PMC (Personalized Medicine Coalition, 2017).