Know Your Biomarker

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

BRAF

MSI | MSS | NRAS | NTRK

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

Who should have BRAF biomarker testing?

If you have stage IV / metastatic colorectal cancer (bowel cancer), you should be tested for the BRAF biomarker. Stage IV or metastatic means that the cancer has spread to other organs or parts of the body.

What is BRAF?

BRAF is a gene that plays an important role in the way that cell growth is controlled. If the BRAF gene has a mutation, the control system may not function properly. This can allow cells to grow abnormally and become cancer.

How is BRAF tested? How are the results reported?

BRAF is tested in a biopsy sample of your tumor (tumour), either from your primary colorectal tumor or from a metastatic tumor. It may be tested individually, or as part of a multiple gene panel using next-generation sequencing (NGS).

Your results will be reported as “BRAF wild-type (WT)” if there is no mutation. If your tumor has a BRAF gene mutation, it will be reported as “BRAF mutant”, or as the specific mutation, for example “BRAF V600E.”

10-15%

BRAF V600E occurs in approximately 10%-15% of all colorectal cancers.

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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 BRAF results mean for me? How do they impact my treatment?

If your BRAF is wild-type (no mutation)

→ BRAF wild-type tumors are typically treated with EGFR inhibitors (for example cetuximab, panitumumab)

If your BRAF has a mutation, such as BRAF V600E

→ The majority of BRAF mutations are V600E. Other mutations in BRAF do occur rarely.

→ The BRAF V600E mutation is associated with aggressive tumor growth.

→ BRAF V600E occurs in approximately 10%-15% of all colorectal cancers.

→ Colorectal cancer with the BRAF V600E mutation is usually treated with targeted therapy, like BRAF inhibitors (for example encorafenib, vemurafenib) in combination with MEK inhibitors.

→ Bevacizumab may be added to other targeted therapies.

→ Targeted therapy can also be combined with traditional chemotherapy.

→ EGFR inhibitors alone are not effective on BRAF mutant colorectal cancer.

→ EGFR inhibitors may be added on to targeted therapies like BRAF inhibitors and MEK inhibitors.

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