OncoStratifier Supplementary Materials

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Table of Contents

Supplementary Figures

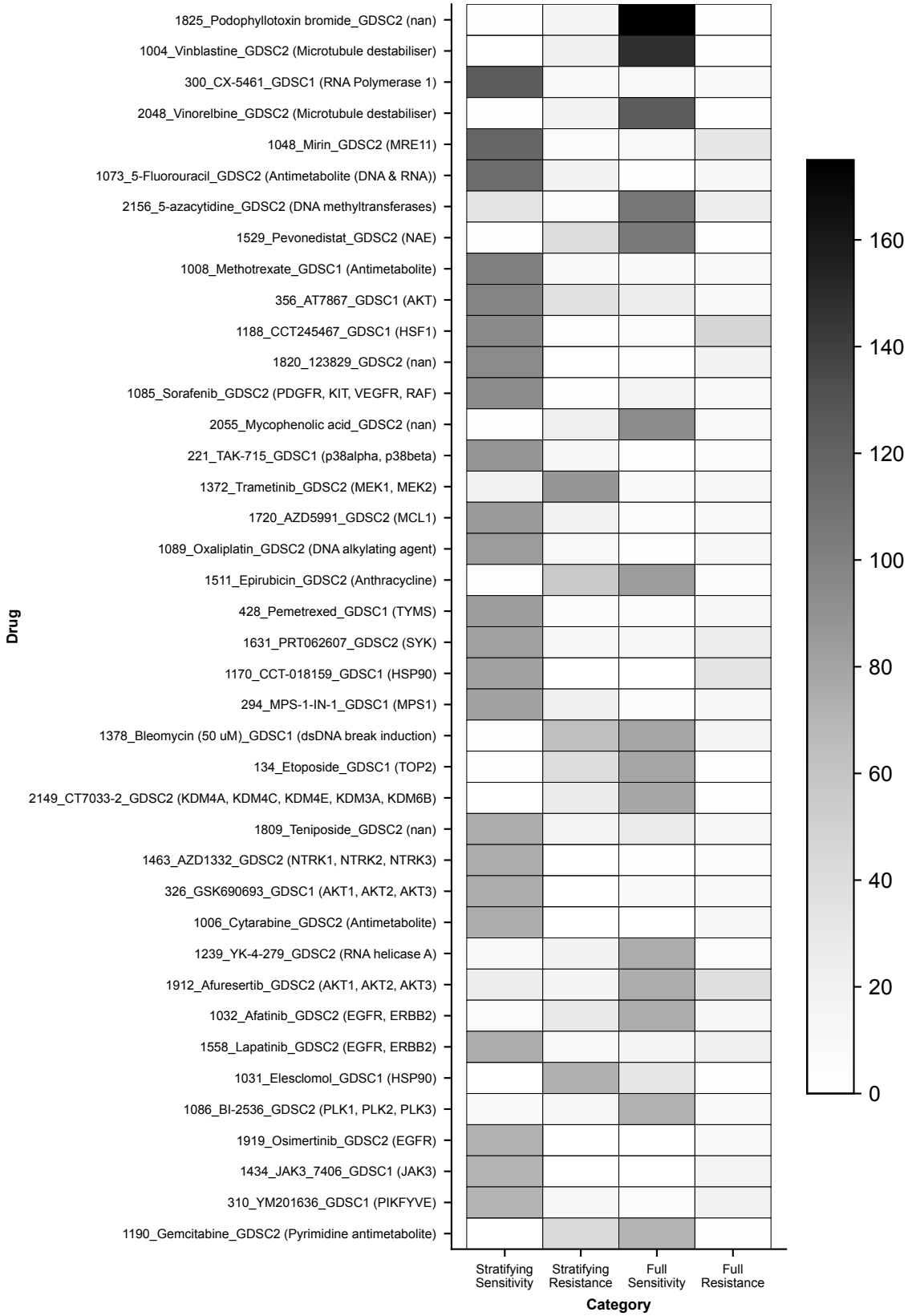

Figure S1: Top drugs found repeatedly over oncogene-cancer type pairs. Number of times each drug is found significantly in one of the OncoStratifier categories across oncogenes and cancer types. Only the top 40 drugs are shown.

