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Cancer Screening Considerations and Cancer Screening Uptake for Lesbian, Gay, Bisexual, and Transgender Persons

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Abstract

Objectives: To describe the current state of cancer screening and uptake for lesbian, gay, bisexual, and transgender (LGBT) persons and to propose cancer screening considerations for LGBT persons.

Data Sources: Current and historic published literature on cancer screening and LGBT cancer screening; published national guidelines.

Conclusion: Despite known cancer risks for members of the LGBT community, cancer screening rates are often low, and there are gaps in screening recommendations for LGBT persons. We propose evidence-based cancer screening considerations derived from the current literature and extant cancer screening recommendations.

Implications for Nursing Practice: The oncology nurse plays a key role in supporting patient preventive care and screening uptake through assessment, counseling, education, advocacy, and intervention. As oncology nurses become expert in the culturally competent care of LGBT persons, they can contribute to the improvement of quality of care and overall well-being of this health care disparity population.

Keywords

lesbian; gay; bisexual; transgender; cancer screening; health disparities; nursing interventions

Cancer Screening Recommendations and Uptake for LGBT Patients

Lesbian, gay, bisexual, and transgender (LGBT) individuals have increased cancer risks. Beyond general population prevention and screening recommendations, there are no definitive cancer early detection and prevention guidelines specific to LGBT persons. In certain sub-populations and certain cancer screens there is lower screening uptake. For example, lesbian and bisexual women, in some studies, have lower rates of breast and cervical cancer screening than their heterosexual counterparts;¹ whereas Boehmer and colleagues² documented that gay and bisexual men had greater health care utilization (and so inferred greater screening uptake) than their heterosexual counterparts. Many actual and potential barriers exist for LGBT people that can contribute to a lack of screening uptake. LGBT people may experience discrimination from health care providers who lack specific cultural sensitivity training in the care of LGBT patients. LGBT individuals may also face contributing societal constraints, such as poverty, unemployment, lack of insurance, stigma, homophobia, racism, homelessness, or incarceration, further marginalizing the patient and potentially diminishing care quality. LGBT people may delay seeking care because of fears of discrimination and mistreatment, as well as financial costs. Despite an increased cancer risk for members of the LGBT community, cancer screening rates are sometimes lower for these underserved minority populations. The purpose of this article is four-fold: 1) to examine current challenges, disparities, and risk factors that LGBT persons face in the cancer screening processes; 2) review current cancer screening recommendations based on the American Cancer Society (ACS), the United States Preventive Screening Task Force (USPSTF), the Office of Disease Prevention and Health Promotion, and the Advisory Committee on Immunization Practices of the Centers for Disease Control and Prevention; 3) provide evidence-based considerations for certain cancer screening in LGBT persons; and 4) discuss the key role of oncology nurses and providers in preventive care through assessment, counseling, education, advocacy, and intervention.

LGBT Risk

The LGBT community comprises a significant portion of the population in the United States and warrants specific considerations when evaluating cancer risk. Population-based national and state surveys estimate that approximately 3.5% of US adults identify as lesbian, gay or bisexual.³ Additionally, a recent study by The Williams Institute found that 0.6% of adults, about 1.4 million individuals, identify as transgender.⁴ For individuals over the age of 50, 2.4 million individuals identify as members of the LGBT community, a number that is expected to double by 2030.⁵ These numbers may in fact be higher, given that many LGBT persons do not disclose their sexual orientation or gender identity status (SOGI) in national surveys and many surveys do not ask SOGI data. Importantly, the majority of medical intake data collection forms do not collect SOGI information.

For the purposes of cancer screening and early detection (and all health screening), the target individual is intended to be asymptomatic and of average risk. In the LGBT community, there is tremendous heterogeneity, as there is in the general population. Within each LGBT sub-population there is individual diversity. Quinn noted that, in fact, “... what each group

shares within the community is a common stigmatization as a sexual or gender minority for which little health research, particularly cancer related, has been conducted.”⁶ (p. 385)

LGBT people may have certain risk factors and behaviors that can predispose them to cancer. The 2015 National Health Interview Survey data report that current cigarette smoking in adults 18 years and older in the US as gay, 19.6%; lesbian, 16.1%; straight male, 16.7%; straight female, 13.6%; bisexual male, 26.8%; and bisexual female, 20.9%.⁷ In the National Epidemiologic Survey on Alcohol and Related Conditions, with a large national sample of 34,653 adults, 20.1% of lesbians and 25.0% of bisexuals reported past-year heavy quantity drinking, compared with 8.4% of heterosexual women. Past-year alcohol dependence was reported by 13.3% lesbian and 15.6% bisexual women, compared with 2.5% of heterosexual women. Gay men reported past-year heavy quantity drinking 18.1%, bisexual men 16.4%, compared with 13.7% of heterosexual men. Past-year alcohol dependence was reported by 16.8% gay men and 19.5% bisexual men, compared with 6.1% heterosexual men.⁸ Gay, bisexual, and transgender men have higher risk for sexually transmitted disease because of unsafe sexual practices; gay men, lesbian, and bisexual women have higher risk for developing eating disorders or obesity because of poor body image and depression; LGBT persons have elevated risk for depression, anxiety, psychological distress, suicidality; certain higher cancer risks and, in some settings, lower cancer screening rates; and increased challenges in cancer survivorship.⁹⁻¹² Older LGBT patients were found to have a higher prevalence of engaging in risky behaviors such as smoking, excessive alcohol use, and unsafe sexual practices.⁵ Furthermore, LGBT older adults are reported to have worse mental and physical health compared with heterosexual and cisgender (that is, a gender identity that matches the sex assigned at birth) older adults.⁵

