

CML Study Links Imatinib Copayments to Adherence to Treatment

BY ROBERT H. CARLSON

There is nothing counter-intuitive about this finding from a recent study of patients with chronic myeloid leukemia (CML): The higher their copayment for imatinib, the more likely they were to discontinue or be nonadherent to treatment.

In the analysis of insurance records for 1,541 CML patients—online as an Early Release article in the *Journal of Clinical Oncology* (*doi: 10.1200/JCO.2013.52.9123*)—17 percent of patients with higher copayments discontinued treatment with tyrosine kinase inhibitors (TKIs) during the first 180 days following initiation versus 10 percent of patients with lower copayments.

Continued on page 14



Myeloma: Front-Line for Continuous 'Rd'

BY ROBERT H. CARLSON

NEW ORLEANS—Development of novel agents for multiple myeloma in recent years is bearing fruit, as treatment regimens move away from alkylating agents and toward immunomodulatory drugs and proteasome inhibitors.

Case in point: A plenary session report here at the American Society of Hematology Annual Meeting of the open-label Phase III "FIRST" (Frontline Investigations of Revlimid+Dexamethasone Versus Standard Thalidomide) trial (MM-020/IFM 07 01) showed lenalidomide plus low-dose dexamethasone to be superior in progression-free survival compared with the long-time standard of melphalan-prednisone-thalidomide (MPT), when given as front-line treatment for patients with newly diagnosed, transplant-ineligible myeloma.

Continued on page 16

Best Breast Cancer Research 2013

BY CYNTHIA X. MA, MD, PHD

With greater optimism in the fight against breast cancer, 2013 ended with discoveries that lend to a deeper understanding on the pathogenesis and progression of

breast cancer. Highlighted here are a few examples of these studies that are likely to shape breast cancer research and ultimately patient care in the future.

HER2 Mutation as a Therapeutic Target in HER2 Non-amplified Breast Cancer

• *Bose R et al: Activating HER2 mutations in HER2 gene amplification negative breast cancer. Cancer Discov 2013;3:224-237:* Bose et al demonstrated that HER2 somatic mutations in breast cancers that lack HER2 gene amplification are oncogenic and, importantly, are sensitive to treatment with the investigational irreversible HER-kinase inhibitor neratinib in preclinical models.

Continued on page 32

Momentum Building to Address Increased Cancer-Related Risks in LGBT Community

BY HEATHER LINDSEY

The goal of the meeting was to provide health care professionals with information about LGBT cancer risks, screening behaviors, and survivorship challenges, as well as help them with approaches to create an inclusive environment and give them the clinical communication skills needed in the care of LGBT individuals.

NEW YORK—Lesbian, gay, bisexual, and transgender (LGBT) individuals are more likely to smoke than their heterosexual counterparts—likely due to several contributing demographic, psychosocial, and unique risk factors, according to researchers at a meeting here last month at Memorial Sloan-Kettering Cancer Center focused on cancer in LGBT communities. Other cosponsors of the meeting were the National LGBT Cancer Network and the Callen-Lorde Community Health Center.

LGBT youth engage in a number of behaviors that put them at increased risk for cancer, including smoking, alcohol use, and lack of physical activity, said **Jose A. Bauermeister, MPH, PhD**, the John G. Searle Assistant Professor of Health Behavior & Director of the Center for Sexuality & Health Disparities at the University of Michigan School of Public Health.



“Although overall the lack of national data on tobacco use disparities in the LGBT community is disappointing, there has been a growing recognition about the intersection between sexuality and smoking,” he said. According to a new report from the Network for LGBT Health Equity published in January (<http://lgbthealthequity.wordpress.com/2014/01/16/tobacco-infograph-citations>), nearly 33 percent of the LGBT community smokes compared with 20 percent of the general U.S. population.

Additionally, LGBT consumers spend \$7.9 billion on cigarettes annually and smoke at rates that are 68 percent higher than the rest of the population. These data were released in light of the 2014 Surgeon General’s Report, which recognizes that the LGBT community experiences “significant disparities in tobacco use.”