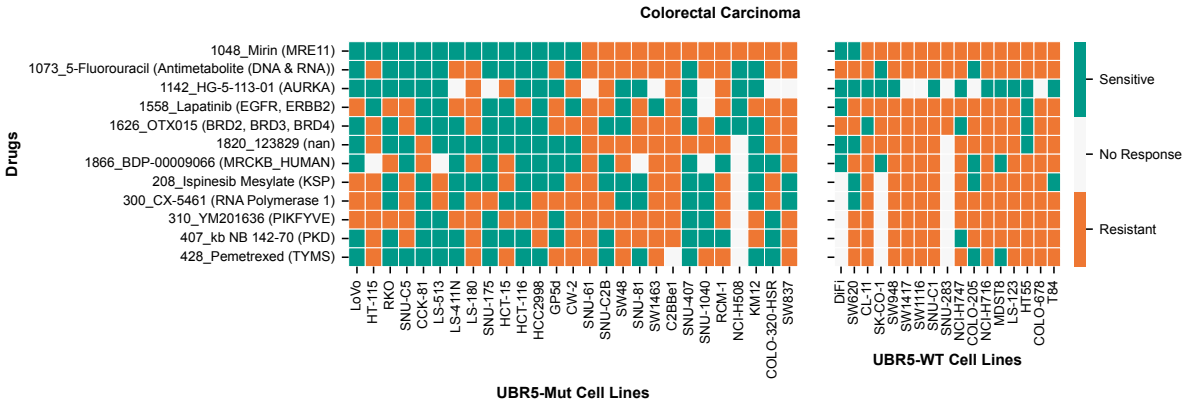

Figure S2: Drug response of cancer cell lines to stratifying drugs found in UBR5 addiction in colorectal carcinoma divided by UBR5 addicted and UBR5 -WT cohorts.

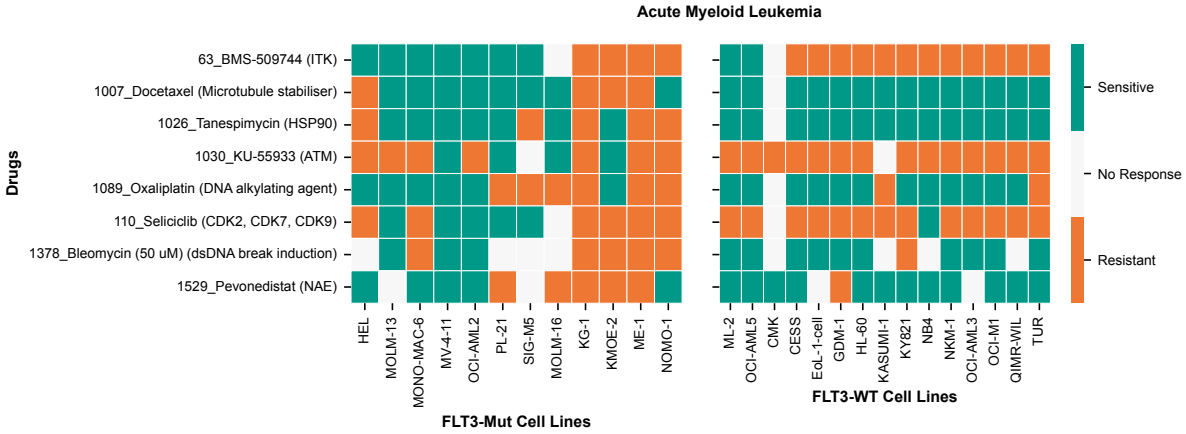

Figure S3: Drug response of cancer cell lines to stratifying drugs found in FLT3 addiction in acute myeloid leukemia divided by FLT3 addicted and FLT3 -WT cohorts.