While female-to-female HIV infection is rare,¹³ there are other risks that may put lesbians at risk for HIV infection. These include injection needle use and unprotected sex with HIV-infected males. Behaviors do not always fall in line with identities, such that a woman may identify as a lesbian (identity), but may also have sex with men (behavior). For example, in a large population-based study of men in New York City, of the population that self-described themselves as heterosexual, nearly 10% had had sex with a man at least once in the preceding year. These men were more likely to be foreign born, of racial/ethnic minority, lower SES, and not use a condom on the most recent sexual encounter with a man.¹⁴

Men who have sex with men have a higher lifetime risk of developing HIV and, if so, are at increased risk for the AIDS-defining and associated cancers. The Centers for Disease Control and Prevention estimated the lifetime risk of various groups to be diagnosed with HIV in the United States.¹⁵ The highest-risk group was men who have sex with men (MSM) who have a lifetime risk of 1 in 6, with Hispanic/Latino men 1 in 5; and white men 1 in 11. Heterosexual males were the lowest-risk group (1 in 524). The most concerning finding is the prediction that 1 in 2 black/African American gay and bisexual men will be diagnosed with HIV in their lifetime, the highest risk for all study cohorts. African Americans represent 14% of the US population, but 44% of all new HIV infections. In addition, there is an estimated unrecognized infection rate of 12.8%.¹⁵

In an analysis of 88,504 patients from 18 European and North American HIV cohorts between 1996 and 2010, life expectancy in 20-year-old patients starting anti-retroviral therapy increased nearly 9 years in women and 10 years in men.¹⁶ There is a lifetime cost of HIV treatment estimated at approximately \$400,000.¹⁵

In evaluating seven site-specific cancers, Quinn et al.⁶ documented that HIV-positive men had a significantly higher prevalence of anal cancer (45.9 per 100,000 person-years) compared with HIV-negative men (5.1 per 100,000 person-years) and compared with the overall incidence in the general population (1.5 per 100,000 person-years). HIV status has been linked to higher cancer prevalence and mortality rates in some cancers. In 2015, Coghill and colleagues¹⁷ linked cancer and HIV registries in six states and showed higher cancer mortality in HIV-positive patients compared with HIV-negative patients for colorectal, pancreas, larynx, lung, melanoma, breast, and prostate cancers. Even after adjusting for cancer treatment, HIV-positive patients continued to have higher cancer mortality rates in colorectal, melanoma, and breast cancers.

With higher tobacco, alcohol, and recreational drug use reported in LGBT populations, the associated significant health risks must be noted. Bisexual men and women report the highest rates of alcohol use and alcohol-related problems compared with heterosexual counterparts.¹⁸ Cigarette smoking remains the most preventable cause of cancer death. Cigarette smoking increases risk of cancers of the oropharynx, larynx, lung, esophagus, pancreas, uterine cervix, kidney, bladder, stomach, colorectum, and liver, as well as acute myeloid leukemia.¹⁹ Connor²⁰ reported causal association of alcohol consumption with cancers of the oropharynx, larynx, esophagus, liver, colon, rectum, and female breast. Therefore, in addition to the known cancer risks of tobacco use, it is incumbent on providers to advocate for risk-modification behaviors for LGBT patients regarding tobacco and alcohol use, and to provide maximum support in these efforts. It is important to let patients who use tobacco know not to be discouraged if they attempt to quit and fail. The biggest predictor of successful cigarette smoking cessation is previous quit attempts. Clinicians should encourage any and all interventions for patients to quit tobacco use (eg, pharmacologic, nicotine replacement [patch, gum, lozenge], hypnosis, acupuncture, self-help books, quit lines, etc.).

For substance abuse, it is estimated that 20% to 30% of gay and transgender people abuse substances, compared with about 9% of the general population. This may be a way to cope with the stresses of discrimination and stigma.²¹ Clinicians should offer support and appropriate referrals to patients who use substances. Substance use may be tied to underlying depression or other psychological concern and so, as noted previously, it is key to address psychological problems that may occur as well.

As with all clinical encounters, the provider must meet and know the patient as a unique individual, and must know the patient within the social and cultural context of the population where the patient is situated. The provider must also consider the concept of intersectionality, what cultures and identities the patient is part of, and impacted by, which may constitute multiple cultures and related identities (eg, age, generation, race/ethnicity,

sexual orientation, gender identity, socioeconomic status [SES], geographic region, religion, political affiliation, etc.).

LGBT people face a health care system that often lacks cultural sensitivity and, as such, represents a significant barrier to seeking care. Twenty-eight percent of transgender individuals reported delaying needed medical care because of fear of discrimination.²² In addition, one in four transgender persons faces insurance problems specifically related to being transgender, and 33% of survey respondents identified having had at least one negative experience with their health care provider in the past year.²³ There will be significant implications throughout a patient's life, if there is a lack of preventive and cancer screening for LGBT individuals. Allowing the opportunity for self-report and discussing SOGI with patients has a significant clinical impact on the development of the plan of care and, ultimately, the care the patient receives.