LGBT Youth Have Higher Rates of Cigarette Smoking

LGBT youth are also at an increased risk of smoking, he said. For example, a 2011 study from the CDC (*MMWR* 2011;60[7]:1-133) evaluating high-risk health behaviors and sexual identity using Youth Risk Behavior Surveys (YRBS) in seven states found that LGBT students were more likely to engage in high-risk health behaviors such as smoking than their heterosexual counterparts were. In survey sites

that assessed smoking behavior and sexual identity, a median of 47.5 percent of heterosexual students reported having ever tried a cigarette, defined as one or two puffs, compared with a median 70.8 percent in gay or lesbian students, and 71.2 percent in bisexual students and 48.2 percent among students who were not sure of their sexual orientation.

For recent smoking, defined as cigarette use on at least one day during the past 30 days, the prevalence was a median 13.6 percent among heterosexual students, 30.5 percent among gay or lesbian students, 30.8 percent among bisexual students, and 18.2 percent among unsure students.

Another paper (*Arch Pediatr Adolesc Med* 2004;158:317-322) evaluating smoking in LGBT youth found that 38.7 percent of 16-year-old girls smoked weekly compared with 9.8 percent of their male counterparts.

Overall, “we have to start thinking about what’s going on across different environments, different social relationships, gender, and sexuality that could and could not be explaining some of these smoking disparities,” Bauermeister said.

Smoking Risk Factors

In another presentation, **Phoenix Matthews, PhD**, a clinical psychologist and Associate Professor of Health Systems Science at the University of Illinois at Chicago College of Nursing, said that demographic, psychosocial, and unique risk factors may be contributing to the increased prevalence of smoking in the LGBT population.

“In the general population, we know that age, race, ethnicity, and education are very strongly associated with risk for smoking, and these same smoking risk factors are apparent in research conducted in sexual minorities.”

For example, a 2006 study (*Subst Use Misuse* 2006;41:1197-1208) of men who have sex with men found that sexual orientation and younger age were risk factors for smoking. “Smoking was highest in the younger population and

decreased over time,” Matthews said. “We see this in the general population as well.”

Race and ethnicity may also play a role, she said, noting that although in general, African-American heterosexual women smoke less than their Caucasian counterparts, a 2008 study (*Subst Use Misuse* 2008;43:1218-1239) found that African-American lesbians were more likely than African-American heterosexual women or Caucasian lesbians to be smokers. These differences were largely due to education, with racial and ethnic minority lesbians with a high school diploma or less being more likely to smoke.



Psychosocial Factors

Psychosocial factors that contribute to smoking in the general population are depression, anxiety, other types of psychosocial distress, alcohol and substance use, experience with victimization, and coping with HIV/AIDS, Matthews continued.

Data clearly demonstrate that sexual minority women have a higher risk for depression than heterosexual women, she said, citing *Am J Public Health* 2002;92:1131-1139, and the literature also demonstrates that the same is true of alcohol use (*J Stud Alcohol Drugs* 2008;69:129-139). Men who have sex with men may also experience elevated levels of depression and alcohol use (*Subst Use Misuse* 2006;41:1197-1208).

Research also clearly demonstrates the excess risk of victimization among sexual minority women, she said (*Am J Public Health*. 2002;92:1131-1139). Victimization often includes both sexual and physical abuse during adolescence and is especially a problem among bisexual women. Childhood victimization increases the likelihood of victimization as an adult, which is a strong predictor of smoking status, she explained.

Finally, HIV-positive men are much more likely to be current smokers, and the habit can contribute to excess mortality in this population, said Matthews, noting data in the Network for LGBT Health Equity Report.

continued on page 27

LGBT

Continued from page 26

Unique Risks

One unique risk factor for smoking in the LGBT community is minority stress, which has been implicated in a whole host of risk behaviors, Matthews said. "Sexual minorities are also subject to pernicious targeting by the tobacco industry," which uses advertisements with messages of empowerment to sell cigarettes. The presence of antismoking messages in LGBT media outlets are also lacking compared with such messages in the mainstream media.

Another unique risk factor involves LGBT community attitudes and norms, she said. For some individuals, smoking has come to be associated with self-expression of being an LGBT person. Levels of acceptability of smoking make cessation challenging for some individuals.

