Maximizing the Prospects for Progress Against Cancer

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Since the beginning of my training as an oncologist in 1996, I have often attended the American Society of Clinical Oncology (ASCO) annual meeting. This year's meeting, however, was the first where I had the honor of attending and speaking in my role as NCI director.

In my remarks at the meeting's opening session, I explained to the audience that I initially joined ASCO when I was a young oncologist-in-training. And that I did so out of abject fear—fear that I did not yet have the experience and expertise to provide the best care possible to the patients I was seeing. Joining ASCO was a way to change that. My patients needed a really good oncologist, and joining an organization like ASCO would help me become one.

The ASCO annual meeting is one of the most important events each year for clinical oncologists from around the world. Researchers and clinicians at every level will tell you that they always leave the meeting more informed, inspired, and connected than when they arrived.

It was gratifying to see so many NCI investigators and NCI-funded investigators reporting on their work at this year's meeting. And the breadth of that work—lab studies identifying biologic factors that can fuel treatment resistance, late-phase trials of new therapies, innovative supportive-care studies, to cite just a few examples—is staggering.

A number of study results presented at this year's meeting deservedly received a lot of attention and praise. Although there are too many to discuss them all, here's a sample of some results that I found to be particularly intriguing and that will change practice or have tremendous potential to do so:

- The 10,000-patient, NCI-funded TAILORx trial found that approximately 70 percent of women with the most common form of early-stage breast cancer do not need cytotoxic chemotherapy given after surgery to remove their tumors. By allowing clinicians to safely and confidently de-escalate therapy, these findings will allow thousands of women each year to be spared the physical and financial toll that can often come along with chemotherapy.

- An industry-funded phase 3 trial showed a nearly 40 percent improvement in median overall survival for some patients with advanced non-small cell lung cancer using a combination of the immune checkpoint inhibitor pembrolizumab (Keytruda) and classical cytotoxic chemotherapy.

- In a phase I clinical trial, an investigational targeted inhibitor of the RET kinase, Loxo-292, produced tumor response rates of nearly 80 percent in patients with advanced cancers (especially lung and thyroid cancer) whose tumors had alterations in the RET gene.

- In great results from a trial led by investigators from NCI's Center for Cancer Research, the MEK inhibitor selumetinib showed impressive efficacy in some children with neurofibromatosis type 1 (NF1). At the meeting, the NCI investigators reported that the drug substantially shrank tumors in many children with NF1 who had developed large tumors called plexiform neurofibromas that can cause significant health problems. Parents of several children on this trial have told me how this drug has been life changing for their children.

- From a phase 3 trial performed in Europe, researchers showed that, in patients with pancreatic cancer that could be removed by surgery, a four-drug chemotherapy combination (mFOLFIRINOX) led to dramatic improvements in how long patients lived compared with those who were treated with standard therapy. Although this is an important finding that should change the standard of care, it's important to note that most people diagnosed with pancreatic cancer already have inoperable or metastatic disease at the time of their diagnosis. NCI is funding efforts to develop ways to identify pancreatic cancer in its earliest stages so that more patients can be treated surgically.

- Initial results from three more treatment arms of patients in the NCI-MATCH trial were also presented at the meeting. The findings confirm that this innovative trial can identify "signals" that targeted therapies may have promise in specific patients or cancers and these drugs should be further studied in these specific groups.

Of course, there were many other important research findings presented at the meeting. But the examples I've cited demonstrate an important point about the state of cancer research and care right now.

I would argue that almost any of the results listed above would have 'stolen the show' at ASCO a decade ago. But now progress is coming so rapidly in cancer therapy that great results like these are beginning to seem commonplace. It feels like we've almost become inured to the progress we're making.

And our national statistics bear out this progress. As was just reported in the most recent Annual Report to the Nation, over the past 15 years, there has been a steady decline in overall cancer death rates in men, women, and children in the United States in all major racial and ethnic groups.

This long and sustained trend, which all indicators suggest will continue, includes major reductions in some cancer-related racial/ethnic disparities, as well as improvements in death rates for some of the most intractable cancers.

Given such progress, it is vital to point out that these successes have been very hard won—the result of decades of elegant and detailed basic science that have allowed us to have a more precise understanding of cancer biology. And as I said during my address to ASCO, we still don't have cancer totally figured out, so now is not the time to reduce our efforts in the basic investigation of cancer biology which are beginning to pay off so handsomely.

It is also important to acknowledge that despite these areas of hope and good news, there are many formidable challenges that remain for patients with cancer.

Although overall cancer death rates have declined, death rates for certain types of cancer—including brain, liver, and uterine cancer—have increased. Too many children diagnosed with cancer are still dying or having to endure lifelong toxicities as a result of their treatment. And we're just starting to come to grips with an increasingly common side effect of being diagnosed with cancer: financial toxicity.

To better address those challenges, I recently announced my four key focus areas as NCI director: a continued commitment to basic science, developing and preparing the cancer workforce, strengthening our data infrastructure, and enhancing the value of clinical trials. Following this approach will allow us, as a research community, to maximize our chances for achieving rapid and meaningful progress in cancer research and care.

And I'm confident that NCI can and should be the catalyst to make all of this happen.

As I told the ASCO audience in closing my talk, one of the biggest challenges we face as oncologists—or anybody involved in caring for patients or working to improve how we prevent and treat cancer—is managing expectations.

Of course, we don't want to overpromise and give people, especially patients, false hope. But too

many from my generation are afraid to be optimistic, too sheepish to ever use the word “cure.” But that’s what we want to do, cure our patients. We are, in fact, curing patients right now, more than ever, including those with metastatic cancer.

There is undoubtedly reason for carefully using that word, because we are dealing with an immensely complex disease that we still do not fully understand.

But I contend there are times to talk about curing cancer with patients and the public, because thanks to decades of progress in cancer science, now we have hope, we have options, and, sometimes, we even have cures.

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