

Can a Single Blood Test Detect Multiple Cancers?

What about whole-body MRIs?

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“Liquid biopsies” make headlines for their potential to detect multiple cancers in their earliest stages, but it’s too soon to tell whether the tests are accurate and safe enough for widespread use, according to findings of a systematic review published in the *Annals of Internal Medicine*. “No controlled studies are completed that report benefits of screening with [multicancer detection] tests,” wrote the study authors, adding, “Evidence was judged insufficient to evaluate harms and accuracy. Accuracy varies by test and study design.”

Liquid biopsy tests identify various cancer-related biomarkers—such as proteins and tumor DNA—in body fluids like blood, saliva or urine. The tests are cheaper than many other screenings and may detect cancer in earlier stages. Considering that 70% of cancer deaths are caused by malignancies for which there are no established screening tests, liquid biopsies (if accurate) could improve early cancer detection rates.

Whole-body MRIs are also touted in news and social media as a lifesaving screening method for asymptomatic patients (in the minimally invasive procedure, magnetic resonance imaging creates high-resolution images of structures inside the body). A growing number of for-profit companies offer the scans, often for a couple thousand dollars. Is it worth it?

Radiologists Brian N. Dontchos, MD, and Manjiri Dighe, MD, examined numerous studies on the topic. In one review, they found that 95% of patients who had the scans showed abnormal findings but only 30% of them required further evaluation and only 1.8% of all patients had a malignancy. Writing for Fred Hutch News Service, they noted: “Long-term patient outcomes and cost-effectiveness are not fully evaluated.” What’s more, “No comparative trials or modeling [have compared] whole-body MRIs with other organ-specific screening tests,” such as mammograms and colonoscopies.

