

**United States Senate Committee on Health, Education, Labor and Pensions  
Hearing on Challenges and Opportunities for Cancer in the 21<sup>st</sup> Century**

**Written Testimony of Steve Case  
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Thank you, Chairman Kennedy for this opportunity to share my thoughts with this subcommittee, and for your commitment to this important issue.

My name is Steve Case. I co-founded America Online and spent two decades helping to make the Internet part of everyday life. Now I am the Chairman of Revolution, a company I started to give consumers more choice, control and convenience in important aspects of their lives. We are particularly focused on health care, and recently launched a new company called Revolution Health. In addition, I serve as the Chairman of Accelerate Brain Cancer Cure, ABC<sup>2</sup>, an organization I founded with my late brother Dan to drive collaboration and innovation in the field of brain cancer.

ABC<sup>2</sup> was formed with the belief that the entrepreneurial model that has enabled so many technological innovations offers the best hope to increase the number of potential therapies discovered and move them rapidly into the clinic for patients. ABC<sup>2</sup> takes an innovative, results-oriented approach to giving researchers the active support they need to make critical breakthroughs, and helps fund outstanding and novel translational research aimed at discovering new treatments to end the pain and suffering from brain cancer.

ABC<sup>2</sup> continues to play an active role not only in research, but also in advocacy. This past Sunday, as a kick off to Brain Tumor Action Week, I joined more than 7,000 patients, survivors, and family members who gathered on Pennsylvania Avenue to raise funds for research and increase awareness. I was inspired by the lasting commitment of those who have lost loved ones to brain cancer and also by the more than 200 survivors who kicked off the race.

From 1950 to 2001, the death rate from heart disease fell 60%, but during that same period of time, the death rate for cancer has not changed. I think it is clear to all of us that the 37 year old war on cancer has not had the impact that was envisioned.

My brother Dan was afflicted with glioblastoma multiforme (GBM), the most common form of brain cancer. Unfortunately, the prognosis for someone with a GBM is grim, with less than 50% of patients surviving more than a year following their diagnosis.

However, I am encouraged by new research emerging, much of which is being developed through collaborations between top brain cancer institutions, biotechnology companies, the National Cancer Institute and the FDA. For example, a new therapeutic option was presented recently – bevacuzumab - that appears to effectively cut off the blood supply to brain tumors and shrink them dramatically. While this treatment will not cure brain cancer, it appears to delay the disease, improve quality and quantity of life, and bide time for the next breakthrough.

Bevacuzumab serves as a positive example of what we can accomplish when researchers, investors, and patients work together under an entrepreneurial model. The lessons learned from the development of this treatment should be applied broadly and should signal the need for a new strategic approach to cancer research and treatment.

Indeed, I am not here today to argue for more money for brain cancer research. Rather, I am here to share my views on cancer more generally – and suggest how we might be able to apply some of the lessons learned from building the Internet to fighting cancer.

All too often, the battle for research money ends up pitting cancer groups against each other, in what they perceive to be a zero sum game – some will win, and others will lose. The fact of the matter is we are all in this together, and all of us will benefit from a more strategic, networked, technology-driven approach to cancer research.

There was a time when information services operated autonomously – but it was only when they were brought together by the Internet that we made real strides. Similarly, our focus in cancer must shift to a more integrated approach – recognizing that even the way we label cancers may very well turn out to be misguided, as we learn more about pathways and invent new more personalized, more targeted ways to treat patients.

Should we invest more in cancer research? Yes, absolutely, for the reasons you'll hear today from my distinguished colleagues. But the big breakthroughs aren't likely to come just from spending more money – they will come from changing how we spend money.

As is too often the case in business, ineffective approaches may be perpetuated simply because it was the way it was done before. While such an approach represents a comfortable path for many in large organizations, it also inevitably discourages innovation and institutionalizes inefficiencies. Since the mid 19<sup>th</sup> century we have classified cancer based on where it appears in the body rather than based on its molecular composition. This system has resulted in the creation of silos around cancer research, where scientists typically focus only on one type of cancer and rarely collaborate. In addition, it has created a climate where cancer advocates are all too often pitted against each other for limited research dollars.

