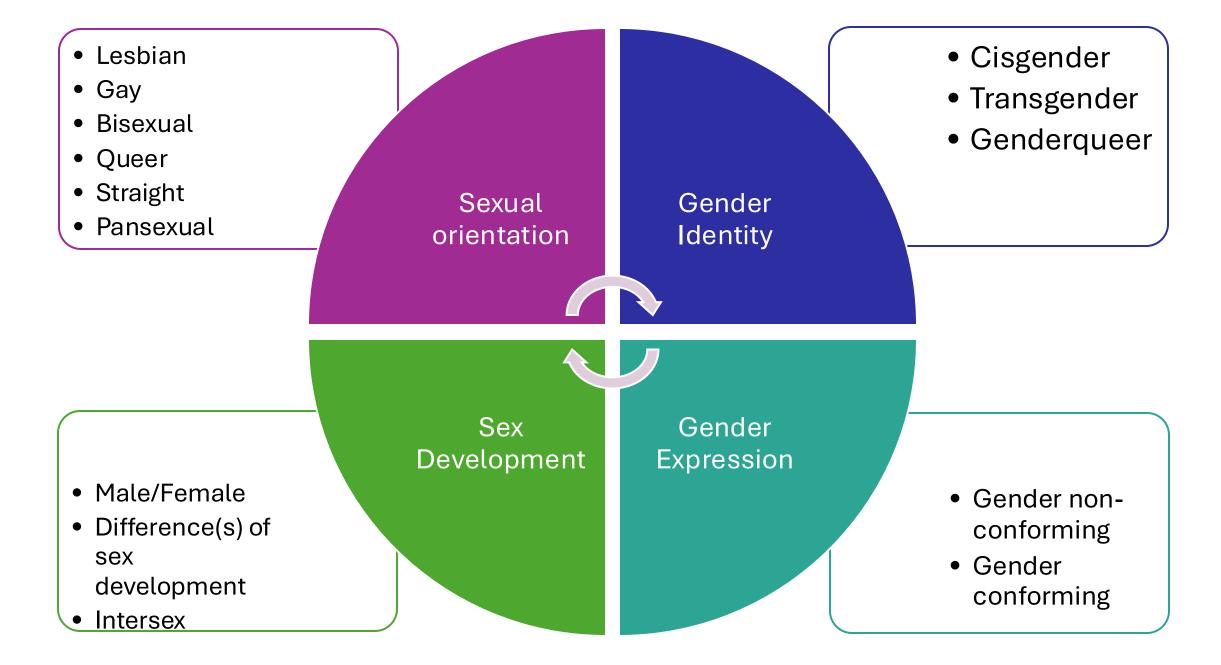
Cancer Disparities in the LGBTQ Community

Shelda Martin MD, FACP Chief Medical Officer/Vice-President Medical Affairs Charleston Area Medical Center Medical Director, CAMC Ryan White Program 9/27/2024



What are we going to do today?

- Establish familiarity with equity-centered language to provide effective and inclusive healthcare (key terms important to this population)
- Review epidemiologic data regarding the LGBTQ population and cancer estimates
- Discuss risk factors that impact the SGM population
- Identify barriers to screening and treatment that exist in the LGBTQ population
- Identify strategies to improve cultural competency reduce barriers to care



Model developed by Kristen L. Eckstrand, MD, PhD

TABLE 1. Common Terms in Transgender	Definition	CI
Gender identity (noun)	"A person's inner sense of being a girl/woman/female, boy/man/ male, something else, or having no gender."	C
Gender expression (noun)	"The way a person communicates their gender to the world through mannerisms, clothing, speech, behavior, etc."	
Assigned female at birth/assigned male at birth (noun)	"Refers to the sex that is assigned to an infant, most often based on the infant's anatomical and other biological characteristics. Commonly abbreviated as AFAB (assigned female at birth) or AMAB (assigned male at birth)."	
Cisgender (adjective)	"A person whose gender identity is consistent in a traditional sense with their sex assigned at birth."	
Transgender (adjective)	"Describes a person whose gender identity and sex assigned at birth do not correspond based on traditional expectations."	
Trans woman/transgender woman (noun)	"A transgender person whose gender identity is girl/woman/ female may use these terms to describe themself. Some will use the term woman. Specifically, this term refers to a person who was assigned male at birth but identifies as girl/woman/ female."	
Trans man/transgender man (noun)	"A transgender person whose gender identity is boy/man/male may use these terms to describe themself. Some will use the term man. Specifically, this term refers to a person who was assigned female at birth but identifies as boy/man/male."	
Gender-affirming surgery (GAS) (noun)	"Surgeries to modify a person's body to be more aligned with that person's gender identity. Types of GAS include chest surgeries (also referred to as <i>top</i> surgery), genital surgeries (also referred to as <i>bottom</i> surgery), facial feminization, body sculpting, hair removal, etc."	