Highest Risk: People of Color, Transgender, Low SES, Overall Well-Being

When evaluating the LGBT community, attention must be paid to the highest risk groups within this minority population. Transgender individuals are perhaps the most marginalized minority group in the LGBT community. Transgender patients frequently report experiencing discrimination in health care settings, and face a health system that lacks personnel who are adequately trained and competent in transgender medicine.²⁴ The National Center for Transgender Equality national survey found that 39% of transgender people reported having experienced serious psychological distress.²³ In addition, 40% of transgender people reported having attempted suicide in their lifetime, and 7% attempted suicide in the past year.

Unemployment, lack of insurance, or being underinsured, being of low SES, and being a person of color also represents high risk for LGBT people. Compared with the national unemployment rate (5%), transgender people are three times more likely to be unemployed and nearly one third of the National Center for Transgender Equality respondents reported living in poverty.²³ There is clear evidence in the literature that disparities exist in racial minorities, those with low SES, and those uninsured or underinsured of higher cancer incidence, advanced stage of disease at diagnosis, and worse survival outcomes.²⁵

In general, LGBT people report lower overall well-being than heterosexual and cisgender counterparts. The lower well-being is in the domains of financial constructs (eg, low standard of living, low ability to afford basic necessities, high financial worry); personal and behavioral constructs (alcohol, drug, tobacco use; current disease burden; past diagnoses; exercise; eating habits); social constructs (relationships with friends and family, personal time, receiving encouragement and support); community well-being (community pride, involvement, safety, security); and purpose well-being (having an inspiring leader, goals, strengths).²⁶ LGBT people are at higher risk for some mental and behavioral health conditions, such as depression, anxiety, and substance use.²⁷ Meyer²⁸ described minority stress and its relationship to mental health in urban-dwelling gay men. The stressors of internalized homophobia (negative impressions of self), stigma, and experiences of discrimination and violence were associated with poor mental health and high levels of

distress. Therefore, it is important to screen for psychological well-being, depression, and other psychiatric disorders.

Cancer and Distress Screening in LGBT Patients

Cancer screening in the LGBT community requires clinicians (such as oncology nurses) to play an active role in identifying and removing barriers to accessing medical care. A landmark survey on discrimination against LGBT people noted LGBT respondents and respondents living with HIV reported having been denied necessary health care, being treated with harsh or abusive language, and being treated by health care professionals who used excessive precautions, or who were physically rough or abusive.²⁹ In addition, survey respondents of color and low income reported this substandard treatment at higher levels. This type of treatment will not only delay care but may cause the individual person to withdraw from care entirely.

Evaluating how LGBT cancer patients disclosed their SOGI status to their providers, a national study of LGBT cancer survivors found that 58% of the patients brought up the subject themselves (often as a way to correct a mistaken assumption of heterosexuality). Only in 19% of the patients was self-disclosure available on the intake form.³⁰

There are clinical implications for recognizing a patient's sexual orientation and gender identity. By obtaining this key demographic information, the clinician's ability to deliver compassionate quality cancer care is increased. Patients note that there is more comfort, better patient-provider relationships, and more individualized care when the provider knows the patient's SOGI status and, therefore, sees the patient as a whole person.³¹ The provider will have a better understanding of the patient, the patient's condition, and the appropriate treatment. For example, if the patient were able to be open with the provider and reveal SOGI status and receptive anal sex, the greater the likelihood that the provider may be proactive in screening; and that the patient will welcome the screening recommendations.

The best and promising practices proposed by the LGBT HealthLink and the National LGBT Cancer Network organizations include the collection of SOGI data, training staff in cultural competency in the care of LGBT patients, development and use of LGBT-tailored cancer screening guidelines, and engagement of competent LGBT patient navigators to allow for early detection and prevention of cancer in LGBT patients.³² Opportunities for providers to capture SOGI data may increase with regulatory requirements of health care records. The Center for Medicare and Medicaid Services has incorporated guidelines that require electronic health care records to have SOGI data collection incorporated to meet Meaningful Use Guidelines as part of the Center for Medicare and Medicaid Services Stage 3 initiatives. A challenging barrier to LGBT cancer research is the opposition to support specific LGBT-focused research, in deference to the purely biomedical and fundamental science perspective.¹ The Surveillance, Epidemiology, and End Results Program of the National Cancer Institute lacks sexual orientation and gender identity data, as does US Census data, and thus limits researchers' ability to focus on LGBT cancer risk and prevalence and screening needs at a national level. In recent years, however, the Department of Health and Human Services has made strides and commitments to support and improve

the care, health, and well-being of LGBT communities through a variety of related initiatives. A number of national surveys now include sexual orientation, birth sex, and gender of sex partners. Testing is ongoing for gender identity survey questions. As of this writing, the ongoing funding and sustainability of these measures and efforts is in potential jeopardy with the current federal administration.

