A P&T Snapshot of the Nation’s Progress Against Cancer

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Every hour, on average, 68 Americans die from cancer. Across the nation and around the globe, scientists labor to lower that number—and their efforts are saving lives. From 1991 to 2012, the U.S. cancer death rate fell 23% because of improvements in early detection, treatment, and prevention (notably a sharp reduction in smoking).1

Yet the toll remains staggering and the progress uneven. Cancer, the number-two cause of death behind heart disease, will claim nearly 600,000 American lives in 2016. Major advances have led to five-year relative survival rates in excess of 95% for prostate and thyroid malignancies, but just 17% of people live that long after a diagnosis of lung cancer, oncology’s leading killer. The five-year survival rate for pancreatic cancer is a mere 8%.1

With so much work remaining, the White House announcement in January of a new drive to find cures—labeled a “moonshot” by Vice President Joe Biden—created widespread interest. So P&T is devoting most of its issue in May (National Cancer Research Month) to oncology.

Our coverage of the “moonshot” summarizes the successes and challenges of the mission to date, exciting recent accomplishments, promising avenues for future research, and the role of the Food and Drug Administration (FDA).

As a snapshot of research progress, we offer six articles on specific medications in a Drug Forecast: Oncology Special Report.

Three of those drugs attack multiple myeloma. Panobinostat (Farydak, Novartis) is a new histone deacetylase inhibitor approved for use in combination regimens. Carfilzomib (Kyprolis, Amgen) and lenalidomide (Revlimid, Celgene) secured new FDA indications in 2015 that expand their roles in treating multiple myeloma.

Gefitinib (Iressa, AstraZeneca) reflects evolving approaches to lung cancer. A decade ago, this tyrosine kinase inhibitor of the epidermal growth factor receptor (EGFR) pathway was seen as failing to deliver on its initial promise. Further research, however, showed that specific genetic mutations predict patients’ responses to EGFR therapies, and in 2015, gefitinib secured FDA approval as a first-line treatment for non–small-cell lung cancer in patients with those anomalies.

Even when therapies work at first, patients can develop resistance to them. Trifluridine/tipiracil (Lonsurf, Taiho Oncology) offers an option for patients with metastatic colorectal cancer following treatment with certain medications.

While other malignancies claim more lives, none causes more cases than skin cancer. Sonidegib (Odomzo, Novartis) is a new systemic treatment for certain patients with locally advanced basal cell carcinoma.

We round out our coverage with highlights from HemOnc Today’s melanoma meeting and a Medication Errors column on the safe use of oral cancer drugs.

Will the cancer “moonshot” succeed? It’s an imperfect metaphor for a mission that may take far longer than the 1960s original. Still, as the articles in this issue prove, the journey is well under way.

REFERENCE