Outcomes

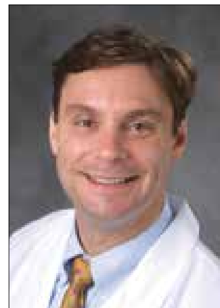
Outcomes: it's a buzzword in medicine these days. Outcomes research. Patient-reported outcomes. Health-related outcomes. Plenty of terminology is focused on this word, but what does it really mean?

Historically in cancer, drug therapy was referred to as chemotherapy, which in essence is poison. Poison the cancer slightly more than the patient, and as long as the patient didn't die, therapy was considered successful. Never mind that patients might experience intractable vomiting, neuropathy, or cytopenia, diminishing life as they knew it; if therapy reduced the cancer burden and delayed death from cancer, we considered it successful.

Fast-forward to today's medical climate: the therapies have evolved, but what about outcomes? With more specifically targeted drugs and more genetically defined cancers, one would think that our outcomes measures would move past modest improvements in median progression-free survival or overall survival, and into the realm of complete radiographic or molecular response, durable response, time off therapy, and—dare I say—cure. But most of our treatment indications and clinical data are based on median improvements. This is in direct contrast to what I find many of my patients and the public are interested in. Although my colleagues and I may be impressed by a hazard ratio that shows a 30% reduction in the risk of death for a population, what my patients frequently want to know is "What is the best-case scenario?" They are interested in the tail of the curve. And why, you might ask? Because patients are motivated by hope. Hope is the ultimate outcome that we so often leave out of our statistical analyses. It is difficult to quantify, and studies do not measure it. But it is the single most motivating factor for our patients undergoing treatment. And, what is the opposite of hope for our patients? Suffering.

Suffering brings us full circle in our discussion of outcomes, because it is perhaps the one factor that can negate hope. The field of oncology is based on measurement of the immeasurable. And so it is with suffering. We attempt to quantify suffering with a whole host of terms and measurements that all seem to miss the mark. We have adverse events, serious adverse events, treatment-related adverse events, grades of toxicities, pain scores, functional assessments, and patient-reported outcomes. These last measures may be our least biased assessments of suffering, but their use needs further refinement.

We have a truly all-star cast of authors for this May issue, who tackle a wide range of diseases and share their insights into treatment. Drs Pedro Exman, Sonia Pernas, and Sara Tolaney from the Dana-Farber Cancer Institute walk us through the management of HER2-positive breast cancer. Focusing on stage II and III disease, they guide us through the relevant trials and present a treatment algorithm to maximize the likelihood of a cure. This paradigm is one to emulate in other solid tumors. Next we have Drs Lucia Masarova and Srdan Verstovsek from MD Anderson Cancer Center updating us on the biology, genetics, and management of myeloproliferative disorders, while Dr Hagop Kantarjian, Chair of Leukemia at MD Anderson, gives us his insights on drug development in acute lymphoblastic leukemia and the recent approval of inotuzumab ozogamicin, a CD22 antibody bound to calicheamicin. This agent resulted in an 80% complete response rate and a 25% two-year survival rate. These results appear to represent a tail of the curve, and provide further hope for patients.



Dr Peter Bach, the world-renowned health policy and outcomes expert from Memorial Sloan Kettering Cancer Center, updates us on the escalating costs of cancer drugs and how to define value in this field. My colleague in prostate cancer at MD Anderson, Dr Sumit Subudhi, gives us an update on the hope and promise of immunotherapy for this historically "cold" tumor, while Dr Michael Overman, also from MD Anderson, outlines the benefits of immunotherapy in patients with mismatch repair–deficient colorectal cancer. Dr Kunal Kadakia and colleagues from the Levine Cancer Institute update us on the optimal duration of adjuvant treatments for colon cancer patients. Rounding out our issue is Dr Marc Braunstein of NYU Long Island School of Medicine, with insights from his first year in a hybrid academic community practice model.

It is May, which means the 2019 ASCO Annual Meeting is about to begin. The theme of this year's meeting is especially on the nose: "Caring for every patient, learning from every patient." With this most personal theme in mind, let us broaden our focus beyond the outcomes of large trials, and return to learning from individual outcomes.

Sincerely,

Daniel J. George, MD