Another challenge to the collection of SOGI is lack of physician understanding as to why those data are important. A single site and national survey of physicians affiliated with an NCI-designated cancer center showed the majority had low levels of knowledge of LGBT health issues, but positive attitudes toward obtaining continuing education.³³ Further, 74% stated they did not inquire about their patients' SOGI status, as they "treat all patients the same."³⁴ Additionally, NCI-designated cancer centers were surveyed about their policies and practices for the collection of SOGI data.³⁵ Of the 20 responding centers (from 45), all said they collect gender identity in the form of binary (Male or Female) in initial intake forms and four have a place in the medical record to record additional categories of gender if the patient requests. Perhaps more importantly though, 18 of the 20 centers had some form of advisory board to assist with LGBT health issues, which suggests acknowledging the need to create inclusive environments. NCI-designated cancer centers often set the stage for standards of cancer care, so it is vitally important that best practices in the collection of SOGI data be implemented and utilized in these centers, which will improve our understanding of LGBT cancer risk, prevention, treatment, and survivorship.

Distress Screening

Distress screening is a recommended standard of care that has been shown to improve overall patient outcomes and may have potential to improve LGBT health screening. The National Comprehensive Cancer Network and the American College of Surgeons Commission on Cancer recommend screening for distress as a standard of care for all cancer patients. Because all patients are screened at one or a number of pivotal visits, stigma may be reduced and motivation increased to share personal information that otherwise may not have been communicated. Distress screening programs have progressed to the point that patients (and increasingly partners) are educated about biopsychosocial problems endemic to cancer, encouraged to share deeply personal concerns, and receive tailored resources.

Given the health care disparities LGBT patients face, distress screening may identify unmet needs that can help the provider to better care for the patient and to garner resources to assist the patient. Emerging technology to gather consumer data is moving into the health care arena, using touch screen-based distress screening tools aimed at gathering patient self-report data and giving the multidisciplinary providers a summary list of potential needs for the patient. A study on the use of one such technology called SupportScreen (City of Hope, Duarte, CA) found that communication between patients and providers improved through this data collection methodology. Patients and, in some cases, partners are screened at first visit for surgical patients and second visit for medical oncology and hematology patients. Patient self-reported results to a full battery of biopsychosocial queries (average time to complete 15 minutes) identifies barriers to care and unmet needs. Real-time tailored educational materials are printed and documented, along with triage to pre-determined

professionals. All data are maintained on a server for program development and research. The tablet-based data collection allows for efficient and effective screening of cancer patients, immediately available responses, and tailored referrals and interventions to the patient-specific needs.³⁶

Prevention and Cancer Screening in LGBT

Clark and colleagues³⁷ provide a comprehensive review of cancer screening in lesbian and bisexual women and transgender men; and Blank et al.³⁸ provide a comprehensive review of cancer screening in gay and bisexual men and transgender people. These authors note mixed results on breast, cervical, and colorectal screening comparing sexual minorities screening behaviors with the general population literature. More recently, McElroy and colleagues³⁹ compared cancer screening behaviors for heterosexual, lesbian, and bisexual women in Missouri. They found no difference in the proportion of women who had ever obtained breast, cervical, or colorectal cancer screening. Clavelle et al.⁴⁰ report that sexual minority women may have a higher breast cancer risk than heterosexual women. Austin et al.⁴¹ also showed that mammography and colorectal screening rates varied only minimally by sexual orientation. In a survey sample on cervical cancer screening, lesbian women who screened less frequently noted fear of discrimination and perceived less benefit from screening. However, 2015 National Health Interview Survey data show the following: women in the United States who are 40 years and older had mammography within the past year = 62.0% lesbian and 50.1% straight; and had mammography within the past 2 years = 78.2% lesbian and 64.3% straight. Women in the US ages 21 to 65 years had cervical cancer screening = 73.6% lesbian, 81.8% straight, and 79.8% bisexual. Adults 50 years and older in the US had colorectal cancer screening with combined stool/endoscopy of 71.8% gay/lesbian, 62.7% straight, and 53.2% bisexual. Men 50 years and older in the US had prostate cancer test within the past year = 44.2% gay and 34.4% straight.⁴²

Lesbian

Lesbians and bisexual women may be at increased risk for breast, cervical, and ovarian cancer compared with heterosexual women, but there are no specific screening guidelines for lesbians and bisexual women. Risk factors include higher use of tobacco and alcohol, nulliparity, and being overweight with high-fat diet.⁴³ Sexual minority women, lesbians, and bisexual women are recommended to follow screening intervals similar to heterosexual and cisgender women.⁴⁴ In screening for breast cancer, the ACS (Table 1), the USPSTF (combined in Table 2), and the Office of Disease Prevention and Health Promotion (combined in Table 2) recommend mammography screening every 1 to 2 years for women age 40 years or older, with or without clinical breast examination.⁴⁴⁻⁴⁷ Regarding cervical cancer, women between the ages of 21 to 65 are recommended to undergo Pap smear every 3 years or every 5 years with combination cytology and human papillomavirus (HPV) testing for women between the ages of 30 to 65 years. However, about 30% of young lesbians and bisexual women in one study had not undergone cervical cancer screening in the past 3 years;⁴⁸ and only 49.5% of transgender men had had Pap smear screening within the past 3 years and 31.9% of transgender men had never had Pap smear screening.⁴⁹ In both studies, a majority of lesbians, bisexual women, and transgender men preferred self-sampling to

screen for cervical cancer, versus a provider-administered Pap smear. For transgender men who had avoided preventive health care because of discrimination or cost, the men were significantly more likely to express a preference for self-sampling.

