

Cancer incidence explodes among those under 50 years

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By: **Arthur Firstenberg**

The rate of cancer in people under 50 has increased considerably since 1990 in 44 countries, according to a study signed in October 2022 by an international team of scientists, notably from Harvard University. [The study, published in the journal *Nature Reviews Clinical*](#)

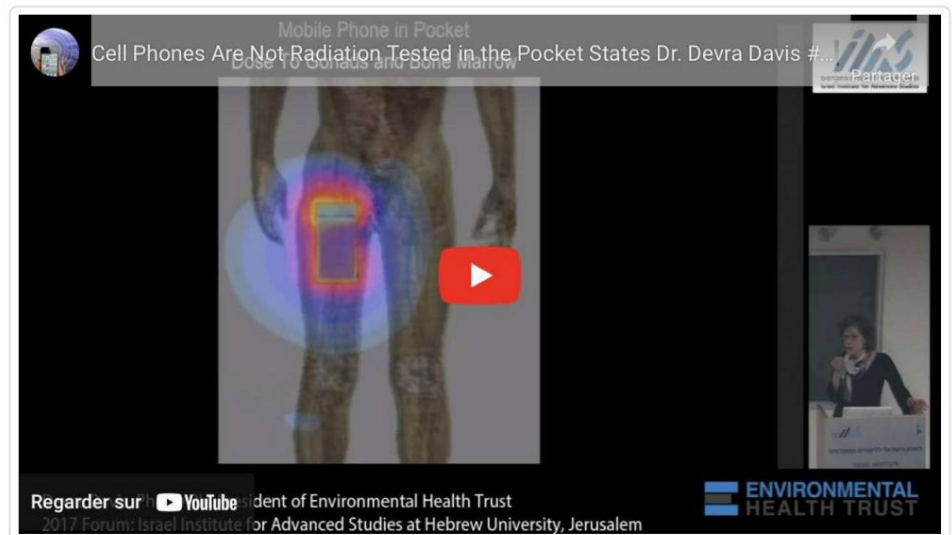
[Oncology](#), is titled "Is early-onset cancer an emerging global epidemic?" »

The authors speculate on various possible causes of this epidemic, including diet, lifestyle, obesity, microbiome and genetic predispositions, but are forced to conclude that there is no evidence that any of these factors is the cause of the global increase. Mention is made of ionizing radiation, but not of non-ionizing radiation such as radio frequencies from wireless technologies.

Journalist [Felice Freyer, who covers health for the daily *Boston Globe*](#), interviewed [two of the study's](#) authors along with six other cancer specialists about the results of this study, including one who speculated that environmental changes might be at play. I sent him a copy of my book *The Invisible Rainbow - A History of Cancer*. [electricity and life](#) accompanied by the following letter:

I read with interest your article dated July 22, 2023 in the *Boston Globe* entitled "[The rise in cancer among young people worries and intrigues doctors](#)". I also read the [Nature Reviews](#) article mentioned in your article ("Is early-onset cancer an emerging global epidemic ?

").



Studies suggest that prolonged carrying of a cell phone in a pocket or bra increases the risk of cancer.

I am also concerned about the increase in certain cancers among young people, but in relation to a very specific environmental factor: radio frequency (RF) radiation emitted by cell phones that young people carry most of the time. There is [abundant literature on this link](#), including a plausible causal mechanism. I believe that exposure to wireless technology, particularly cell phones, is the cause of most of the recent increase in cancer among young people.

Supplementary Table 1 of the Nature Reviews study lists trends for 13 cancer types in 44 countries. The types of cancer on the rise in at least 75% of these countries are precisely cancers of the organs most highly irradiated by cell phones: breast, [colorectal \(read this article in relation to the use of cell phones\)](#), the thyroid, prostate, endometrium and kidney.

During use, cell phones are held either right next to the thyroid gland or in front of the body near the breast. When not in use, but left on and emitting radiation, cell phones are most often kept in a back or side pocket, near the kidney or near the colon and prostate or prostate. uterus. The most exposed organ among those included in the study is the thyroid, the only type of cancer examined with an overall upward trend in each of the 44 countries (with the exception of Thailand, where the numbers did not not reached statistical significance).

I would also like to draw attention to testicular cancer, which this team has not examined. The testicles are also heavily irradiated by cell phones in pockets. And testicular cancer is not only on the rise among young people around the world, but in 2020 it was the most common cancer among men aged 15 to 44 in 62 countries around the world. (Ariana Znaor et al., Global patterns in testicular cancer incidence and mortality in 2020), *International Journal of Cancer* 151 (5): 692-698 (2022), <https://onlinelibrary.wiley.com/doi/pdf/10.1002/ijc.33999>.

