Multi-Cancer Early Detection Test Sensitivity for Cancers With and Without Current Population-Level Screening Options

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INTRODUCTION

• Amongst the causes of the reduction of cancer mortality in recent decades are decreases in smoking rates, successful cancer detection through screening.1
• Population screening is recommended by the United States Preventive Services Task Force (USPSTF) for four main cancer sites: cervical, colorectal, breast, and skin (melanoma).2
• More than two-thirds of cancer-related deaths are due to cancers without screening tests.3
• Solid tumors without screening tests include pancreatic, esophageal, and gastric cancers.
• There are no recommended screening options for many cancer types of hematologic origin, despite the fact that leukemias, lymphomas, and myelomas are detected by collective screening for patients at high risk of all of these tumors (eg, in apheresis donors).4
• Cancer detection, defined as a malignancy detected before it reached advanced stages across 150 types of cancer, including both hematologic and solid tumors, with a single blood draw.5
• MoGEES testing has the potential to address the gap in mortality from cancer and will reduce cancer mortality.6
• Previous publication of the Circulating Tumor Cell Genome Atlas (CTGA, NCT02368878) found previously showed overall sensitivity of 60%, specificity of 99.5%, and true-positive cancer signal origin prediction accuracy of 86% for the MoGEES test.7

OBJECTIVE

To determine the MoGEES test’s performance in hematologic cancers and solid cancers with and without screening, using data from the CTGA and MoGEES study.

METHODS

CCGA Study

• A total of 2,754 cancer participants were included in this post hoc analysis.
• Solid screened: 1,175
• Solid unscreened: 1,336

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Figure 1. Sensitivity by Cancer Group and Clinical Stage

Figure 2. Sensitivity for Solid Screened Cancers by Stage

Figure 3. Solid Screened Cancers Diagnosed Through Screening or Clinical Presentation

CONCLUSIONS

• Cancer signals were detected from cancers that lack recommended screening tests and contribute to significant cancer-related mortality, including hematologic, sarcomas, and solid tumors (eg, lung and bile duct), and cancers of hematologic origin (lymphoma).4
• This post hoc analysis of CCGA indicates that MCED testing has the potential to complement existing screening paradigms by detecting cancer signals for many cancers across solid and hematologic malignancies that currently lack known screening recommendations.

References
2. United States Preventive Services Task Force. USPSTF recommendation statements. www.uspreventiveservicestaskforce.org/Page/Name/uspstf-recommend-statements

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