There are no screening recommendations for endometrial cancer. The ACS recommends that at menopause women should be informed about the risks and symptoms of endometrial cancer. Women are encouraged to report spotting or bleeding to their providers.

In ovarian cancer, lesbians and bisexual women may be at an increased risk because of higher rates of nulliparity and decreased hormonal contraceptive use. However, ovarian cancer screening is not recommended for average-risk patients, regardless of orientation or behavior.⁴⁸ In the PLCO (Prostate, Lung, Colorectal, Ovarian) cancer screening randomized controlled trial, women in the intervention arm received evaluation of CA-125 tumor marker annually for 6 years and transvaginal ultrasound annually for 4 years, in addition to routine care.⁴⁹ This screening did not reduce ovarian cancer mortality and false-positive tests were associated with surgical interventions and complications. The large scale UK Collaborative Trial of Ovarian Cancer Screening has shown an “encouraging” approach to ovarian cancer screening, but requires additional follow-up to proceed with policy recommendations about the benefits of this screening approach.⁵⁰ The study used multi-modality screening with annual CA-125 and a risk of ovarian cancer algorithm. Based on the risk (low, medium, high), more frequent CA-125 was performed, and with the addition of transvaginal ultrasound as a second-line test. In a secondary analysis where prevalent cases were censored, this approach was associated with a statistically significant 20% reduction in mortality overall and a 28% reduction in mortality in years 7 through 14 of follow-up.

Transgender

As a general approach to cancer screening in transgender people, Deutsch⁵¹ notes that there is insufficient evidence to state whether transgender people have increased or decreased cancer risk overall, or organ-specific cancer risk. She recommends that clinicians provide organ-based routine cancer screenings for all transgender patients, using current guidelines. She goes on to note “As a rule, if an individual has a particular body part or organ and otherwise meets criteria for screening based on risk factors or symptoms, screening should proceed regardless of hormone use.” Noting that transgender people are nearly five times more likely to live with HIV, and nearly one in five black transgender women reports living with HIV,²³ it is incumbent on clinicians to screen HIV-positive transgender people for the AIDS-defining cancers (Kaposi sarcoma, non-Hodgkin lymphoma, and cervical cancer) and to be aware of the higher risk of HIV-infected individuals to other malignancies, including anal, liver, lung, and Hodgkin lymphoma.⁵² In Table 3, specific issues in screening for transgender women and men with past or current hormone use are presented.²⁴

Gay

In gay, bisexual, and MSM who are asymptomatic and sexually active, annual screening is recommended for HIV, syphilis, Chlamydia, and gonorrhea.⁵³ HPV is a common sexually transmitted infection, and is a major cause of cervical, anal, and mouth cancers.⁵² A

systematic review of cancer in the MSM community found that anal HPV prevalence is higher regardless of HIV status.⁵⁴

With regard to prostate cancer screening, there are no specific screening guidelines for gay, bisexual, or MSM.¹ In an update on screening for prostate cancer in April 2017, the USPSTF recommends that clinicians discuss the potential benefits and harms of PSA (prostate-specific antigen) screening for prostate cancer in men ages 55 to 69. The USPSTF does not recommend PSA-based screening in men 70 years of age and older.⁵⁵ Again, with a thorough assessment of the GBT population, and recognizing they may present as populations with higher risk, we suggest more aggressive screening with PSA and digital rectal examination. For example, it is known that when prostate cancer occurs in younger men in the 4th and 5th decade of life, the cancer tends to be more aggressive than the benign, indolent prostate cancers that are expected in the 6th, 7th, and 8th decades of life.⁵⁶ The higher incidence, age of onset, and worse outcomes of prostate cancer are associated with African Americans, thus giving pause again to consider more aggressive and early screening, in spite of the USPSTF recommendation. While there is the risk of over screening and possible subsequent over treatment, in special populations, the evidence would suggest that more aggressive screening is in order. As noted above, for a transgender female whose prostate gland is intact, routine screening is recommended, with the suggestions noted here.

For anal intraepithelial neoplasia and anal cancer, although screening with anal cytology does occur in practice, it is not widely recommended in guidelines. This is a controversial arena for discussion in cancer screening. The reader is referred to two excellent reviews of screening and treatment for anal intraepithelial neoplasia and anal cancer.^{57,58} Each author acknowledges the significant increased incidence of anal cancer in HIV-positive men (which approaches the incidence of colorectal cancer in the general male population [pooled anal cancer incidence in HIV-positive men, 45.9 per 100,000 men;⁵⁹ and total colorectal male incidence between 2009 and 2013, 46.9 per 100,000 men⁶⁰]). Leeds presents the two screening and treatment algorithms used by the University of California San Francisco and Johns Hopkins centers.⁵⁸ However, there remains significant controversy about the ability to meet expected screening criteria for anal pap smear, anoscopy, ongoing recommended screening, and treatment algorithms. Contention exists as to whether anal cancer screening and anal dysplasia treatment should occur only in the context of research protocols,⁵⁷ or whether such access should be expanded to high-risk populations in dedicated clinics.⁶¹ Gay, bisexual, and transgender people are encouraged to seek out providers who are knowledgeable about these issues and concerns, who have expertise in such screening and treatment procedures (or appropriate oncology referral), and to make informed decisions about this level of care.

