Flynn Larsen of Chicago in Illinois, discuss an experiment. director of the Ludwig Center at the University of Chicago in Illinois. “We’re not restricted in how incredible opportunity,” says Geoffrey Greene, PhD, codirector of the Ludwig Cancer Research worldwide. To date, Ludwig Cancer Research has a collaborative network of acclaimed scientists with an endowment of $1.2 billion.

The centers combined with the Institute make up Ludwig Cancer Research, a nonprofit, international, collaborative network of acclaimed scientists with an endowment of $1.2 billion. To date, Ludwig Cancer Research has dedicated more than $2.5 billion to cancer research worldwide. “The donation provides us an incredible opportunity,” says Geoffrey Greene, PhD, codirector of the Ludwig Center at the University of Chicago in Illinois. “We’re not restricted in how we use it, so we can be creative, innovative, and use as much ‘out-of-the-box’ thinking as we want to.”

Greene and his colleagues plan to use the funds to recruit senior investigators and fund new initiatives to bolster their effort to better understand the genesis, progression, and management of cancer metastasis. Other centers are focused on areas ranging from immunotherapy and stem cell research to cancer prevention and early detection.

**Budgets Up at NIH, NCI, and FDA**

After a fiscally challenging year, scientific and medical research will feel some budgetary relief with the new federal spending bill signed into law in mid-January by President Obama, totaling $1.1 trillion for fiscal year 2014. Under the new budget, the U.S. Food and Drug Administration (FDA) will receive $2.552 billion, $166 million more than its post-sequestration 2013 budget, a 7% increase. Funding for the NIH will increase by $1 billion to $29.9 billion, a 3.5% increase, and funding for the National Cancer Institute (NCI) will increase by $140 million to $4.923 billion, a 2.9% increase.

Sequestration, which amounted to a 5% reduction of the NIH FY2013 budget applied evenly across all programs, projects, and activities, had wide-ranging effects. According to NIH Director Francis Collins, MD, PhD, the cuts not only increased competition for new grants, making it harder for new investigators and new ideas to be funded, but also slashed funds from existing grants that were already operating on tight budgets.

For the FDA, the bill goes beyond restoring the budget losses due to sequestration, although a large portion of the increase will cover food-safety activities mandated by a 2011 law. However, other agencies weren’t as lucky. The NIH budget falls $714 million short of pre-sequestration funding levels. The NCI budget increase makes up only about half of sequestration losses. In fact, in real dollars, NCI’s FY2014 budget falls short of its FY2009 budget of $4.968 billion.

“We should clearly express our appreciation to the Congress for being able to do that much in an incredibly difficult environment,” says Edward J. Benz Jr., MD, president of Dana-Farber Cancer Institute in Boston, MA. “On the other hand, it’s a partial make-up. It is not a solution to the fundamental weakening of the research enterprise that has resulted from a long history of dwindling funding that was exacerbated by sequestration.”

At Dana-Farber, sequestration delayed recruitment and indefinitely postponed development of various research centers. “Money that might have been used for new projects, new ideas, or for recruiting new investigators had to be diverted toward making up for the losses to existing labs,” says Benz.

The sequestration cuts of FY2013 came on top of budget cuts for the NIH and NCI that began in FY2011. Even without taking into account outright budget cuts, the NIH budget had not kept pace with biomedical inflation, an estimated increase in the prices of research equipment and supplies, in a decade. In January 2013, the NIH projected biomedical inflation levels of 2.7% for FY2014 and 2.9% for FY2015. “Resources are constrained, but there is still a lot of federal and non-federal money being spent on cancer research,” says Benz. “It’s incumbent on us to find the best way to use existing funding to make the biggest impact on patients.”

**Report Links Smoking to Poor Cancer Outcomes**

Fifty years ago, the landmark 1964 report Smoking and Health, issued by U.S. Surgeon General Luther Terry, MD, first linked smoking to lung cancer. The latest report, issued in January by Acting Surgeon General Boris Lushniak, MD, MPH, and available at www.surgeongeneral.gov, highlights successes of the resulting anti-tobacco movement and expands the long list of smoking-related health problems to include colorectal and liver cancers, diabetes, and rheumatoid arthritis, among others.