And then, of course, there's brain cancer, which this team didn't look at either. The brain is even more irradiated by cell phones than the thyroid. Tumors of the brain and central nervous system are the second most common type of cancer today and the leading cause of cancer-related deaths among children and young adults. (JS Bell et al., Global incidence of brain and spinal tumors by geographic region and income level based on cancer registry data - *Journal of Clinical Neuroscience* 66: 121-127 (2019), <https://www.sciencedirect.com/science/article/abs/pii/S0967586818322252>).

There is a plausible mechanism. Electromagnetic fields interfere with the movement of electrons, including those in the electron transport chain in the mitochondria of each cell.

This slows metabolism and causes oxygen deprivation, leading to a dramatic increase in several diseases and disorders, for which the medical community is largely desperate in its search for an explanation. I'm referring to obesity, diabetes, heart disease and cancer. Reduced efficiency in digesting sugars and fats will lead to obesity, diabetes and heart disease, while cancer cells thrive in anaerobic conditions. And the Warburg hypothesis proposes that oxygen deprivation not only promotes cancer, but also causes it.

You may be interested in some of the following studies: • John G. West et al., Multifocal

breast cancer in young women with prolonged contact between their breasts and cell phones, *Case Reports in Medicine*, Volume 2013, Article ID 354682 ,
<https://www.hindawi.com/journals/crim/2013/354682>

• Michael Carlberg et al., Is the increase in thyroid cancer incidence in the Nordic countries due to the use of mobile phones?
International Journal of Environmental Research and Public Health 17, 9129 (2020), <https://www.mdpi.com/1660-4601/17/23/9129>

• Microwave News, Colorectal cancer explodes among young adults; are smartphones to blame?
Epidemiologist De-Kun Li wants to know, June 3, 2019, <https://microwavenews.com/news-center/de-kun-li-crc>

• I. Yakymenko et al., Long-term exposure to microwave radiation causes cancer growth: evidence from radar and mobile communication systems, *Experimental Oncology* 33 (2): 62-70, 2011),

<https://pubmed.ncbi.nlm.nih.gov/21716201/>

• In Seok Moon et al., Association between vestibular schwannomas and cell phone use, *Tumor Biology*. 35(1): 581–587 (2014),
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3907669>

• Lennart Hardell and Michael Carlberg, Mobile and wireless phone use and glioma risk – Analysis of pooled case-control studies in Sweden, 1997 to 2003 and 2007 to 2009, *Pathophysiology*22(1): 1- 13 (2015), <https://www.sciencedirect.com/science/article/pii/S0928468014000649>

• Briere, Jean-Jacques, Paul Benit, and Pierre Rustin. 2009. "The Electron Transport Chain and Carcinogenesis." » In: Shireesh P. Apte and Rangaprasad Sarangarajan, eds., [Cellular Respiration and Carcinogenesis](#) (New York: Humana), pp. 19-32.

• Thomas N. Seyfried and Laura M. Shelton, Cancer as a metabolic disease: implications for novel therapeutics, *Carcinogenesis*35(3): 515–527 (2014), <https://link.springer.com/article/10.1186/1743-7075-7-7>

• Thomas N. Seyfried., Cancer as a mitochondrial metabolic disease, *Frontiers in Cell and Developmental Biology*, Volume 3, Article 43 (2015), <https://www.frontiersin.org/articles/10.3389/fcell.2015.00043/full>

The history and causation of cancer in relation to electromagnetic fields is examined in chapter 13 of my book, [The Invisible Rainbow: A History of Electricity and Life](#) (White River Junction, VT: Chelsea Green 2020. Tr fr The Invisible Rainbow), a copy of which accompanies this letter. The book has 137 pages of bibliography.

I believe that the widespread use of cell phones, which began suddenly over the past 25 years, is responsible for the simultaneous and extraordinary increase in certain cancers among young people over the same period, and should be a factor analyzed in each study on the incidence, prevalence and causality of cancer today.

I look forward to reading any follow-up articles you may write on this topic.

I also sent a similar letter to each of the seven scientists she interviewed. Here are all their names and email addresses for those of you who wish to write to them:

- Felice Freyer, Boston Globe, felice.freyer@globe.com
- Dr. Tomotaka Ugai, Brigham and Women's Hospital, tugai@bwh.harvard.edu
- Dr. Andrew T. Chan, Massachusetts General Hospital, achan@mgh.harvard.edu
- Dr. Brian Wolpin, Dana-Farber Cancer Institute brian, wolpin@dfci.harvard.edu
- Dr. Heather Eliassen, Brigham and Women's Hospital, nhahe@channing.harvard.edu
- Dr. Timothy Rebbeck, Dana-Farber Cancer Institute,
timothy_rebbeck@dfci.harvard.edu
- Dr. Kimmie Ng, Dana-Farber Cancer Institute, Kimmie_Ng@dfci.harvard.edu
- Dr. Joel B. Mason, Tufts University, joel.mason@tufts.edu