AVENIO ctDNA and Tumor Tissue Targeted Panel V2

*This 17-gene research panel, included in the AVENIO ctDNA Targeted Kit V2 and the AVENIO Tumor Tissue Targeted Kit V2, contains biomarkers referenced in guidelines published by the U.S. National Comprehensive Cancer Network (NCCN).**

Gene	All Coding Regions	CRC	Lung	Breast	Gastric	Glioma	Melanoma	Ovarian	Thyroid	Pancreatic	Other Cancers	SNV	Indel‡	Fusion§	CNV§
ALK			●								ALCL, Large B-Cell Lymphoma, Neuroblastoma, Inflammatory Myofibroblastic Tumor, Spitzoid Tumor, Rhabomyosarcoma	●	●	●	
APC		●			●	●				●	HCC, Medulloblastoma, Desmoid	●	●		
BRAF		●	●			●	●	●	●		Borderline Ovarian, Cholangiocarcinoma, Spitzoid Tumor, Pancreas Acinar Carcinoma, Melanocytic Nevus, GIST	●	●		
BRCA1	●			●				●		●		●			
BRCA2	●			●		●		●		●		●			
DPYD**		●										●			
EGFR	●		●			●						●	●		●
ERBB2	●	●†	●	●	●	●		●				●	●		●
KIT							●				AML, Testicular Germ Cell Tumors, GIST, Thymic Carcinoma	●	●		
KRAS	●	●	●		●			●	●	●	AML, Juvenile Myelomonocytic Leukemia	●			
MET	●		●								Head and Neck Squamous Cell, HCC, Papillary RCC	●	●		●
NRAS		●	●				●		●		MM, AML, Juvenile Myelomonocytic Leukemia	●			
PDGFRA											GIST, Hypereosinophilic Syndrome	●			
RET		●	●						●		Pheochromocytoma, Spitzoid Tumor, Mucosal Neuroma	●		●	
ROS1			●		●	●					Spitzoid Tumor, Cholangiocarcinoma, Borderline Ovarian	●		●	
TP53	●	●	●	●	●	●		●		●	Various Leukemias, Adenocortical, Basal Cell Carcinoma, Esophageal, Soft Tissue and Bone Sarcomas, Head and Neck SCC	●	●§§		
UGT1A1††		●										●			

All coding regions are based on the longest transcript from Ensembl build 82.

* National Comprehensive Cancer Network. http://www.nccn.org. Accessed on August 2, 2023

** Inactivating mutations are associated with sensitivity to fluoropyrimidines.

† Kavuri et al. Cancer Discovery 8: 832-41 (2015). PMID: 26243863.

†† Certain variants are associated with sensitivity to irinotecan.

‡ Indels are limited to variants in a pre-specified list of positions, referred to as "Loci of Interest", except for EGFR exon 19 long deletions, EGFR exon 20 long insertions and MET long insertions, which are not restricted to a pre-defined set of Indels.

§ Detection of Fusions and CNVs are limited to variants in a pre-specified list of positions, referred to as "Loci of Interest" in the AVENIO analysis software.

§§ Indel for TP53 is called for tissue only, not plasma.

Associations of variations or mutations in these genes with the listed diseases were sourced from the following: COSMIC, GeneCards, My Cancer Genome.

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