

## Description of Additional Supplementary Files

**File name:** Supplementary Data 1

**Description:** Model performance metrics for each prediction task by cancer type, predictor, percentage RNA-seq, classifier used, normalization method, and test data platform

**File name:** Supplementary Data 2

**Description:** Pathway-Level Information Extractor (PLIER) results for breast cancer (BRCA), separated by normalization method (nmeth), percentage RNA-seq (pseq), and replication seed index (seed\_index)

**File name:** Supplementary Data 3

**Description:** Pathway-Level Information Extractor (PLIER) results for glioblastoma (GBM), separated by normalization method (nmeth), percentage RNA-seq (pseq), and replication seed index (seed\_index)