Breast Cancer Screening Recommendations for Transgender Patients: A Review; Suarez, Alex et al. Mayo Clinic Proceedings, Volume 99, Issue 4, 630-639.

Cultural Competency

- Open, nonjudgmental attitude that includes not making assumptions about a patient's sexual orientation or behaviors
- Remember that terms change constantly and carry different meanings for different people. **Don't be afraid to ask your patients about their identity.**
- Acknowledge that we all have implicit biases that inform our diverse behaviors as clinicians and limitations that may need intervention
- Education on cultural differences and world views gives us all unique perspectives that are valuable and valid in treating patients

To Treat Me, You Have To Know Who I Am

Welcoming lesbian, gay, bisexual and transgender (LGBT) patients into healthcare

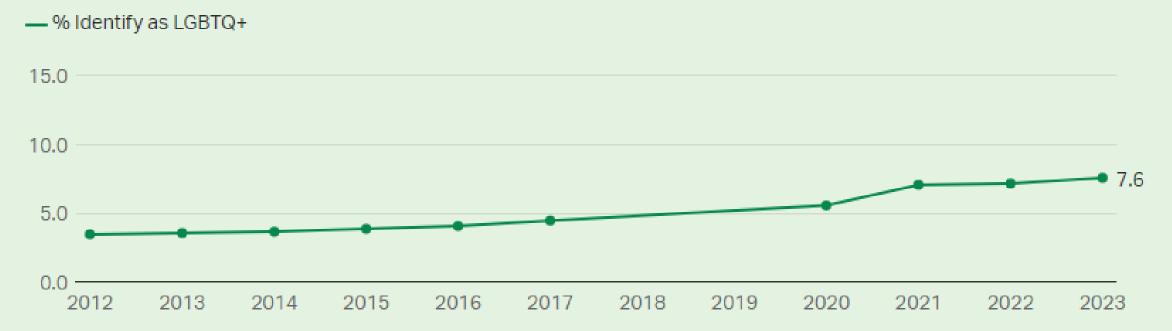


nyc.gov/hhc



Americans' Self-Identification as Lesbian, Gay, Bisexual, Transgender, or Something Other Than Heterosexual, 2012-2023

Which of the following do you consider yourself to be? You can select as many as apply. Straight or heterosexual; Lesbian; Gay; Bisexual; Transgender



Respondents who volunteer another identity (e.g., queer; same-gender-loving; pansexual) are recorded as "Other LGBTQ+" by interviewers. These responses are included in the LGBTQ+ estimate. Data were not collected in 2018 and 2019. 2012-2013 wording: Do you, personally, identify as lesbian, gay, bisexual or transgender?

Background

National polling and research studies report 1.2-12% of the population identifies as SGM

The American Cancer Society estimated in 2020, 1.8 million people in the US will be newly diagnosed with cancer and 606,520 will die because of cancer

It is expected that between 21,600 and 216,000 SGM people will be newly diagnosed with cancer and approximately 2,782 to 7,278 will die