The comprehensive new report—the 32nd such document—is also the first to offer evidence documenting the harms of continued smoking for people with cancer. It notes that smoking increases all-cause mortality by at least 50% and cancer-specific mortality by 61% in cancer patients. Cancer survivors who
**NEWS IN BRIEF**

**NOTED**

- Woonsocket, RI–based CVS Caremark said that it will discontinue sales of tobacco products at its more than 7,600 CVS/pharmacy stores across the country by October 1, making the company the first national pharmacy chain to take this step in support of the health of its customers. “Put simply, the sale of tobacco products is inconsistent with our purpose,” said Larry Merlo, president and CEO of CVS Caremark. The move is expected to cost the company $2 billion in sales annually.

- The $1,000 human genome sequence is now a reality, according to San Diego, CA–based Illumina, Inc., making mass sequencing possible. The company’s CEO, Jay Flatley, introduced its HiSeq X sequencer, designed to process 20,000 genomes a year at a cost of $1,000 each, at the JP Morgan Chase & Co. health care conference in San Francisco, CA.

- Between 2005 and 2009, lung cancer incidence rates have dropped by 2.6% per year among men and 1.1% per year among women, according to a report from the Centers for Disease Control and Prevention. Among adults ages 35 to 44, the drop in incidence rates was even greater—6.5% per year among men and 5.8% per year among women. In all age groups, lung cancer incidence rates dropped more quickly among men than among women.

- Mylan Pharmaceuticals began marketing Hertraz (trastuzumab) in India. The drug is the world’s first biosimilar to Herceptin (Roche/Genentech).

- Due to insufficient enrollment, Aveo Oncology and Astellas Pharma have decided to discontinue a phase II trial of tivozanib in patients with locally recurrent or metastatic triple-negative breast cancer.

- In a study in the Annals of Oncology, researchers conclude that Europe may not have enough medical oncologists to keep pace with the rising toll of cancer (Ann Oncol 2014;25:525–8). The report shows that 12 countries, mostly in Western Europe, will probably have enough medical oncologists over the next 8 years, but researchers were not able to gather sufficient information from 15 other European Union members to assess their needs.

- U.S. Surgeon General Luther Terry, MD (standing), summarizes the findings of the report Smoking and Health at a 1964 press conference. It was the first American report to conclude that smoking causes lung cancer and chronic bronchitis.

Smoke are also at increased risk for second cancers caused by smoking—especially lung cancer, for which the risk is up to 24 times greater in current smokers compared with never smokers. That information isn’t new to most oncologists, says Benjamin Toll, PhD, director of the smoking cessation program at Yale Cancer Center and associate professor of psychiatry at Yale School of Medicine in New Haven, CT. What they may not be aware of are the strong data showing that radiation therapy does not work as well for current smokers.

“If you’re a radiation oncologist, it’s really important to strongly encourage your patients who smoke to quit,” says Toll, adding that research shows smoking can hamper surgery and chemotherapy outcomes as well. Smoking may also increase the risk for treatment-related toxicities, according to the Surgeon General’s report.

Yet, it is not routine for oncologists to discuss these risks with patients who smoke, says Toll, who helped review the report’s chapter on cancer. Toll hopes evidence from the 472 prospective studies summarized in the adverse health outcomes section prompts more oncologists to pay attention to their patients’ tobacco use.

Many cancer patients stand to benefit from cessation assistance, considering more than a third of cancer patients continue to smoke after diagnosis. For cancer patients who quit at diagnosis, the report suggests the risk of dying could drop by 30% to 40%.

Even so, few prospective studies have assessed the impact of smoking cessation at diagnosis compared to remaining a smoker, says Toll, noting that most of the research done so far has looked only at how continued smoking adversely affects cancer patients. “Rigorous studies are still needed to determine whether quitting smoking before treatment leads to a better outcome.”

For more news on cancer research, visit Cancer Discovery online at http://CDnews.aacrjournals.org.

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**CANCER DISCOVERY**

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