

hENT1, which has been shown to facilitate transport of gemcitabine across the cell membrane. Drug penetration was lowest in patients with dense, fibrotic tumors and low hENT1, and those patients also had the poorest responses to therapy.

The researchers then analyzed CT scans from 110 patients who had previously received presurgical gemcitabine-based chemoradiation. They noted a correlation between the absorption patterns of the dye used in CT scans and clinical outcome, suggesting a possible method for predicting the effectiveness of therapy.

“The IV dye used in CT scans acts as a surrogate for the chemotherapy that you would give intravenously. Knowing this, we could use the CT scan as a predictive study that could tell us which patients would respond poorly to therapy so we could hopefully use other drugs to modify that delivery,” explains Fleming. “For example, you could assess the hENT1 expression status and collagen density of the tumor, combined with imaging data, to get a profile of the expected efficacy of IV therapies in an individual patient.”

A patient predicted to respond poorly to chemotherapy, based on data from a CT scan and a biopsy, says Fleming, might receive a drug prior to chemotherapy that might alter the tumor’s blood vessels [such as the hypertension drug losartan (Cozaar; Merck)] to improve delivery of chemotherapy.

Preliminary data suggest that using imaging to predict responses to therapy may be effective for other types of solid tumors, says Fleming. ■

E-cigarettes Linked to Smoking among Teens

Electronic cigarettes, or e-cigarettes, are often promoted as smoking cessation aids, but among teens they may increase the likelihood of smoking conventional cigarettes, according to a new cross-sectional study reported in March (*JAMA Pediatr* 2014 Mar 6 [Epub ahead of print]).

E-cigarettes deliver nicotine-containing vapor without many of the toxins found in conventional cigarettes. Their use has climbed rapidly in recent

years, particularly among adolescents, according to the National Youth Tobacco Survey, designed by the Centers for Disease Control and Prevention (CDC) to assess smoking behavior among youth. In 2011, 4.7% of high-school students who responded to the survey reported trying e-cigarettes; in 2012, that number rose to 10%.

Lauren Dutra, ScD, and Stanton A. Glantz, PhD, of the Center for Tobacco Research and Education at the University of California, San Francisco, analyzed survey answers from the CDC’s national survey of teens who had ever experimented with cigarettes to better understand the connection between e-cigarette use and conventional smoking.

They reported that adolescents who had puffed on an e-cigarette were nearly eight times as likely to smoke conventional cigarettes as peers who had never tried one. In addition, teens who had never used e-cigarettes were three times as likely to have gone a year without smoking conventional cigarettes as those who had.

On the other hand, teenage smokers who used e-cigarettes were one and a half times as likely to intend to quit in the next year, compared with those who didn’t use e-cigarettes, suggesting that youth may be trying to quit using these devices. However, the survey did not include data on quit attempts.

Dutra points out that their study is based on data from the 2011 and 2012 surveys, and the e-cigarette landscape has changed dramatically in the last 2 years.

“Many products have popped up since then,” Dutra says. These new products, with names like hookah pens or vape pens, are often flavored to taste like fruit or candy and represent manufacturers’ attempts to market to kids and teens while steering clear of the term “cigarette.” They’re also likely causing a further uptick in the market. “I certainly think it’s likely that the numbers we saw for e-cigarette use were underestimated,” Dutra adds.

Because cross-sectional studies show only a snapshot of behavior at a given time, “we need longitudinal data to see if kids are starting with e-cigarettes and moving on to conventional cigarettes or not,” she says. ■

NOTED

- **President Obama released his budget proposal for fiscal year (FY) 2015, which recommends \$30.2 billion for the NIH,** a \$300 million increase over the current funding level of \$29.9 billion; the National Cancer Institute would receive a \$2 million increase, bringing its budget to \$4.931 billion. Even with the proposed increases, however, these amounts fall short of FY 2012 budgets.
- **Attorneys general from 28 states and territories sent letters to five of America’s largest retail chains, encouraging them to stop selling tobacco products in stores that have a pharmacy.** Kroger, Rite Aid, Safeway, Walgreens, and Walmart were asked to consider following the example set by CVS Caremark, which announced in February that it will stop selling tobacco in its stores by October 1.
- **The U.S. District Court for the District of Utah denied a request from Salt Lake City’s Myriad Genetics and other patent holders for a preliminary injunction against Ambry Genetics** to prevent it from selling tests to assess *BRCA1* and *BRCA2* mutations. Myriad filed suit against Ambry, of Aliso Viejo, CA, in July 2013, alleging that Ambry’s tests infringed on patent claims that were not invalidated when the U.S. Supreme Court ruled in June that genes cannot be patented because they are products of nature. Ambry can continue to offer its *BRCA* tests pending the lawsuit’s outcome.
- **The American Society of Clinical Oncology issued a comprehensive report on the cancer-related challenges facing the U.S. medical system.** *The State of Cancer Care in America: 2014* estimates that, due to an aging population, the number of cancer cases will increase by as much as 42% by 2025 while the number of oncologists will likely grow by just 28%, creating a shortage of nearly 1,500 doctors. In addition, the cost of cancer care, the report says, is likely to increase by 40% between 2010 and 2020.
- **The European Parliament approved new rules to ban advertising for e-cigarettes beginning in mid-2016.** E-cigarettes would also be required to carry graphic health warnings on their packaging, limit nicotine content, and be childproof.

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