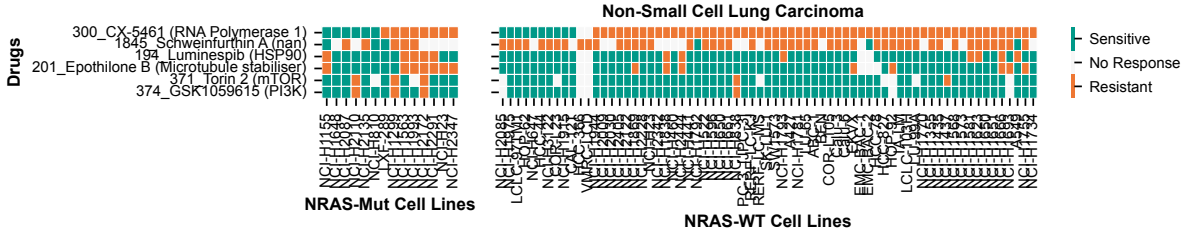

Figure S4: Drug response of cancer cell lines to stratifying drugs found in NRAS addiction in non-small cell lung carcinoma divided by NRAS addicted and NRAS -WT cohorts.

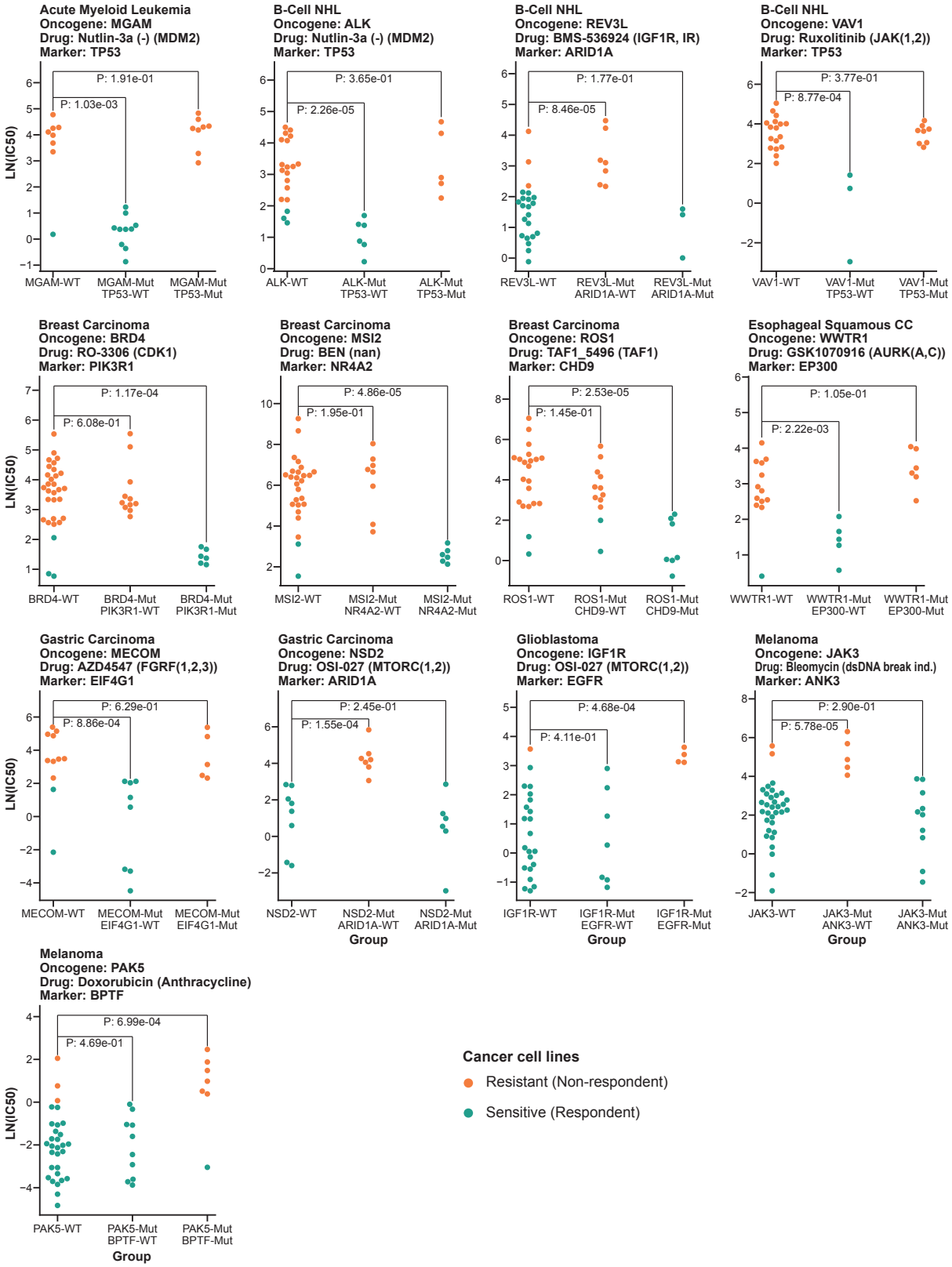

Figure S5: Additional Mutational Markers for Stratifying Drugs. Distribution of the cancer cell line drug response grouped by oncogene-WT, oncogene-Mut & marker-WT, and oncogene-Mut & marker-Mut for the drugs that are found as stratifying in acute myeloid leukemia, b-cell non-hodgkin leukemia, breast carcinoma, esophageal squamous cell carcinoma, gastric carcinoma, glioblastoma, and melanoma. LN(IC50) scores are used as drug response. The target of each drug is pointed out in the parentheses. We tested the significance of response change in oncogene-Mut & marker-WT and oncogene-Mut & marker-Mut groups against the oncogene-WT group using Fisher's exact test (corrected by the Benjamini-Hochberg (1) procedure).

