

# Navigating Contradictions in Cancer Screening: Headlines Versus Personalized Approach for Patients and Families

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**R**ecently, there have been several seemingly contradictory headlines in the national news regarding cancer incidence and intervals for screening practices. Most recently, a major study questioned whether cancer screening saves lives at all. Although a major study concluded that efficacy of cancer screening practices is not substantial, another called for earlier screening for breast and colorectal cancer because of increasing cases in younger adults. These headlines are based on conclusions from recently published studies; however, the validity of the findings differs in regard to the formation of the research questions, sample representativeness, historical bias, interpretation of statistical models, and, most importantly, recommendations for personalized approaches. For oncology nurses working with individuals across the trajectory of cancer prevention, early detection, and treatment, how do we communicate with individuals who are reading headlines, watching short television news clips, and consulting internet news sources to make sense of these reports for patient and family teaching? Framing information

is a well-established role for oncology nurses, who patients and families reach out to for trusted information.

Two studies published in August 2023 presented “newsworthy” headlines. Perhaps the most jarring questioned whether cancer screening saves lives. These headlines were based on a meta-analysis of 18 long-term randomized clinical trials of six common cancer screening tests (mammography screening for breast cancer; colonoscopy, sigmoidoscopy, or fecal occult blood testing for colorectal cancer; computed tomography screening for lung cancer in smokers and former smokers; and prostate-specific antigen testing for prostate cancer) (Bretthauer et al., 2023). All trials had at least 10 years of follow-up, and the total sample size was 2.1 million participants. Data were from multiple studies of cancer screening examining whether collectively there was evidence that the six cancer screening tests lowered rates of all deaths. The conclusion was that colorectal cancer screening with sigmoidoscopy may extend life by about three months; lifetime gain for other screening tests appeared to be unlikely or uncertain. Another study published in the same time frame presented alarming findings of a higher incidence of breast and colorectal cancer among young adults. In a cohort study of 562,145 people with early-onset cancer in the United States from 2010 to 2019, the incidence rates of early-onset cancers increased substantially during the

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study period, with breast and gastrointestinal cancer having the fastest growing incidence rates, suggesting that earlier screening is necessary (Koh et al., 2023).

How can the results of these two studies “fit in” to what we know about cancer screening? First, critiquing the studies to closely examine the sources of data is important. The time frame of the Bretthauer et al. (2023) analysis has been underappreciated. Some of the cohort studies used in the meta-analysis were published as far back as 1989. Because the inclusion criteria stated a 10- to 12-year follow-up period, the data for studies published in 1989 were collected in the 1970s (Tabar et al., 1989). In addition, the racial and ethnic components of the samples have been overlooked. The samples for many of the studies included in the meta-analysis were from Northern European, homogenous White samples. Studies from the United States, such as the Pinsky et al. (2019) study included in the meta-analysis, where non-Hispanic Black participants comprised 4%–5% of the sample, were similarly nonrepresentative of the population. Alternatively, the Koh et al. (2023) study had a sample composition that more closely resembled the U.S. population: 0.8% were American Indian or Alaska Native, 9.8% were Asian or Pacific Islander, 10.9% were Black, 21% were Hispanic, 56% were White, and 1.6% were of unknown race and/or ethnicity. In addition, dates of data collection were more recent.

For oncology nurses, how do we continue the conversations with patients and families? First, we need to read the primary sources and discuss the validity of studies with our professional colleagues. Next, we should continue referring patients and families to well-respected advisory panels such as the American Cancer Society and the U.S. Preventive Services Task Force, which both issued new draft recommendations for screening, notably lowering the age for breast cancer screening (from age 50 years to 40) and for colorectal cancer screening (from age 50 years

to 45). For patients and families, we can encourage conversations about screening, pointing out that the guidelines are made at a population level for individuals at average risk. The guidelines do not consider social determinants of health and other personalized health information, such as *BRCA1* or *BRCA2* genetic variants. Although some of the headlines themselves may be misleading, oncology nurses and other health-care providers can use them to open conversations about the complex issues related to cancer screening and for enhancing personalized decision-making.



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