PEOPLE


Mass General Cancer Center

Michael Birrer, MD, PhD, became director of the Winthrop P. Rockefeller Cancer Institute in Little Rock, AR, replacing interim director Laura Hutchins, MD. Birrer was formerly the director of the O'Neal Comprehensive Cancer Center at the University of Alabama at Birmingham. He was also a professor of medicine at Harvard Medical School and the director of Gynecologic Medical Oncology at Massachusetts General Hospital and the Gynecologic Oncology Research Program at the Dana-Farber/Harvard Cancer Center, all in Boston.


Genentech

On January 1, **Levi Garraway, MD, PhD,** became chief medical officer and head of Global Product Development at Roche, replacing Sandra Horning, MD, who retired. Most recently, he was senior vice president of Eli Lilly's Oncology Research and Development and head of Lilly Research Laboratories Novel Target Research. Garraway has also served as director of the Joint Center for Cancer Precision Medicine, which includes Dana-Farber Cancer Institute, Brigham and Women's Hospital, and Boston Children's Hospital, as well as the Broad Institute of MIT and Harvard in Cambridge, MA. In 2010, he cofounded Foundation Medicine.


University of Illinois Cancer Center

In December, **Robert Winn, MD,** began his role as director of the Virginia Commonwealth University Massey Cancer Center in Richmond, replacing Gordon Ginder, MD. Previously, Winn served as director of the University of Illinois Cancer Center in Chicago and as associate vice chancellor of community-based practice at the University of Illinois Hospital and Health Sciences System. His research focuses on lung cancer, including mechanistic drivers of the disease and the role of cellular senescence.

Oncology Drug Shortages Persist

Over the past two decades, drug shortages have been an ongoing concern in the United States, leaving clinicians scrambling to ensure that patients can obtain needed medications. This issue has been particularly acute in pediatric oncology, and a recent shortage of vincristine, a chemotherapeutic commonly prescribed for children, illustrates how shortages occur and how treatment centers respond—and highlights the need for better strategies to avoid or mitigate insufficient supplies of lifesaving therapies.

"There are so many drug shortages in this country—not just oncology drugs but all kinds of drugs—that it is absolutely stunning; shortages are a fact of life," says Stacey Berg, MD, of Texas Children's Hospital and Baylor College of Medicine in Houston. In total, 2,688 drug shortages have occurred in the United States since 2001, 50% to 75% of which involved sterile injectables, a category that includes almost all chemotherapies prescribed for children. "These are the generic drugs that form the backbone of many of our therapies," says Peter Adamson, MD, of the Children's Hospital of Philadelphia in Pennsylvania.

Largely driven by economics, drug shortages occur predominantly in the United States, Adamson explains. "While the U.S. pays the most in the world for new drugs, they pay the least in the world for sterile injectables, and that has resulted in consolidation of U.S. suppliers, as well as many suppliers leaving the market," Adamson says. "What you're left with is a single supplier, and, especially for drugs that require sterility in manufacturing, a very fragile supply chain."

Adamson had long considered a shortage of vincristine—a cornerstone of treatment in pediatric oncology—a worst-case scenario. The shortage materialized after Teva made a "business decision" to stop producing the drug in July, perhaps due to its low price of less than $10 per vial. In August, Pfizer, the sole remaining manufacturer, began struggling to keep pace with a spike in demand. Other shortages have been caused by manufacturing problems.

When a shortage occurs, clinicians inventory their supply and begin conserving—for example, by adjusting treatment schedules. Companies and institutions may also redistribute the drug. In most cases, such steps are enough to ensure that patients receive the treatment they need, though not without creating undue stress. "It's sort of unbelievable that it's come to rationing when we hit shortage," Adamson says.

Although the vincristine shortage may soon be resolved—Teva announced in November that it will resume manufacturing the drug "as early in 2020 as possible"—Berg and Adamson expect shortages to continue, necessitating broader changes. In 2018, the FDA formed a Drug Shortages Task Force, which recently released a report that implicates a "broken marketplace" as a root cause of shortages, and outlined potential solutions—namely increasing understanding of shortages, giving manufacturers incentives to improve supply-chain monitoring, and promoting sustainable contracts with drug buyers (www.fda.gov/media/132059/download). The FDA also maintains a list of drug shortages (accessdata.fda.gov/scripts/drugshortages/default.cfm).

However, experts say that the FDA's solutions don't go far enough. Berg posits that the FDA could create a list of essential medicines and use its authority to guarantee access by offering incentives or subsidies to companies (JAMA Pediatr 2019;173:477–84). "Drug manufacturing represents critical public infrastructure, and we should make sure that there is a plan for continuing to provide those critical things," she says.

Adamson says the United States should develop a national drug reserve that could be tapped during shortages. The government could also establish contracts with manufacturers, thus stabilizing the drug market by guaranteeing a buyer. "I don't think we can continue to live without a realistic backup plan," he says.

–Catherine Caruso ■