

New report outlines cancer screening's future potential

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Cancer screening has contributed substantially to reduced incidence, morbidity, and mortality, but issues like access and quality care and have kept screening from fulfilling its full potential, according to a new report. The report, published in *CA: A Cancer Journal for Clinicians*, is the latest installment in the ACS's blueprint for cancer control. The authors summarize the status of cancer screening and propose key areas where attention is needed to further advance screening's contribution to cancer control.

Since the mid-20th century, accumulating evidence has supported the introduction of screening for cancers of the cervix, breast, colon and rectum, prostate (via shared decisions), and lung. The authors of the new [report](#), led by Robert A. Smith, Ph.D., vice president of screening for the American Cancer Society say even as new discoveries could improve outcomes, there has been a failure to fulfill the potential of existing technology, due to lack of access among the target population and the delivery of state-of-the art care at each crucial step in cancer care. The report adds there is insufficient commitment to invest in the development of new technologies, incentivize the development of new ideas, and rapidly evaluate promising new technology.

The report outlines five key focus areas to help cancer screening realize its full potential:

- Research to improve the implementation of existing screening modalities

Research should be directed at facilitating the uptake of organized screening, including for populations that are less likely to undergo screening. Elements of this [research](#) should include the study of reminder systems, population management, public messaging, team-based care, and navigation. On a broader scale, studies of different approaches to organizing and paying for health care are needed.

- Research to improve the quality and performance of currently available screening tests

Increased financial commitment is needed to evaluate the performance of current screening technology in the community, to support research and development to improve and evolve existing technology, and to develop new technology. No less important are strong quality assurance programs to ensure that performance is monitored and that steps are taken when performance falls below acceptable standards

- Research to develop entirely new screening strategies to screen for cancers currently amenable to screening

New directions in breast cancer screening that are functional versus anatomic, including contrast-enhanced MRI and molecular breast imaging, are being tested, with promising results in overcoming the limits of 2-D and 3-D mammography in women with significant mammographic breast density. Blood tests that detect circulating DNA and potentially can detect many types of asymptomatic cancers are in development. Developing new higher performing, more affordable, and/or more culturally acceptable screening tests warrants a substantial research investment.

- Research to develop increasingly refined, risk-based screening strategies

All approaches to screening incorporate assessments of risk. Organizations have issued guidelines to screen individuals who are at higher than average risk for some cancers, but the depth of data supporting these recommendations is highly variable. It may someday be possible to identify individuals who are well below average risk and might choose to forgo screening or to be screened differently. However, to date, reducing the intensity of screening to levels below those currently recommended for average-risk individuals has led to a loss of screening effectiveness overall in exchange for reducing the number of adults who undergo screening and reducing the overall rate of harms.

- Research to develop effective ways to screen for cancers for which screening tests do not currently exist

At this time, no screening strategy has been developed and tested for pancreatic cancer, which by 2030 is likely to become the second leading cause of cancer-related death in the United States among men and women are combined. Liver cancer and bladder cancer are other diseases for which reliable and practical risk-based screening tests are needed. Screening for less common causes of cancer-related death may be possible but would demand highly accurate screening tests and well-defined and acceptable diagnostic and treatment approaches, to favorably tip the risk/benefit ratio.

"The capacity to screen for asymptomatic cancer and [cancer](#) precursors defines one of the great successes in the history of [cancer control](#), but

the full potential of [cancer screening](#) is not being achieved," said Dr. Smith. "Millions of individuals who should be screened are not being screened, and millions who are being screened are not receiving the highest quality testing available."

The report concludes that "the barriers that are impeding improvements in screening rates need to be systematically identified and rectified with no less than a mission-oriented commitment. Research dedicated to improving existing [screening](#) strategies and finding new ones is necessary, and the current level of investment in this type of research is insufficient."

More information: A Blueprint for Cancer Screening and Early Detection: Advancing Screening's Contribution to Cancer Control. *CA Cancer J Clin* 2018 [DOI: 10.3322/caac.21550](https://doi.org/10.3322/caac.21550)

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