Editorial

Have We Been Down This Road Before?

It's August as this is written; time for a few days out of the office. Thank goodness for patients with patience, colleagues of good will, and nurse practitioners of great ability.

But a vacation idyll does not slow the stream of oncology news updates finding their way to my laptop and phone, enabling me to stay abreast of the progress in our field, at least as understood by what the general public might read in the papers. Even better: there is good news! Scientists have clarified their vision of what causes cancer (The New York Times, August 15, 2011). Alas, though, it means overturning the old paradigm.

Remember the “hallmarks of cancer”—the idea that the fundamental derangement in cancer is the abnormal cancer cell? Forget about it. The key to cancer, it seems, is in everything else. Not the 2% of coding DNA, but the 98% of junk DNA. Not the cancer cell, but the surrounding stroma. Not even human tissues. The microbial genome—the genetic material of the bacteria with which we share daily existence—will be critical for appreciating how cancer develops. And it turns out that for each one of us, there are trillions of them. It all seems very different and interesting, and I’m sure that there are grants to be written and ideas to be explored. But it seems a long way from caring for patients with cancer. Undeterred by evolving scientific models, doctors actively caring for patients with cancer are still preoccupied with the cancer cell and with finding new ways to attack it.

Also recently, The New York Times (August 11, 2011) introduced the public to an elaborate procedure in which patients with abdominal tumors undergo surgery to fully extirpate all visible and resectable cancer and then are given an intraperitoneal dose of chemotherapy, warmed to supraphysiologic temperatures so as to more effectively kill residual cancer cells. This simmering chemotherapy is called HIPEC. The procedure is sufficiently controversial as to have generated debate at the ASCO meeting in June.

First, let us acknowledge the obvious, to which the Times alludes: no compelling data exist that this procedure helps patients compared with conventional therapies. For the record, no NCCN Guidelines currently endorse this approach. The enthusiasm at present is driven by preclinical hypotheses and limited success stories drawn from relatively small case series. Second, this procedure—expected to proliferate from 1500 to 10,000 patients per year—is driven by a potent mixture of good intentions and lucrative financial rewards. Finally, and perhaps most dispiritingly, studies to rigorously test the value of this approach have stalled because of dismal accrual. It seems that there is no equipoise.

All of this brings to mind 6 words: bone marrow transplantation for breast cancer. That situation too was characterized by heroic interventions, promising to succeed where conventional approaches too often fell short. Institutions and clinicians could reap large rewards while delivering treatments that seemed, at face value, to make sense. Why wouldn’t one want to cut out all the cancer? If some chemotherapy is good, wouldn’t more be better? Randomized trials can’t get off the ground because patients and doctors “know” that the most intensive approach must be the best one. These parallels should be sobering to those offering aggressive debulking and HIPEC procedures and should set off alarms among federal bureaucracies, clinical research communities, and third-party payors.

Cancer is a terrible disease. Its habits—despite decades of research and billions of dollars—remain inscrutable. Frustrated scientists try to think outside the box and look toward new avenues of research as standard models prove inadequate. Patients and clinicians are desperate for innovation and treatment that promise better outcomes than conventional therapy can offer.

New ideas are invigorating and might open new avenues that improve care. And yet, it often seems like we’ve been down these roads before.