

## GASTROINTESTINAL CANCER

**Screening cost effective, not treatment**

Advances in treatments and molecular testing have improved the outcomes of patients with metastatic colorectal cancer (mCRC). In 2009, ASCO recommended that patients with mCRC undergo *KRAS* mutational screening, because those with mutated *KRAS* do not respond to anti-EGFR therapies. Although less clear, it is also thought that patients with mutated *BRAF* may not respond to anti-EGFR therapy. Thus, limiting anti-EGFR therapy to patients with wild-type *KRAS* and *BRAF* would reserve treatment for those most likely to benefit, and avoid unnecessary exposure to harmful and costly drugs in patients who do not.

Ajay Behl and coauthors decided to evaluate the comparative effectiveness of screening for *KRAS* and *BRAF* mutations in patients with mCRC. As Behl explains, “previous studies lack transparency regarding how they analyse the treatments, resection of metastases, and survival for the different types of metastases”. The research by Behl and his colleagues was based on a decision analytic framework—which includes parameters based on the

available evidence from clinical trials and other literature in clinical oncology—in the context of treatment with cetuximab. Behl explains the background to the study: “our comprehensive research programme has two main components: first, secondary data collection through evidence synthesis and cost-effectiveness analysis, and second, primary data collection through a proof-of-principle study to examine questions about personalized medicine for CRC.

The results of the study reveal some disturbing truths, as Behl highlights: “the most significant findings are that anti-EGFR treatment is costly. Screening for *KRAS* and *BRAF* mutations can substantially reduce the cost of providing anti-EGFR treatment with a very small reduction in overall survival.” Behl continues, “crucially, the results are less supportive of the use of anti-EGFR treatment than earlier research has shown. We cannot confirm that anti-EGFR treatment is a cost-effective use of health-care resources. However, *KRAS* testing is cost saving, with *BRAF*



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testing likely to offer additional savings.” In the future, Behl’s team plans “to use these data to analyse differences in the treatment of mCRC in rural and urban health-care settings.”

*Lisa Hutchinson*

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