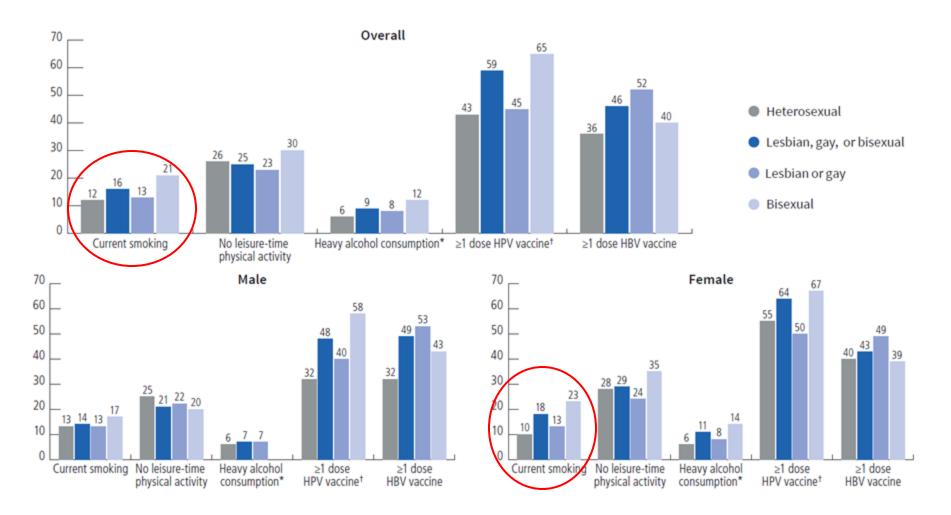
SGM Risk for Cancer

- More than 40% of all cancers in the general population are attributable to modifiable risk factors: tobacco use, excess body weight, alcohol consumption, and unhealthy diet
- Elevated prevalence of some cancer risk factors among LGBTQ can be partially explained by minority stress

Special Section 2024: Cancer in people who identify as lesbian, gay, bisexual, transexual, queer, or gender non-conforming



Cancer risk factors (%) by sexual orientation and sex, adults 18 years and older, US



HPV: Human papillomavirus, HBV: Hepatitis B virus. Survey estimates were considered unstable and suppressed if denominator sample size was <50 or the relative standard error was >=30. *Males > 14 drinks per week; Females >7 drinks per week. †Ages 18-29 years.

Source: National Health Interview Survey, 2021-2022 for smoking. 2020 and 2022 for physical activity and alcohol consumption, 2019 and 2022 for HPV vaccination, and 2021 for HBV vaccination. ©2024, American Cancer Society, Inc., Surveillance and Health Equity Science

Table S1. Adjusted Prevalence Ratios for Cancer Screening Rates and Cancer Risk Factors by Sexual Orientation, Adults 18 Years and Older, US

	Cancer screening			Cancer risk factors				
	Breast Females 50-74 years	Cervical Females 21-65 years	Colorectal All adults 45-75 years	Current smoking	No leisure- time physical activity	Heavy alcohol consumption*	≥1 dose HPV vaccine [†]	≥1 dose HBV vaccine
Heterosexual	Ref	Ref	Ref	Ref	Ref	Ref	Ref	Ref
Gay/Lesbian	0.97 (0.87, 1.08)	0.92 (0.84, 1.00)	1.14 (1.03, 1.26)	1.27 (1.07, 1.51)	1.06 (0.94, 1.20)	1.16 (0.91, 1.48)	0.98 (0.80, 1.20)	1.39 (1.25, 1.54)
Bisexual	0.94 (0.80, 1.10)	0.97 (0.91, 1.03)	0.89 (0.78, 1.02)	1.66 (1.44, 1.92)	1.08 (0.95, 1.22)	1.77 (1.39, 2.26)	1.29 (1.16, 1.43)	1.02 (0.89, 1.16)

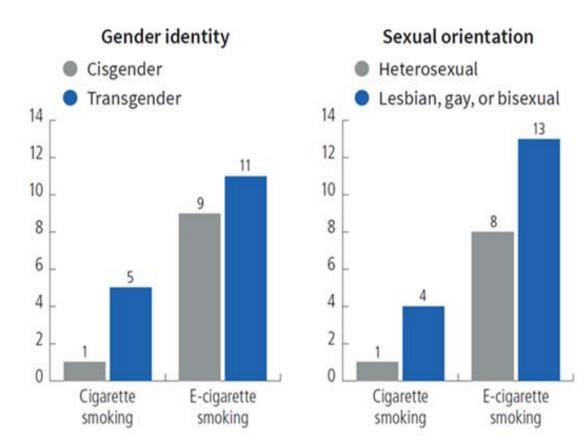
HPV: Human papillomavirus; HBV: Hepatitis B virus. Adjusted for age, sex (when applicable), education, race/ethnicity, region. *Males >14 drinks/week. Females >7 drinks/week. †Ages 18-29

Source: National Health Interview Survey, 2021-2022 for smoking, 2020 and 2022 for physical activity and alcohol consumption, 2019 and 2022 for HPV vaccination, and 2021 for HBV vaccination.

