Evidence-based truths about the benefit of cancer screening

In my capacity as past Chair of the Cancer Care Member Interest Group of the College of Family Physicians of Canada and regular contributor to and coordinator of the Oncology Briefs series in *Canadian Family Physician*, I wish to express my profound concern that *Canadian Family Physician* would publish an article with such blatant misinformation as was found in "Debunking myths about screening. How to screen more judiciously."[1] This article includes statements that are erroneous at best and dangerous at worst. The following are examples.

It is a myth that earlier detection of cancer results in better outcomes. In fact, earlier-stage cancer is directly correlated with reduced mortality, increased survival, and decreased morbidity of treatment, all of which are better outcomes than are seen in late-stage cancer.[2] The authors suggest that earlier detection needlessly identifies cancers that would not impact outcomes due to slow growth or regression. Scientific data do not support the spontaneous regression of cancers: in a study of 479 untreated breast cancers followed over 10 years, zero cancers spontaneously regressed or disappeared.[3]

It is a myth that newer technology produces more benefit. Age-standardized mortality rates have consistently declined in Canada since 1984 for breast, lung, prostate, and colorectal cancers.[4] From 1975 to 2019, US breast cancer mortality decreased by 58%, attributable to both screening and treatment.[5] These large mortality reductions reflect the evolution of cancer diagnostics and therapies that have revolutionized how we diagnose and treat cancers. To name just 2 examples, trastuzumab, a targeted agent, has reduced absolute 10-year mortality by 6.9% and all-cause mortality by 6.5% in patients with human epidermal growth factor receptor 2 (*HER2*)-positive breast cancers.[6] Adjuvant immunotherapy in patients with unresectable stage III non–small cell lung cancer has reduced the risk of death by 28% at 5 years compared with placebo.[7]

It is a myth that cancer screening saves lives. The 5-year survival for women for stage I breast cancer is 100%, for stage III is 74%, and for stage IV is 23%.[8] Non–small cell lung, colorectal, and cervical cancers have similar declines in survival with advancing stage.[9-11] Cancers diagnosed through screening are earlier-stage cancers with better survival and decreased mortality, meaning that lives are saved.

Cancer screening is not for everyone and patient preferences and comorbidities must always be considered when engaging in shared decision making on this topic. I strongly believe that Canadian family physicians are educated enough and have enough common sense to have screening discussions judiciously so as to avoid overdiagnosis in patients with competing medical issues or advanced age. The statements made by the lead author and colleagues in this article risk misinforming a nation of family physicians about the pros and cons of screening. The publication of this misinformation is especially concerning given that the author holds the influential and, theoretically, neutral position of Co-Chair of the Canadian Task Force on Preventive Health Care, the national body that determines screening guidelines for our country.

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Competing interests
None declared

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Response

In reflecting on the points raised by Dr Wilkinson in the May 2024 issue of *Canadian Family Physician*,[1] we would like to offer the following responses.

On earlier detection. On how earlier detection is needlessly identifying cancers that would not impact outcomes, Dr Wilkinson wrote: "Scientific data do not support the spontaneous regression of cancers: in a study of 479 untreated breast cancers followed over 10 years, zero cancers spontaneously regressed or disappeared."[1,2]

We are puzzled by this point, as spontaneous regression is tangential to our question: Does earlier detection of cancer result in better health outcomes? On this, the most important question, we provided 3 examples in cancer screening (ie, melanoma, neuroblastoma, and thyroid cancer).[3] Scientists know that high-quality evidence is