Oropharyngeal cancer, while associated with HPV, does not require special screening beyond medical and dental examination.⁵³ The Centers for Disease Control and Prevention/Advisory Committee on Immunization Practices recommends HPV vaccination for all boys at age 11 or 12 years (or as young as 9 years); older boys through age 21 years, if they did not get vaccinated when they were younger; gay, bisexual, and MSM through age 26 years, if they did not get vaccinated when they were younger; and men with HIV or weakened

immune systems through age 26 years, if they did not get vaccinated when they were younger.⁵⁹

In addition to routinely recommended adult vaccinations, Hepatitis A and B vaccines are recommended, given the sexual transmission of both of these viruses. There have also been outbreaks of invasive meningococcal meningitis in New York City and Los Angeles. Some states and counties have recommended meningococcal vaccination to prevent infection in MSM, particularly those who are HIV-positive.

Cancer Specific Screening for All

Based on the National Lung Screening trial, which showed a 20% reduction in lung cancer mortality, the USPSTF now recommends annual low-dose computed tomography screening for individuals between the ages of 55 and 80 and who have at least a 30 pack-year smoking history, quit within the last 15 years, or continue to smoke.⁶²

When screening for colon or rectal cancer, the USPSTF recommends colorectal cancer screening for all men and women starting at the age of 50 until age 75.⁴⁷ Additionally, the ACS recommends that men and women at age 50 should receiving either: flexible sigmoidoscopy every 5 years, colonoscopy every 10 years, double-contrast barium enema every 5 years or computed tomography colonography every 5 years.⁴⁵ Similar recommendations were made by the American College of Gastroenterology.¹

Conclusion

A tide swell of positive change continues to take shape regarding the visibility of, and acceptance into, the broader mainstream society and culture of the LGBT population. Still, major social, racial, ethnic, and health care disparities persist, as do homophobia, discrimination, and lack of understanding of LGBT people's unique health care needs. We see this inequity in health care access and care delivery, including cancer screening. Three recent position papers are noted here because of the significant impact they will have on improving the quality of LGBT cancer care and are reviewed more thoroughly in the final article of this issue. These are the *Annals of Internal Medicine Position Paper on Lesbian, Gay, Bisexual, and Transgender Health Disparities from the American College of Physicians*,⁶³ the *American Society of Clinical Oncology Position Statement: Strategies for Reducing Cancer Health Disparities Among Sexual and Gender Minority Populations*,⁶⁴ and *The American Cancer Society's Approach to Addressing the Cancer Burden in the LGBT Community*.⁶⁵

These organizations are increasingly invested in understanding and addressing the health care disparities that disproportionately affect LGBT people and how those disparities impact the delivery of quality cancer care throughout the continuum. Each proposes steps to provide more clinically and culturally competent care to LGBT people; to impact positive healthy behaviors and minimize risky health behaviors (beginning in childhood and youth when behaviors are formed); to endorse, fund, support, and carry out sexual orientation and gender-identity data collection and research to improve health care overall and cancer care to

LGBT people; and to advance the training and education of the health care workforce to better care for LGBT people.

Illness creates stress, cancer creates crisis, and being an oppressed minority creates social isolation, acute vulnerability, demoralization, and depression. The costs to the individual, family, and society are enormous. Oncology nurses are absolutely essential to the humanizing of health care. Driven by values and inherent respect for the full human experience, nurses are the most trusted of health care professionals.

Nurses are essential to the screening process. Nurses are frontline, patient-facing professionals who can impact screening uptake and care follow through. Oncology nurses work with patients at all stages of human development and throughout the cancer continuum. Nurses can recommend and confirm that screening based on nationally published guidelines (Tables 1-3) is appropriate to the individual and has been carried out. Adherence to screening may improve the quality and quantity of life for the patient. Knowing the patient population and risk, nurses may also take into consideration the evidence-based observations made herein for high-risk patients and their associated screening needs.

Nurses are in a unique position to counsel patients on risk behavior modifications and support health-endorsing behaviors. The nurses' understanding of all health screening recommendations, and the implications of screening, special considerations for this at-risk population, both primary care and cancer-specific, will serve patients well.

Oncology nurses are in key positions to advance the science and quality of care for LGBT patients. By knowing the patient, being present for the patient, understanding events as they have meaning in the life of the patient, continually supporting, informing, educating, validating the patient's experience, and maintaining belief, the nurse can positively impact the patient's quality of life, quality of care, self-efficacy, and adherence to cancer screening and all aspects of care.⁶⁶

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TABLE 1.

ACS Recommendations for Early Detection of Cancer in Average-risk Asymptomatic Adults^{*,25}