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Special Section 2024: Cancer in people who identify as lesbian, gay, bisexual, transexual, queer, or gender non-conforming Current cigarette and e-cigarette use (%), middle and high school students, US, 2022





Source: National Youth Tobacco Survey, 2022. ©2024, American Cancer Society, Inc., Surveillance and Health Equity Science

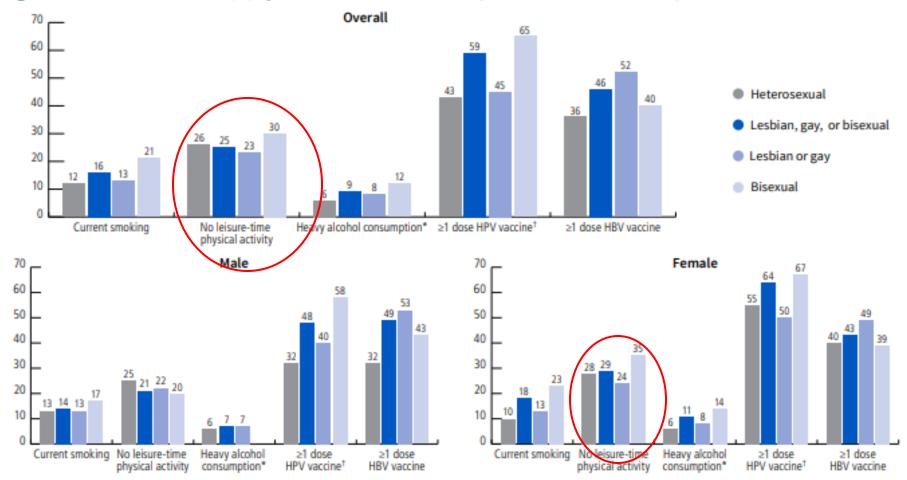


Figure S1. Cancer Risk Factors (%) by Sexual Orientation and Sex, Adults 18 Years and Older, US

HPV: Human papillomavirus. HBV: Hepatitis B virus. Survey estimates were considered unstable and suppressed if denominator sample size was <50 or the relative standard error was >=30%. *Males >14 drinks/week. Females >7 drinks/week. †Ages 18-29.

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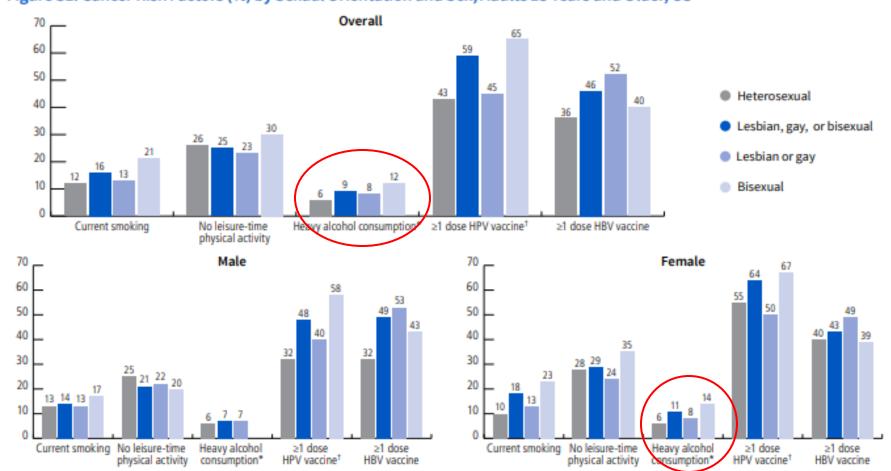


Figure S1. Cancer Risk Factors (%) by Sexual Orientation and Sex, Adults 18 Years and Older, US

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Source: National Health Interview Survey, 2021-2022 for smoking, 2020 and 2022 for physical activity and alcohol consumption, 2019 and 2022 for HPV vaccination, and 2021 for HBV vaccination.