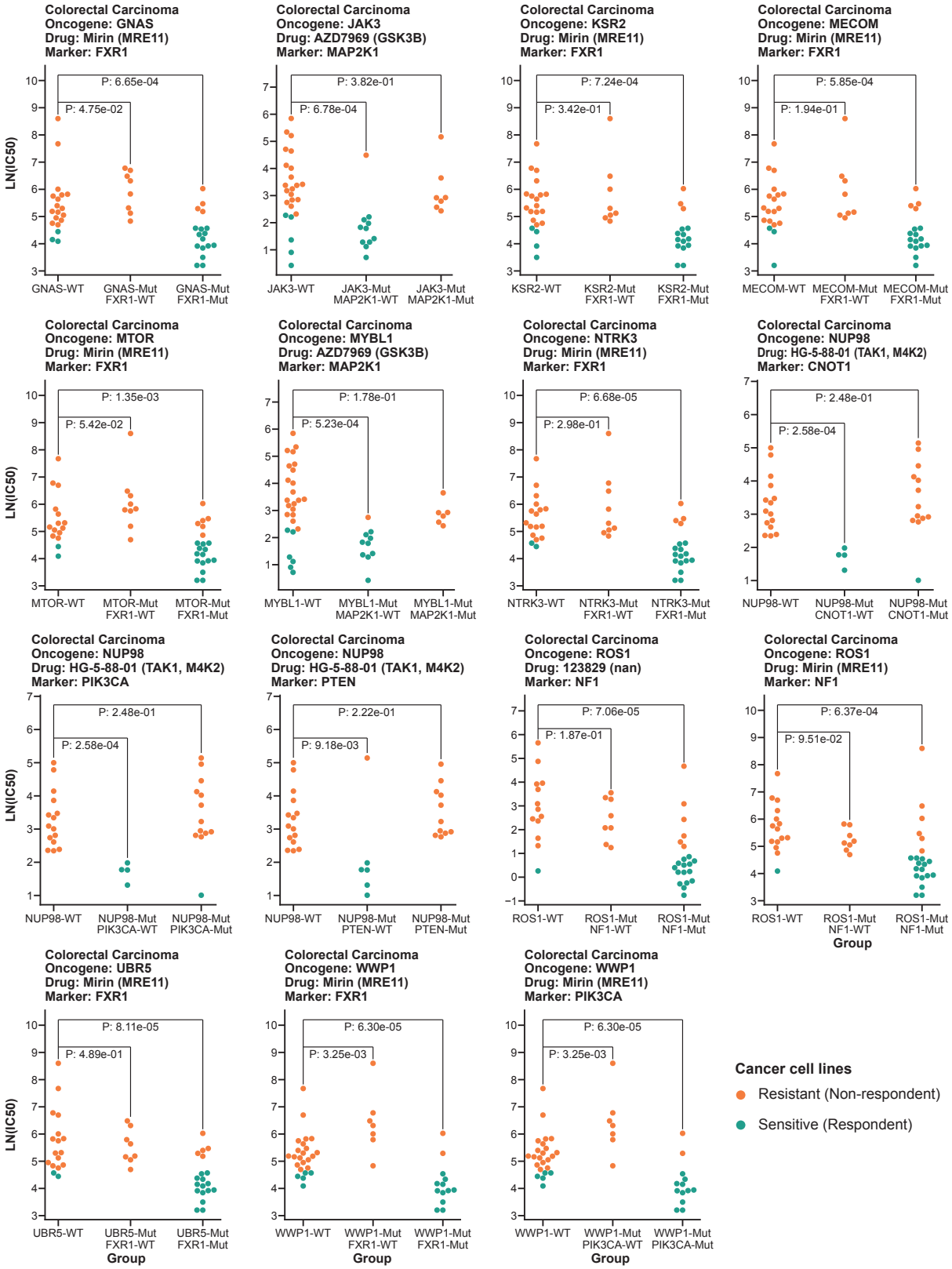

Figure S6: Additional mutational markers for stratifying drugs in colorectal carcinoma. Distribution of the cancer cell line drug response grouped by oncogene-WT, oncogene-Mut & marker-WT, and oncogene-Mut & marker-Mut for the drugs that are found as stratifying in colorectal carcinoma. LN(IC50) scores are used as drug response. The target of each drug is pointed out in the parentheses. We tested the significance of response change in oncogene-Mut & marker-WT and oncogene-Mut & marker-Mut groups against the oncogene-WT group using Fisher's exact test (corrected by the Benjamini-Hochberg (1) procedure).

