CLEARYOURVIEW
An initiative to drive the best treatment decisions with complete biomarker testing

Backgrounder: Complete Biomarker Testing in Colorectal Cancer (CRC)

First-line treatment decisions for advanced colorectal cancer (CRC) lag behind recommended medical guidelines

Many advanced CRC patients may be receiving inappropriate therapy due to guideline non-adherence to biomarker testing before starting first-line treatment

- Medical guidelines have expanded over the past 10 years and now recommend all patients with metastatic colon cancer be tested for 6 genomic alterations or biomarkers: *KRAS, NRAS, BRAF, ERBB2* (*HER2*), and *NTRK* as well as microsatellite instability (MSI)[1] to help inform first-line treatment decisions
- Biomarker-driven therapy selection can improve survival for advanced CRC patients.[2] Testing for all biomarkers can help predict which treatment will respond and which won't, and is the only way to help ensure the right treatment from the start
- Only 40% of patients with advanced CRC receive complete guideline-recommended biomarker testing, putting many advanced CRC patients at risk for inappropriate treatment[3]
- As an example, 72% of patients who received anti-*EGFR* therapy did not have guideline-aligned *RAS* and *BRAF* testing to determine eligibility for that treatment[3]
- Various factors contribute to clinical adoption of precision oncology lagging behind recommended medical guidelines, including: physician-reported gaps in the knowledge and skills needed to incorporate genotyping into clinical practice; challenges in keeping track of the latest recommendations; the time frame associated with getting complete genotyping results using tissue biopsies; and the cost of tests when not covered by insurance[3-5]

Testing every newly diagnosed advanced CRC patient for all 6 guideline-recommended biomarkers is crucial[6]

Genetic mutation	Associated therapy information
KRAS	Poor response to anti-*EGFR* therapy. *KRAS* mutations, which appear in ~50% of patients, convey a lack of response to anti-*EGFR* therapies.[7-8]
NRAS	Poor response to anti-*EGFR* therapy. *NRAS* mutations**,** which appear in ~50% of patients, convey a lack of response to anti-*EGFR* therapies.[7-8]
BRAF V600E	Poor response to anti-*EGFR* therapy. *BRAF* V600E can be targeted with encorafenib. In combination with other therapies, it results in longer overall survival and higher response rate than standard therapy.[2]
MSI (microsatellite instability)	Responds to immunotherapy. MSI-High status improves the likelihood of response to immune checkpoint inhibitors.[9-12, 3]
NTRK fusions	Respond to tumor-agnostic *NTRK* inhibitors.
ERBB2 (*HER2*) amplification	Anti-*HER2* therapy may have a beneficial role in the treatment of *HER2*-positive metastatic CRC.

For journalists and media reporters: To learn more about this initiative, contact: media@clearyourview.org

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