

The raging cancer epidemic that isn't

Dan Gardner, *The Ottawa Citizen*

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The organizers of a conference being held this week at the University of Ottawa think we should be afraid. "In 2007, nearly half of all North American men and close to 40 per cent of women will be diagnosed with a malignant cancer at some point in life," wrote Liz Armstrong and Angela Rickman in a column published Tuesday in the *Toronto Star*.

"Cancer incidence in children has continued to rise since the early 1970s at one per cent a year. StatsCan reports that cancer is now, or soon will be, the number one cause of death." Chemical contamination of the environment is to blame. It was 45 years ago that Rachel Carson warned the world of this danger in *Silent Spring*, write Armstrong and Rickman -- both with a group called Prevent Cancer Now -- but still profits are "trumping health and safety" and countless people are paying with their lives.

Clearly, the authors would like us to be alarmed. Should we be? Yes. We should be alarmed that such codswallop can be published in a major newspaper.

Rachel Carson's famous 1962 book *Silent Spring* misused cancer statistics to suggest we were killing ourselves with chemicals, and Carson's modern disciples make exactly the same mistakes she did, Dan Gardner writes.

Let me start with that statistic about childhood cancers rising steadily since the early 1970s. I don't know the authors' source, but I do have a pretty definitive document called the Progress Report on Cancer Control. It was published by the Public Health Agency of Canada in 2004. On page 16, it has a neat graph that shows childhood cancer incidence rates rising between 1970 and 1985. Then they go flat. But don't take my word for it: "The overall incidence of childhood cancer has remained relatively stable since 1985," says the report.

But shouldn't we be frightened that the incidence rates rose between 1970 and 1985? Not really. For one thing, they rose from a very tiny level to a slightly higher but still very tiny level -- from 13 cases for every 100,000 children to 16.8 cases per 100,000 children. How tiny is that? It means the annual risk of a child getting cancer is 0.0168 per cent.

Another important thing to bear in mind is that incidence rates can climb for a host of reasons that have nothing to do with the actual prevalence of cancer. Introduce a screening program and you'll spot cancers that previously hadn't been detected -- including cancers that wouldn't have developed into life-threatening conditions if they had never been found. As a result, the incidence rate will rise even if the reality hasn't changed one bit. Improved detection methods or program expansions can have the same effect. Even better data collection can artificially boost incidence rates.

To sharpen the picture, cancer scientists also consult mortality rates. And the mortality rate for childhood cancers has been falling steadily and rapidly for decades. (To be clear, improvements in treatments mean mortality stats tend to underplay reality in the same way incidence data tend to exaggerate it.)

Then there's the claim that cancer will soon be "the number one cause of death." Unlike the previous factoid, this one has the virtue of being true. Sort of.

Yes, cancer is about to become the No. 1 killer. But that's not bad news. In fact, it's very good news. That's because, when population age and growth are factored in, Canada's cancer mortality rate is actually declining. That decline is not reflected in the "leading killers" list simply because the toll inflicted by the long-standing No. 1 killer, heart disease, is falling even faster, so it is about to drop to No. 2.

Doesn't sound so scary now, does it?

Ms. Carson made a similar mistake in *Silent Spring*, when she noted, with great alarm, that cancer "accounted for 15 per cent of the deaths in 1958 compared with only four per cent in 1900." What she didn't mention is that in the years between 1900 and 1958, massive improvements in public health all but wiped out major killers such as diarrhea and diphtheria. And tuberculosis: In 1900, it was the No. 1 killer; 58 years later, it had fallen out of the top 10. With other causes of death taking far fewer lives, the proportion of all deaths caused by cancer would have risen steeply even if the rate of cancer deaths hadn't changed in the slightest.

Something else the *Toronto Star* column shares with *Silent Spring* is a terrible mishandling of the "lifetime risk" statistic. In *Silent Spring*, it featured prominently, providing the title -- "One in Every Four" -- of the main chapter on cancer. Armstrong and Rickman would like us to conclude that because the lifetime risk figure is even higher now than it was in Carson's day, the situation has gotten that much worse.

What they leave out -- as environmentalists routinely do -- is that the primary risk factor for cancer is age. The longer you live, the greater your risk of cancer. If you know you will live to be 100 -- and wouldn't that be nice? -- it would be a good idea to bet the house that you will be diagnosed with cancer someday.

The problem here is obvious. Human life spans are getting longer and longer. In Canada, it's now slightly over 80. That's wonderful news, right? But that fact alone will steadily increase the lifetime risk of cancer.

In fact, if we all started to live to 100, our lifetime risk of cancer would approach 100 per cent. Would we find that scary? Would we say, in shocked tones, that "cancer will strike nearly every person"? Probably not. I suspect we'd consider it cause for celebration.

Conversely, if some new virus caused everyone to drop dead the moment they turned 35, the lifetime risk of getting cancer would fall through the floor -- but no one would be dancing in the streets.

Oh, and one more thing: Even if these statistics weren't misleading and there really were a cancer epidemic, there would be little reason to blame it on contamination of the environment by synthetic chemicals. The World Health Organization does not consider such contamination to be a major cause of cancer. Neither does any reputable scientific body.

For some, what I've written here is heresy and proof that I am in league with Satan and DuPont. Fine. Denunciations will be happily received at the e-mail address below. But for the rest of us, what matters is that the chemicals-are-killing-us view remains as wrong today as it was 45 years ago.