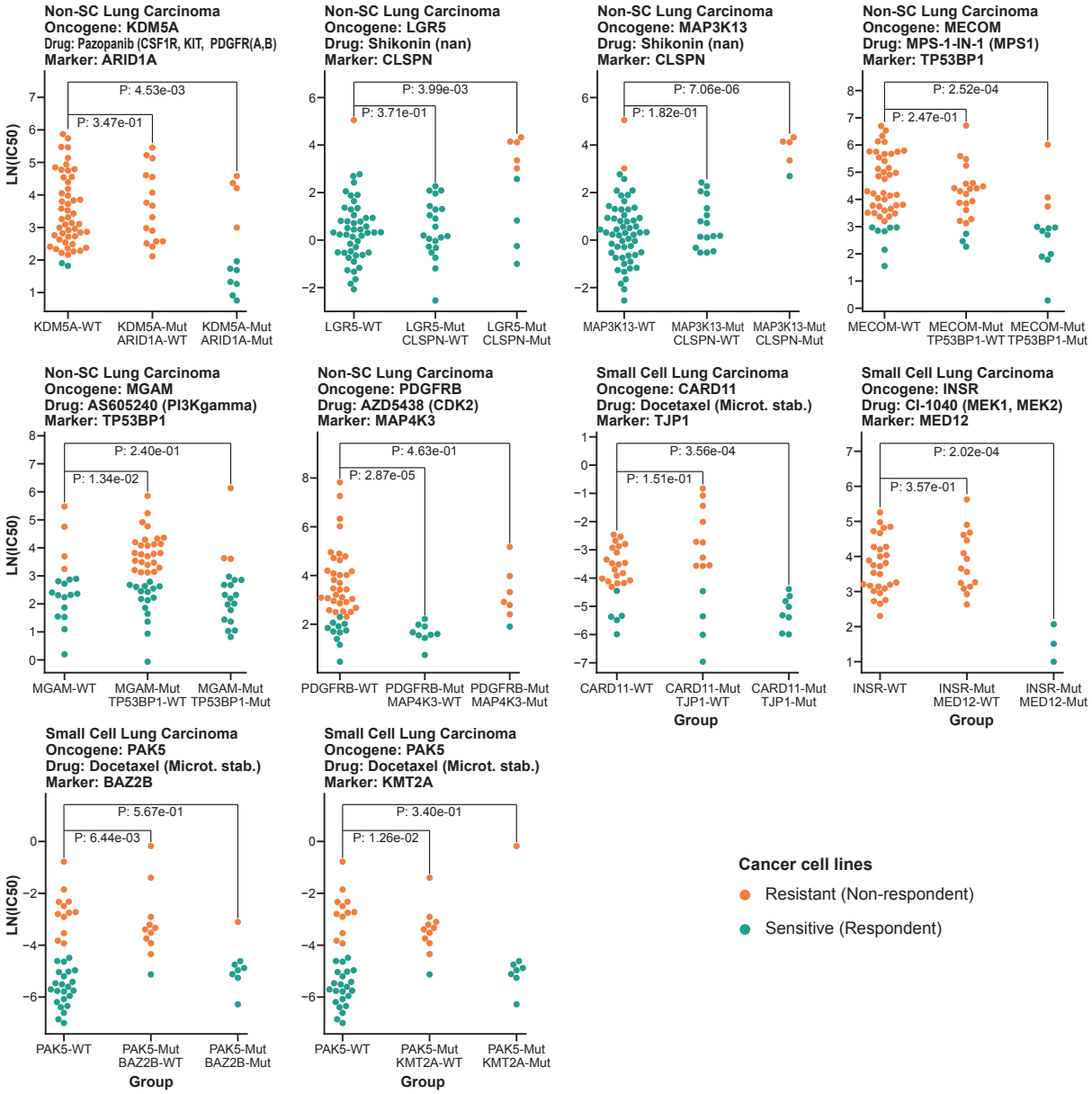

Figure S7: Additional mutational markers for stratifying drugs in lung carcinoma. Distribution of the cancer cell line drug response grouped by oncogene-WT, oncogene-Mut & marker-WT, and oncogene-Mut & marker-Mut for the drugs that are found as stratifying in lung carcinoma. LN(IC50) scores are used as drug response. The target of each drug is pointed out in the parentheses. We tested the significance of response change in oncogene-Mut & marker-WT and oncogene-Mut & marker-Mut groups against the oncogene-WT group using Fisher's exact test (corrected by the Benjamini-Hochberg (1) procedure).

