In March of this year, the Hematology/Oncology Pharmacy Association (HOPA) held its annual meeting in New Orleans, LA. What made this meeting special is that it marked the 10-year anniversary of the conference and was highlighted by a special keynote lecture by John Kuhn, one of HOPA’s founding members, and its first president. Starting with approximately 30 founding members, HOPA has grown to more than 2000 members in 2014.

During this rapid expansion of HOPA, we have seen an equally impressive expansion of new agents in hematologic and in solid tumor malignancies. More than 20 new anticancer agents have been approved in the past 10 years, and many drugs (old and new) have received new indications in that same time frame. As we have learned more about the pathophysiology of cancer, we have not only been able to better use available agents, but scientists have also been able to develop drugs that target specific malignant processes or specific tumor characteristics.

A small representative example of some breakthroughs in the past 10 years includes:
- New agents for rare or difficult-to-treat cancers—such as renal-cell carcinoma, thyroid cancer, and melanoma—that are directed at previously unknown targets, such as the mTOR, RET, and mutated BRAF pathways
- Better use of previously approved agents, such as limiting EGFR inhibitors to KRAS wild-type colon cancer
- The first new drug for Hodgkin lymphoma in 30 years
- New versions of older chemotherapy agents, such as second-generation taxanes and other agents that target mitosis
- The rapid expansion of new agents for the treatment of common cancers, such as metastatic prostate and breast cancer.

This is just a short list of the many breakthroughs that have occurred in the past 10 years. With these breakthroughs have come increased challenges and opportunities for oncology pharmacists (as well as other oncology practitioners), including reimbursement challenges and the explosion of oral chemotherapy agents to name a few.

The *Journal of Hematology Oncology Pharmacy* (JHOP) is dedicated to bringing you such updates and breakthroughs, with the ultimate goal of improving patient outcomes.

In this issue of JHOP, Robert J. Ignoffo, PharmD, FASHP, FCSHP, discusses 2 new articles that illustrate the use of individualized patient tumor characteristics for making treatment decisions. The first study was a phase 1 dose-expansion trial of ceritinib, which was recently approved by the US Food and Drug Administration for the treatment of patients with anaplastic lymphoma kinase (ALK)-positive, metastatic non–small-cell lung cancer (NSCLC) who experience disease progression or intolerance to crizotinib.

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The individualized, patient-specific chemotherapy approach to care rather than a “one-treatment-fits-all” approach is a paradigm shift in the way we treat our patients and in the way healthcare providers need to constantly update their knowledge base to provide optimal patient care. This increased knowledge has led to the rapid expansion of new therapeutic agents.
The approval of this drug provides patients with this specific mutation another line of therapy for their disease. Patients in the phase 1 trial had an impressive 56% response rate to ceritinib after crizotinib failure, and this response was independent of the type of ALK-resistance mutations identified. 2

The second trial Dr Ignoffo discusses is a meta-analysis of chemotherapy or EGFR-directed therapy in patients with wild-type (ie, no positive predictive mutations) EGFR-positive NSCLC. 3 Although data have demonstrated that EGFR-targeted therapies have increased response rates in patients with mutations in exon 19 or exon 21, this clinical trial took the opposite approach and evaluated their effect on patients without EGFR mutations. 3,4 Not surprising, in this patient population, chemotherapy has superior response rates and superior progression-free survival. These results highlight the need to characterize each patient’s tumor to provide the best care for the patient, not for the general type of cancer, as has been done historically.

These 2 clinical trials provide a glimpse into how the landscape of oncology care has changed in the past 10 years. Treatment is no longer tumor-specific for a cancer such as NSCLC; rather, NSCLC is now characterized by its cell type (eg, adenocarcinoma), ALK-positivity, and EGFR mutational status before making a treatment decision. 5 This approach will continue to evolve in the next 10 years and will present healthcare providers many opportunities and challenges in the delivery of optimal care for their patients.

References