Next-generation sequencing panel cost-effective for CRC

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(HealthDay)—Use of a next-generation sequencing (NGS) panel including genes associated with highly penetrant colorectal cancer and polyposis (CRCP) syndromes is cost-effective for CRCP diagnosis, according to a study published online May 4 in the *Journal of Clinical Oncology*.

Carlos J. Gallego, M.D., from the University of Washington in Seattle, and colleagues developed a decision model to assess NGS panel testing versus current standard of care in patients referred to a cancer genetics clinic. The costs and health benefits of identifying relatives with a pathogenic variant were assessed, in terms of life-years and quality-adjusted life-years (QALYs).

The researchers found that assessment with a NGS panel that included Lynch syndrome genes and other genes associated with highly penetrant CRCP syndrome correlated with an increase of 0.151 year of life, 0.128 QALY, and $4,650 per patient. The resulting incremental cost-effectiveness ratio was $36,500 per QALY versus standard care. At a threshold of $100,000 per QALY, there was a 99 percent probability that this panel was cost-effective. The addition of genes with low colorectal cancer penetrance correlated with an incremental cost-effectiveness ratio of $77,300 per QALY compared with this panel.

"Additional studies are needed to determine whether these findings are applicable to other common phenotypes and to other, more comprehensive NGS applications, including universal NGS screening of all patients with colorectal cancer," the authors write.

Several authors disclosed financial ties to the pharmaceutical and biotechnological industries.

More information: Abstract
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