Catching Up with the Cancer Moonshot

In his final State of the Union Address, President Obama charged Vice President Joe Biden with leading an effort to dramatically accelerate the pace of cancer research. The goal is to make 10 years’ worth of progress in half the time. The program is called the Cancer Moonshot. It’s a reference to the U.S. push in the 1960s to be the first nation to put a man on the moon. It worked for space travel. Now the question is whether a big, government-funded initiative can turn the tide against cancer.

To find out, WebMD spoke to Walter Curran, MD, executive director of Winship Cancer Institute at Emory University in Atlanta. Curran will participate in a panel discussion on Wednesday at the annual Health Connect South conference in Atlanta called “Can the Cancer Moonshot Succeed?” The interview has been edited for clarity and length.

WebMD: What’s happened with the Cancer Moonshot so far?

Curran: Biden has been very busy and very engaged to learn all he can about the current state of cancer research in the country. He convened a panel that’s referred to as a blue ribbon panel to define priorities for this effort. The blue ribbon panel came out with this report just last week [Sept. 7].

All of us who have been involved with that are reviewing the recommendations and seeing what we think makes sense and what doesn’t make sense. I think it’s been an exciting process.

WebMD: Of the 10, were any especially important or interesting to you?

Curran: Many patients now do well on targeted therapies, and then for reasons we
don’t understand, those treatments stop working. So I think those goals to overcome resistance to targeted therapy and the goal to accelerate our progress using immunotherapy. I think those are critical. And I think the third is to expand prevention and early detection strategies. If I was going to say what are the three that could make the greatest difference, those are the ones I would identify.

WebMD: Do you think any critical areas were missed?

Curran: I was a bit disappointed in lack of explicit discussion as to the need to think about underserved communities and minority populations and what special consideration they should have in cancer research. That’s a focus here at Winship. For that not to be noted in this was surprising as well as disappointing.

WebMD: When the cancer moonshot was first proposed, it was proposed with $1 billion in funding, but it got started with a lot less than that, around $1 million. Has it been fully funded? What will happen to the program if it isn’t?

Curran: This Moonshot program is happening, I think, with a background of growing public support for cancer research. Some of that support is coming on the public side, where the overall NCI budget for the current fiscal year is notably higher than it has been in past years. That's independent of any Moonshot money. Also I think there’s been an acceleration of private philanthropy from a number of parties on a national basis.

I think these priorities are likely to remain as NCI priorities regardless of what transition we see in the executive office. I think a lot of them are really good steps forward.

WebMD: Is there more to it than money?

Curran: Probably national awareness. There are variable opinions about whether ‘Moonshot’ is the best analogy for cancer research. I think Moonshot tends to imply an engineering problem that once solved is settled. Cancer isn’t like that.

The biology, the development, the therapy and the care of cancer….it’s a lot different than a ‘Yes we have landed on the moon and we have reached our achievement.’ Because cancer is several hundred types of diseases. We're learning, even within a given malignancy, how many molecular subtypes there are. So while the name
‘Moonshot’ is simplistic, it, also, I think it helps with messaging and focusing.

I think what people need to be clear about is that this is not a strategy where anyone is stating where all cancers will be cured or prevented with this. The progress has been real and in some cases it has been amazing.

WebMD: Are there any types of cancer, or cancer diagnosis, that we can cure in the near future? You said progress had been really outstanding in some cases and I wondered if you could mention what those were.

Curran: There are many people with cancer who are cured now. The last number I saw, there are 16 million cancer survivors in the U.S. The majority of women with breast cancer are now cured. The majority of men with prostate cancer do not die of prostate cancer. Those are two common malignancies where death from cancer is less likely than living cured or with cancer.

Where we hope to see progress is in those cancers or those cases where cure or long term remission are not possible.

Over the last 10 to 15 years, our progress against the deadliest cancer, lung cancer, has truly been remarkable and most of it is due to improved understanding of the genetic variability of lung cancer. The fact that there are mutations that are referred to as driver mutations among many people with lung cancer, and we have drugs that can effectively target lung cancer subtypes. In lung cancer, that has truly been revolutionary.

WebMD: This isn’t the first time an administration has proposed something like this. Nixon started the War on Cancer. Can we point to tangible gains that have come out of big initiatives like this?

Curran: I think the results of Nixon’s War on Cancer have been extraordinary. There are diseases now that are curable now that were not curable then. Some of the greatest progress that came early on in his war on cancer was really the development of effective chemotherapy. There really was very little effective chemotherapy before that. The whole National Cancer Institute came out of that. So we absolutely do make big leaps forward.