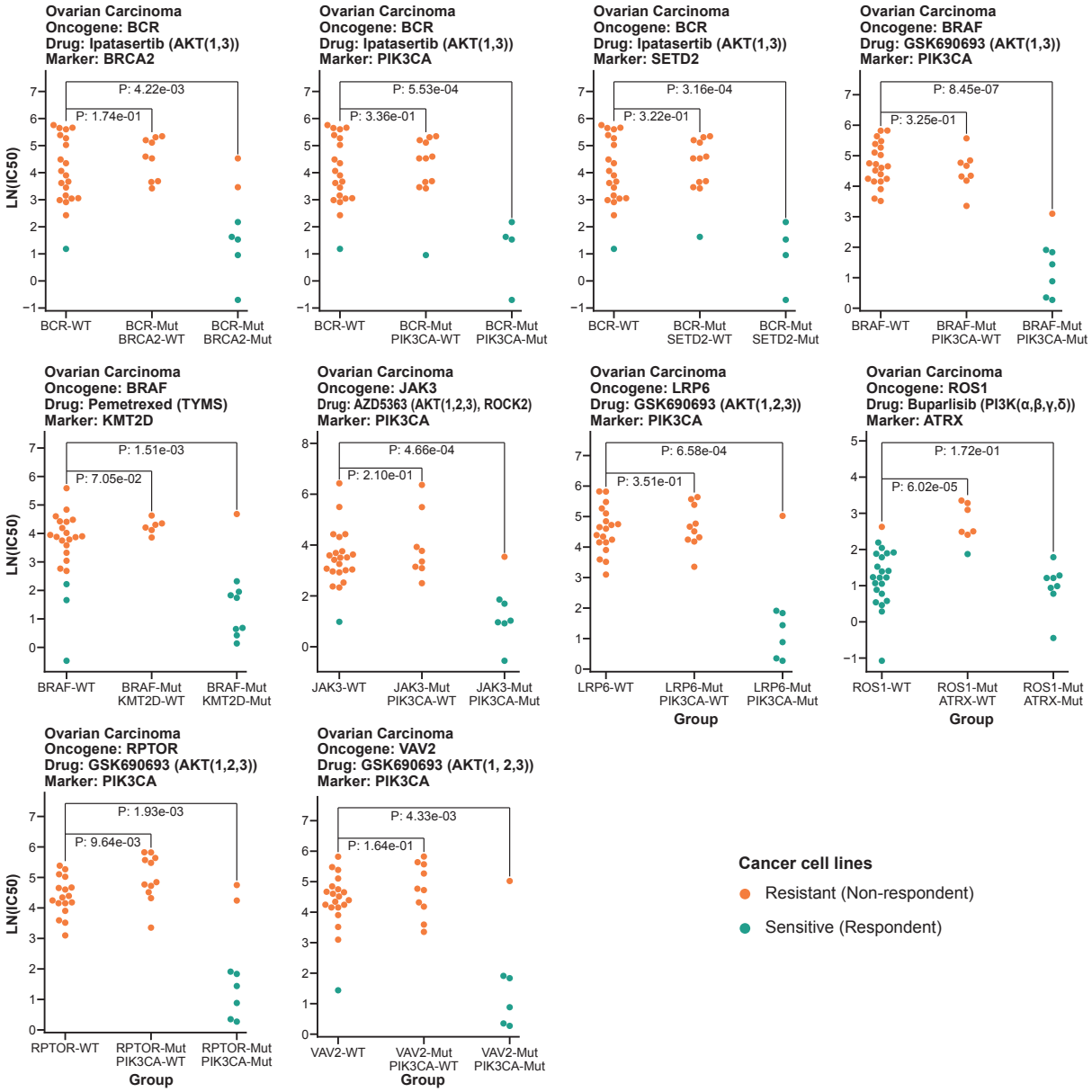

Figure S8: Additional mutational markers for stratifying drugs in ovarian carcinoma. Distribution of the cancer cell line drug response grouped by oncogene-WT, oncogene-Mut & marker-WT, and oncogene-Mut & marker-Mut for the drugs that are found as stratifying in ovarian carcinoma. LN(IC50) scores are used as drug response. The target of each drug is pointed out in the parentheses. We tested the significance of response change in oncogene-Mut & marker-WT and oncogene-Mut & marker-Mut groups against the oncogene-WT group using Fisher's exact test (corrected by the Benjamini-Hochberg (1) procedure).

