

Why our fear of cancer is outdated — and harmful

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David Ropeik, a former environmental journalist and retired instructor in the environmental management program at Harvard University's School of Continuing Education, is the author of "[Curing Cancerphobia: How Risk, Fear, and Worry Mislead Us](#)."

We need to rethink our fear of cancer. Our dread of the Emperor of All Maladies, learned decades ago, is now out of date and doing great harm on its own.

We have feared cancer more than any other disease since it became the No. 2 cause of death in the United States in the 1920s (after heart disease). Although the promise of “the cure” for cancer remains unfulfilled, we have made great progress. Cancer mortality in the United States is down 33 percent in just the past three decades. As many as two-thirds of all cancers can now be treated as chronic conditions or cured outright.

Yet our deep fear of the disease stubbornly persists. And no wonder. Progress notwithstanding, a diagnosis of cancer is still thought to be a death sentence. When a national survey asked people for the first word that came to mind when they heard the word “cancer,” more than half replied “death.” And, indeed, this family of more than 200 types of disease continues to be a cruel killer, of roughly 600,000 Americans a year. People we know. People we care for.

But for all that harm, consider the cost of our cancerphobia, a fear that in some ways no longer matches the facts.

We now know that tens of thousands of common breast, prostate and thyroid cancers that are detected early never go on to do any harm. People “overdiagnosed” with these types of cancer are understandably frightened and usually choose more aggressive treatment than their clinical conditions require. Such “fear-ectomies” cause great harm, leading to side effects that range from moderate to severe and include death itself. We spend an estimated \$5.2 billion a year on such clinically unnecessary treatment, 3 percent of the total spent on all cancer care annually.

The Centers for Disease Control and Prevention reported that in 2017, nearly 16 million people were screened for cancer even though they were younger or older than those for whom screening is recommended, based on who is more likely to be helped or harmed (by false positives, the side effects from follow-up diagnostic tests, and aggressive treatment for clinically non-threatening disease discovered in screening). We spend a minimum of \$9.2 billion per year on this overscreening.

A majority of people believe that most cancer is caused by environmental carcinogens. Yet we now know that cancer is principally a natural disease of aging, which allows DNA mutations that cause uncontrolled cell growth to accumulate. More than half of those diagnosed with cancer in the United States are at least 65 years old, while 87 percent of those who die of it are 50 or older.

Yet governments spend hundreds of billions of dollars each year to reduce the risk from environmental carcinogens, vastly more than on any other environmental health threat, including fine-particulate air pollution, which kills more than 100,000 people a year. We spend billions on organic foods, vitamins and supplements, as well as many other products that promise to reduce our risk of cancer but don't. The public has voted against fluoridating the drinking water in public supply systems serving 30 percent of Americans, despite a lack of evidence to support the fear that fluoridation is a cancer risk. Fear of ionizing (nuclear) radiation, a vastly smaller cancer risk than commonly believed, has driven the cost of building nuclear power plants so high that this source of non-greenhouse-gas-emitting energy struggles to compete in the energy marketplace.

Heart disease kills roughly 15 percent more people than cancer each year. Yet the National Cancer Institute budget is \$7.3 billion, while the National Heart, Lung, and Blood Institute spends only about \$2 billion researching and working on prevention of heart disease. There is no "war on heart disease," no "heart disease moonshot" to compare to the calls for a "cancer moonshot," a metaphor evoked since the Nixon administration and currently an initiative of the Biden administration.

Our fear of cancer resists change, in part, because of its psychological nature. We are instinctively more afraid of threats that are personified by victims we know, that cause great pain and suffering, and over which we have no control — which is why screening is so appealing, because it at least gives us something we can do to protect ourselves.

Cancer fear also resists change because our beliefs still rest on what we learned long ago. The public is mostly unaware of the quiet, incremental progress that has made so many cancers treatable or curable. Very few know that many common cancers never kill. Our deep faith in screening belies the evidence that it has only modest benefit and does great damage, something people don't realize because screening advocates have vastly oversold the benefits and practically never mention the harm.

We cannot absolutely cure cancer, nor will we ever entirely erase our cancerphobia. The disease is an intrinsic product of our biology. The fear is driven by ancient psychological instincts. But in the interest of both our individual and public health, we need to promote awareness of the progress we've made fighting cancer. We need to understand and battle both the disease and our fear, because both are doing terrible harm.

