

Disclosed herein are methods of identifying a cancer patient that will be responsive to treatment with a fibroblast growth factor receptor (FGFR) inhibitor and methods of treating cancer patients. The methods involve evaluating a biological sample from the patient for the presence of one or more FGFR mutants from a FGFR mutant gene panel. Kits and primers for identifying the presence of one or more FGFR mutant genes in a biological sample are also disclosed herein.