Know Your Biomarker

RAF | CEA | ctDNA | DPYD | FAP | HER2 | KRAS | Lyn

PIK3CA

MSI | MSS | NRAS | NTRK

K3CA | TMB | Tumor Location/Sidedness | UGT1A1 | P

Who should have PIK3CA biomarker testing?

There are no standardized recommendations for PIK3CA testing. Most PIK3CA testing is done in a clinical trial setting. Talk to your medical team about whether PIK3CA testing could be useful for you.

What is PIK3CA?

PIK3CA is a gene that plays a role in the way cell growth, cell survival, and cell migration are controlled. Mutations in PIK3CA can lead to uncontrolled cell growth and migration, and may cause cancer as well as some rare diseases of abnormal growth. The PIK3CA mutations associated with colorectal cancer are not hereditary.

How is PIK3CA tested? How are the results reported?

PIK3CA mutation status is tested in a sample of your tumor (tumour). Results may be reported as "PIK3CA wild-type (WT)" or as "PIK3CA mutant". If your tumor has PIK3CA mutant, it may be reported as a specific mutation, like "mutant exon 9" or "mutant exon 20".

↓

Biomarker testing can give you and your medical team valuable knowledge about your cancer and help guide your treatment choices. For more information about colorectal cancer biomarkers, please visit knowyourbiomarker.org and talk to your medical team.

What do my PIK3CA results mean for me? How do they impact my treatment?

If your PIK3CA result is wild-type (WT)

→ 80% of colorectal cancer has PIK3CA wild-type

→ PIK3CA wild-type is associated with a better overall prognosis

→ Your treatment options include traditional chemotherapy and targeted therapy and/or immunotherapy based on the results of your other biomarker testing (for example KRAS, BRAF, MSI-H).

If your PIK3CA result is mutant exon 9 or mutant exon 20

→ 20-25% of colon cancers and 10% of rectal cancers have a PIK3CA mutation.

→ Only 3% of colorectal cancers have the PIK3CA exon 20 mutation.

→ PIK3CA mutation is more common in right-sided (proximal) colon cancers than in left-sided (distal) colon and rectal cancers.

→ Exon 9 mutations are associated with a higher likelihood of KRAS mutations, but a lower rate of BRAF mutation and MSI-High.

→ Exon 20 mutations are associated with a higher rate of KRAS and BRAF mutations, as well as MSI-High.

→ EGFR inhibitors are less effective in colorectal cancer with PIK3CA exon 20 mutations.

→ PIK3CA mutation may predict a good response to aspirin or other NSAIDs (non-steroidal anti-inflammatory drugs) as neoadjuvant and adjuvant treatment, as well as in prevention of colorectal cancer recurrence after treatment.

→ There are ongoing clinical trials for treatments that directly target mutant PIK3CA. Talk to your medical team about whether you could benefit from a clinical trial.

Thank you to our sponsors and partners for their support of the Know Your Biomarker program.