We need to come together as one community committed to tackling cancer -- and move away from the model that treats cancer based on where it appears in the body and toward a model where we focus on signaling pathways, new technologies, biomarkers and novel clinical trials.

The National Cancer Institute has already made significant strides in this direction with the creation of the Cancer Genome Atlas—an attempt to discover the genetic underpinnings of cancer. By understanding cancer based on its genetic underpinnings, we are discovering that what we thought was one disease—breast or lung cancer—are actually several unique ailments. The Cancer Genome Atlas is currently analyzing brain, lung, and ovarian cancers, but should expand this vital work to all types of cancer. This will be a powerful tool which will better enable us to classify different types of cancers and improve treatment of the disease.

A key component of this new approach will be to increase funding of biomarker research. Biomarker research will redefine how diseases are classified -- not simply looking at their symptoms, but at their biologic underpinnings. What were thought to be single diseases are being split into separate ailments. If we better understand the pathways for different types of cancer, we will be able to target treatments more effectively.

As part of this strategic approach, we need to eliminate the restrictions that prevent NCI from pursuing the most effective collaborative models. Congress is well-intentioned but – in my view – somewhat misguided in earmarking large portions of the NCI budget to specific cancers, which deprives the NCI from being able to adopt a more strategic approach. Similarly, while there is always the risk of abuse, the policies now in place limit collaboration and slow innovation by making it difficult for the NCI to partner with for profit companies. We didn't preclude NASA from working with for profit companies when we wanted to reach the moon, similarly, we should not prevent NCI from pursuing the most effective model to find a cure for cancer.

We also need to think differently about managing risk. We are so good in this country about reporting when something wrong happens, but too often fail to highlight our progress. When it comes to cancer we need post-approval surveillance of therapeutics to report the positive outcomes, not just the side effects. We need to learn from each encounter cancer patients have with their doctors and act on that information. The technology is in place to allow us to share this information in order to improve treatment. If retailers can analyze data at each of their cash registers, there is no reason why America can't do the same with its cancer doctors.

Although there is much work still to be done to fight cancer there is reason to be hopeful. Some breakthrough collaborative projects are in place, and the initial results are encouraging. For example, I already mentioned the Cancer Genome Atlas, exactly the kind of networked strategic approach we need more of. Another project that could result in real breakthroughs is the National Cancer Institute Nanotechnology Initiative. These represent good first cross-disciplinary steps, but a much larger commitment to these sorts of strategic, collaborative initiatives is needed.

But as we focus on systems and technology and collaboration, as we must, let's not forget that this is all about people – about patients, and their families. Our health care system has been organized around the payers for the past half century – not around consumers. We need to put consumers – patients – back at the center of our health care system. For example, cancer patients need to be more empowered with information, and have the opportunity to take an even more active role in managing their care. This was one of the lessons I learned on a personal level, when my brother was battling his cancer.

My brother passed away, but the work of the organization he started lives on. I am proud of the strides we have made in driving collaboration and innovation in cancer research. But as I spent more time learning about the health care system, I concluded that more needed to be done – and that I needed to put my money where my mouth was. That led me to start a new company, Revolution Health. We are just getting started, and we recognize there is a long journey ahead, but we are hopeful that we can play a small role in improving our nation’s health care system. Our focus is on getting consumers more actively involved in thinking about and managing their health and the health of their loved ones, so they can live healthier, happier, and longer lives. Our efforts to really engage consumers, along with the creative efforts of many, many organizations, will hopefully set us on a path towards a health care system driven by consumers, shaped by market forces, and powered by technology.

I would like to thank the Committee for giving me the opportunity to join you today to share both my personal and professional and experiences – and passion -- around revolutionizing health care, and fighting cancer. I applaud your commitment and stand ready to assist you and the cancer research community to hasten the search for cures.

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