Data also suggest that smoking cessation is not a priority issue within the LGBT community. Studies of LGBT organizations have found that because of funding from the tobacco industry, a strong stance is not taken on tobacco control, Matthews said.

Another unique risk factor for smoking is the importance of bars as a social venue for the LGBT community. Frequent attendance at LGBT bars increases current smoking risk by threefold, she said, referring to *Res Nurs Health* 2011;34:141-152. Moreover, the use of alcohol with smoking is a well-established relationship, she said, adding that with smoking bans, the activity has simply moved outside to the sidewalk.

Cancer Risk Factors in LGBT Youth

Another speaker, Francisco O. Buchting, PhD, Director of Grant Making and Community Programs at the Horizons Foundation, affiliate faculty at the Center for Population Research in LGBT Health, and Co-chair of the American Cancer Society's California LGBT Team, said that while researchers know LGBT youth exhibit a number of high-risk health behaviors, there is little information on cancer risk. Notably, the Surveillance Epidemiology and End Results (SEER) database of the National Cancer Institute does not collect data by sexual orientation, he pointed out.

However, a new analysis (*Am J Public Health* 2014;104:245-254) demonstrates that sexual minority youth report engaging in more behaviors associated with cancer risk than heterosexuals do, said the lead author, Margaret Rosario, PhD, Professor of Psychology at City College of New York|CUNY Graduate Center.

She and her colleagues pooled YRBS data from 2005 and 2007 to examine cancer-risk behaviors in sexual minorities in grades 9 through 12. Of an available sample of 65,871 youth, 7.6 percent were found to be a sexual minority.

The researchers studied 12 cancer-related risk behaviors: any smoking of

cigarettes; consuming tobacco by other means, including chewing tobacco or smoking cigars; drinking alcohol; binge drinking over the past 30 days; early intercourse and lifetime number of partners; more than one sexual partner in the past 90 days; not using a condom during last sexual intercourse; using alcohol or drugs at last sexual intercourse; higher body mass index (BMI); diet low in fruits and vegetables; purging via vomiting or laxatives; and lack of physical activity.

"Overall, the research underscores the need for early interventions."

Overall, LGBT youth were found to be twice as likely as their heterosexual peers to engage in smoking and alcohol use. "We tend to focus on just cigarette smoking but apparently chewing tobacco and cigars smoking are also problematic," Rosario said. "These are areas of tobacco use we really have to focus on." LGBT youth were also nearly twice as likely to binge drink.

Additionally, sexual minorities were two to three times more likely to engage in sexual risk behaviors such as not using condoms, having early sex or more lifetime partners, and having more than one partner in the last 30 days. An elevated risk of drug use during intercourse may be related to the unprotected sex that is occurring, she said.

Sexual minorities were more likely to be overweight and obese, and purging was four times more common in this population than in heterosexuals,

the data showed. This group was also less likely to participate in physical activity. They were, however, 30 percent more likely to have a diet high in fruits and vegetables than heterosexual youth, she said.

When the researchers stratified the subjects by gender, age, race, and ethnicity, the overall patterns relating to sexual orientation and health disparities persisted, Rosario said. "Sexual minorities are at risk for cancer later in life, I suggest, from a host of behaviors that begin relatively early in life. No sex or ethnic racial group is at greater risk or protected for these behaviors."

Overall, the study underscores the need for early interventions, she said.

LGBT Smoking-Cessation Programs

Unfortunately, culturally competent smoking-cessation programs are lacking in the LGBT community, Matthews said. Moreover, few intervention studies evaluate smoking outcomes among LGBT individuals.

"But there is some good news," she said. The NIH has started to fund intervention research in this area. Additionally, an LGBT smoking-cessation program affiliated with the University of Chicago called "Bitch to Quit" (<http://bit.ly/116YSrt>) is testing the question of whether culturally targeted interventions improve outcomes.

Also, information about best practices for LGBT smoking-cessation programs are readily available through organizations such as the National LGBT Tobacco Control Network (<http://lgbt-tobacco.org/resources.php>)

Usually, Matthews concluded, a direct recommendation from a health provider is the most effective way to work with people on their smoking-cessation efforts. ☐

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