

Table 1

Different omics techniques and their applications.

Omics	Type	Principle	Throughput	Application
Genomics	Whole exome sequencing	NGS	high	Genome-wide mutational/ analysis
	Whole genome sequencing	NGS	high	Exome-wide mutational analysis
	Targeted gene/exome sequencing	Sanger-sequencing	Low	Mutational analysis in targeted gene/exon
Epigenomics	Methylomics	Whole-genome bisulfite sequencing	High	Genome-wide mapping of DNA methylation pattern
	ChIP-sequencing	Chromatin IP* and NGS	high	Genome-wide mapping of epigenetic marks
Transcriptomics	RNA-sequencing	NGS	High	Genome-wide differential gene expression analysis
	microarray	Hybridization	High	Differential gene expression analysis
Proteomics	RPPA	Antibody based	Low	Differential protein abundance analysis
	Deep-proteomics	Mass-spectrometry	high	Genome-wide differential protein expression analysis
Metabolomics	Deep-metabolomics	Mass-spectrometry	high	Differential metabolite expression analysis