Cancer Site	Population	Test or Procedure	Recommendation
Breast	Women ages 40–54	Mammography	Women should undergo regular screening mammography starting at age 45 years Women ages 45–54 should be screened annually Women should have the opportunity to begin annual screening between the ages of 40 and 44
	Women ages 55+		Women ages 55 years should transition to biennial screening, or have the opportunity to continue annual screening. Continue screening as long as overall health is good and life expectancy is 10 + years
Cervix	Women, ages 21–29	Pap test	Cervical cancer screening should begin at age 21 years; for women ages 21–29 years, screening should be done every 3 years with conventional or liquid-based Pap tests.
	Women, ages 30–65	Pap test and HPV DNA test	For women ages 30–65, screening should be done every 5 years with both the HPV test and the Pap test (preferred), or every 3 years with the Pap test alone (acceptable)
	Women, ages 66+	Pap test and HPV DNA test	Women ages 66 + who have had 3 consecutive negative Pap tests or 2 consecutive negative HPV and Pap tests within the past 10 years, with the most recent test occurring in the past 5 years, should stop cervical cancer screening
	Women who have had a total hysterectomy		Stop cervical cancer screening
Colorectal	Men and women, aged 50 years, for all tests listed	gFOBT with at least 50% sensitivity or FIT with at least 50% sensitivity, OR	Annual: Testing stool sampled from regular bowel movements with adherence to manufacturer's recommendation for collection techniques and number of samples is recommended; FOBT with the single stool sample collected on the clinician's fingertip during a digital rectal examination is not recommended; "throw in the toilet bowl" FOBT's also are not recommended; compared with guaiac-based tests for the detection of occult blood, immunochemical tests are more patient-friendly and are likely to be equal or better in sensitivity and specificity. There is no justification for repeating FOBT in response to an initial positive finding; patients should be referred for colonoscopy
		Multitarget stool DNA test, [†] OR	Every 3 years, per manufacturer's recommendation
		FSIG, [‡] OR	Every 5 years alone, or consideration can be given to combining FSIG performed every 5 years with a highly sensitive gFOBT or FIT performed annually
		Double-contrast barium enema, [‡] OR	Every 5 years
		Colonoscopy, OR	Every 10 years
		CT colonography [†]	Every 5 years
Endometrial	Women at menopause		At the time of menopause, women should be informed about risks and symptoms of endometrial cancer and encouraged to report unexpected bleeding to a physician
Lung	Current or former smokers ages 55–74 in good health with 30 + pack-year history	LDCT	Clinicians with access to high-volume, high-quality lung cancer screening and treatment centers should initiate a discussion about annual lung cancer screening with apparently healthy patients ages 55–74 who have at least a 30 pack-year smoking history, and who currently smoke or have quit within the past 15 years. A process of informed and shared decision making with a clinician related to the potential benefits, limitations, and harms associated with screening for lung cancer with LDCT should occur before any decision is made to initiate lung cancer screening. Smoking cessation counseling remains a high priority for clinical attention in discussions with current smokers, who should be informed of their continuing risk of lung cancer. Screening should not be viewed as an alternative to smoking cessation

Cancer Site	Population	Test or Procedure	Recommendation
Prostate	Men, aged 50	PSA test with or without digital rectal examination	Men who have at least a 10-year life expectancy should have an opportunity to make an informed decision with their health care provider about whether to be screened for prostate cancer, after receiving information about the potential benefits, risks, and uncertainties associated with prostate cancer screening. Prostate cancer screening should not occur without an informed decision-making process

Abbreviations: CT, computed tomography; FIT, fecal immunochemical test; FSIG, flexible sigmoidoscopy; gFOBT, guaiac-based fecal occult blood test; HPV, human papillomavirus; LDCT, low-dose helical CT; Pap, papanicolaou; PSA, prostate-specific antigen.

* All individuals should become familiar with the potential benefits, limitations, and harms associated with cancer screening.

† All positive tests must be followed-up with colonoscopy.

TABLE 2.

Preventive Care and Screening Benefits for Adults

Preventive Services/Measures	Target Audience
Abdominal aortic aneurysm one-time screening ^{*,†}	Men of specified ages (65–75) who have ever smoked
Alcohol misuse screening and counseling	All
Anal intraepithelial neoplasia and anal cancer	No current recommendations exist. See discussion and reflect on individual patient consideration [‡]
Aspirin use to prevent cardiovascular disease ^{*,†} and colorectal cancer [‡]	Men and women ages 50–59
Blood pressure screening	All
BRCA risk assessment and genetic counseling/testing	Screen women who have family members with breast, ovarian, tubal, or peritoneal cancer with one of several screening tools designed to identify a family history that may be associated with an increased risk for potentially harmful mutations in breast cancer susceptibility genes (BRCA1 or BRCA2). Women with positive screening results should receive genetic counseling and, if indicated after counseling, BRCA testing
Breast cancer screening	Screening mammography for women, with or without clinical breast examination, every 1 to 2 years for women age 40 years and older [‡]
Breast cancer preventive medications	Engage in shared, informed decision making with women who are at increased risk for breast cancer about medications to reduce their risk. For women who are at increased risk for breast cancer and at low risk for adverse medication effects, clinicians should offer to prescribe risk-reducing medications, such as tamoxifen or raloxifene [‡]
Cholesterol screening	All ages 40–75
Cervical cancer screening	Screening for cervical cancer in women ages 21 to 65 years with cytology (Pap smear) every 3 years or, for women ages 30–65 years who want to lengthen the screening interval, screening with a combination of cytology and HPV testing every 5 years [‡]
Colorectal cancer screening	All over age 50 [*] and continuing until age 75 [‡]
Depression screening	All
Diabetes (Type 2) screening	All adults with high blood pressure [*] and cardiovascular risk in adults aged 40–70 who are overweight or obese [‡]
Falls prevention	Community-dwelling adults age 65 years and older who are at increased risk for falls
• Exercise or physical therapy to prevent falls	
• Vitamin D supplementation to prevent falls	
Healthful diet and physical activity for cardiovascular disease prevention	In July 2017, the USPSTF published its final recommendation statement on behavioral counseling to promote healthful diet and physical activity for cardiovascular disease prevention in adults without known risk factors The USPSTF recommends that primary care professionals individualize the decision to offer or refer adults without obesity who do not have hypertension, dyslipidemia, abnormal blood glucose levels, or diabetes to behavioral counseling to promote a healthful diet and physical activity. Existing evidence indicates a positive but small benefit of behavioral counseling for the prevention of CVD in this population. Persons who are interested and ready to make behavioral changes may be most likely to benefit from behavioral counseling [‡]
Help with healthy eating and physical activity promotion	Adults at risk for heart disease, overweight or obese, diabetes, or additional CVD risk factors
Hepatitis B screening	People at high risk