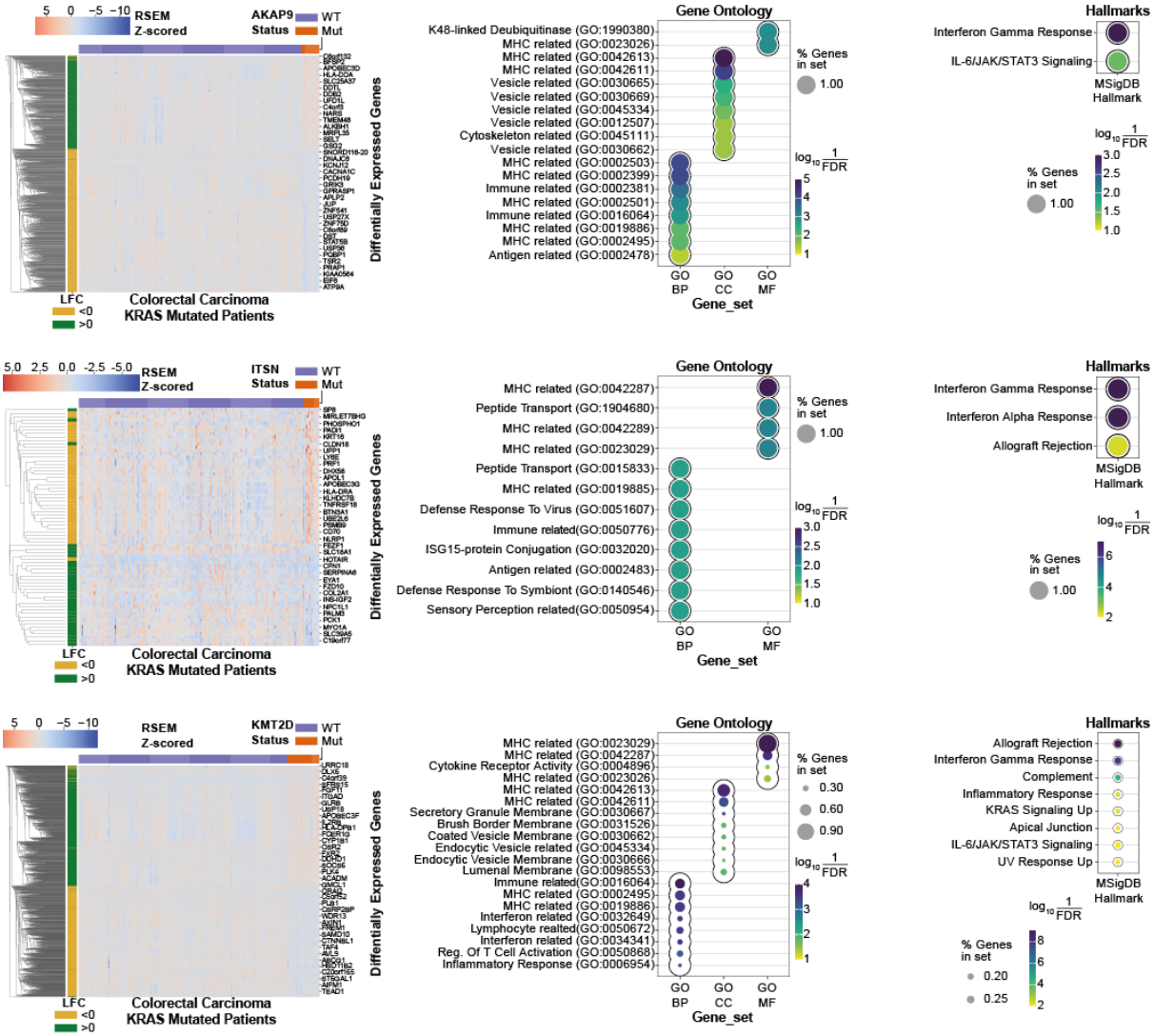

Figure S9: KRAS-addicted colorectal patients stratified by mutational marker and their respective DGEs. Differentially Expressed Genes' expression between oncogene addicted patients where marker gene is mutated or WT. Expression values are standardized. Middle column shows the enriched GO Terms and right column shows enriched hallmarks for each set of DGEs.

References

1. Benjamini, Y. & Hochberg, Y. Controlling the False Discovery Rate: A Practical and Powerful Approach to Multiple Testing. *J. R. Stat. Soc. Series B Stat. Methodol.* **57,** 289–300 (1995).