Preventive Services/Measures	Target Audience
Hepatitis C screening	Adults at increased risk, and one time for everyone born 1945–1965
HIV screening	Everyone aged 15 to 65 should be screened for HIV infection. Teens younger than age 15 and adults older than 65 also should be screened if they are at increased risk for HIV infection. All pregnant women, including women in labor who do not know their HIV status, should be screened for HIV infection
Immunization vaccines <ul style="list-style-type: none"> • Diphtheria • Hepatitis A • Hepatitis B • Herpes zoster • Human papillomavirus (HPV) • Influenza (flu) • Measles • Meningococcal • Mumps • Pertussis • Pneumococcal • Rubella • Tetanus • Varicella (chickenpox) 	Adults (doses, recommended ages, and recommended populations vary)
Intimate partner violence screening: women of childbearing age	Screen women of childbearing age for intimate partner violence, such as domestic violence, and provide or refer women who screen positive to intervention services. This recommendation applies to women who do not have signs or symptoms of abuse
Lung cancer screening	Adults 55–80 at high risk for lung cancer because they are heavy smokers or have quit in the past 15 years [*]
Obesity screening and counseling	All
Ovarian cancer screening	There are no recommended screenings for ovarian cancer. In July 2017, the USPSTF reaffirmed its 2012 statement that there are no accurate screening tests for ovarian cancer and the sequelae of false-positive tests outweighs potential benefits of screening [†]
Prostate cancer screening	The potential benefits and harms of PSA-based screening are closely balanced in men ages 55 to 69 years. The decision about whether to be screened should be an individual one. For men age 70 years, the potential benefits do not outweigh the harms, and these men should not be screened for prostate cancer [‡] Please refer to discussion and reflect on individual patient consideration [§]
STI prevention counseling <ul style="list-style-type: none"> • Syphilis • Chlamydia • Gonorrhea • HIV • Hepatitis B 	Adults at higher risk [*] Intensive behavioral counseling for all sexually active adolescents and for adults who are at increased risk for STIs. [‡] Screening for Chlamydia and Gonorrhea in sexually active women age 24 years or younger and in older women who are at increased risk for infection [‡]
Skin cancer behavioral counseling	Counsel children, adolescents, and young adults ages 10–24 years who have fair skin about minimizing their exposure to ultraviolet radiation to reduce risk for skin cancer
Tobacco use screening	All adults and cessation interventions for tobacco users

^{*} Office of Disease Prevention and Health Promotion: <https://www.healthcare.gov/preventive-care-adults/>.

[†] US Preventive Services Task Force: <https://www.uspreventiveservicestaskforce.org/Page/Name/uspstf-a-and-b-recommendations/>.

[‡] Authors' suggestions for consideration.

Abbreviations: CVD, cardiovascular disease; HPV, human papillomavirus; Pap, papanicolaou; PSA, prostate-specific antigen; STI, sexually transmitted infection; USPSTF, United States Preventive Screening Task Force.

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TABLE 3.
Specific Issues in Screening for Transgender Women and Men With Past or Current Hormone Use

	Transgender Women (MTF)	Transgender Men (FTM)
Breast cancer	Discuss screening in patients >50 years with additional risk factors for breast cancer [*]	Intact breasts: routine screening as for natal females Postmastectomy: yearly chest wall and axillary exams [†]
Cervical cancer	Vaginoplasty: no screening	Cervix intact: routine screening as for natal females No cervix: no screening
Prostate cancer	Routine screening as for natal males	N/A
Cardiovascular disease	Screen for risk factors	Screen for risk factors
Diabetes mellitus	On estrogen: increased risk	Routine screening [‡]
Hypertlipidemia	On estrogen: annual lipid screening	On testosterone: annual lipid screening
Osteoporosis	Testes intact: routine screening as for natal males Post orchiectomy: screen all patients >65 years Screen patients age 50 to 65 years if off hormones for >5 years	Screen all patients >65 years Screen patients age 50 to 65 if off hormones for >5 years

^{*} Estrogen/progestin therapy for >5 years, family history, body mass index (BMI) > 35.

[†] While there is no evidence to support clinical breast examinations in this population, we perform yearly chest wall and axillary exams and use this as an opportunity to examine scar tissue, examine any changes, and educate the patient about the small but possible risk of breast cancer.

[‡] Transgender men with polycystic ovary syndrome (PCOS) should be screened for diabetes as for natal females with PCOS. Refer to the UpToDate material on further evaluation after diagnosis of PCOS in adults.

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