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Breast Cancer in SGM women

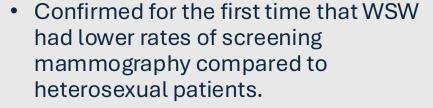
Increased theoretical risk of breast cancer based on risk factors

- Higher rates of nulliparity
- Higher body mass index
- Alcohol and tobacco use
- Lower likelihood of pregnancy before age 30
- Decreased contraceptive use

Incidence is unclear because only 24% of National Cancer Institute Oncology Research Program practice groups capture data on sexual orientation and 10% capture gender



Mammograph Screening National Health Interview Survey 2013-2017



- Lower rates of screening mammography exemplified disengagement from primary care.
- WSW were more likely to report difficulty finding a PCP they were comfortable with, less likely to have consulted with a health care professional in the past year and less likely to have received preventive health care.

Barriers to Care Individual level

- LGBTQ individuals are more likely to live in poverty
- Lack of transportation
- LGTBQ+ individuals were historically less likely to have health insurance but implementation of the ACA in 2014 increased access to care and the marriage equality Supreme Court decision in 2015 has narrowed this gap.
- LGBTQ individuals are more likely to have knowledge about screening guidelines, risk factors and procedures involved for testing *
- There is a reported fear of pain and embarrassment for screening tests and a fear of results that would be obtained
- Those who perceived greater benefits of the test and did not perceive themselves to less susceptible than heterosexual counterparts were more likely to be screened.

Barriers to Care Individual level

- The greatest health disparity faced by LGBTQ communities is the "Presumption of Care gap", which is the fear that a provider will refuse care due to gender identity or sexual orientation.
- Studies estimate that fear of health care discrimination causes 18% of LGBTQ adults and 24% of transgender adults to avoid necessary care
- 28% transgender patients reported harassment and violence in medical settings and 19% were refused care
- There are currently 9 states (Alabama, Arkansas, Florida, Illinois, Mississippi, Montana, Ohio, South Carolina, and Tennessee) where it is legal for medical professionals to refuse care to LGBTQ+ patients, covering an estimated 20% of the LGBTQ population.

Barriers to Screening-Provider Level

- Clinicians receive little education or training regarding the healthcare needs of LGBTQ people.
- The majority lack knowledge about LGBTQ specific cancer screening guidelines
- Most oncologists in institutional and national surveys reported not feeling knowledgeable regarding SGM health and feeling uncomfortable caring for SGM patients primarily because of a lack of knowledge.
- 70% of oncologists surveyed by the National Cancer Institute reported interest in education on SGM health needs.
- The practice of cultural humility (a continuous process of sel-reflection aimed at maintaining a respectful, unpresuming and open-minded perspective toward others valued cultural identities and experiences) can improve care for all patients.

Barriers to Care-System level

- Presence of inclusive documentation and physical environments in the healthcare setting
- Importance of gender-neutral language
- Ability to state both sex at birth and gender identity
- Space to disclose sexual orientation
- Having to schedule multiple appointments for multiple tests rather than having several tests during one appointment



From: Breast Cancer Diagnosis, Treatment, and Outcomes of Patients From Sex and Gender Minority Groups

JAMA Oncol. 2023;9(4):473-480. doi:10.1001/jamaoncol.2022.7146

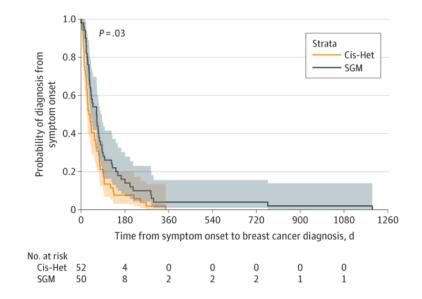


Figure Legend:

Kaplan-Meier Curves of Diagnosis Probability After Symptom OnsetPatients from SGM groups experienced a delay in diagnosis compared with Cis-Het patients (median time to diagnosis, 64 vs 34 days). Cis-Het indicates cisgender heterosexual; SGM, sex and gender minority.

Copyright 2023 American Medical Association. All Rights Reserved. Table 2. Adjusted Hazard Ratios or Odds Ratios for Patients From SGM Groups Compared With Cisgender Heterosexual Patients

Outcome	Adjusted HR or OR (95% CI) ^{a,b}	P value
Declined oncologist-recommended treatment	2.27 (1.09-4.47)	.03°
Time from symptom onset to diagnosis, d	0.65 (0.42-0.99)	.04°
Time from diagnosis to recurrence, mo	3.07 (1.56-6.03)	.001 ^c
Missed guideline-based screening ^d	1.61 (0.44-5.80)	.47
Appropriate referral to genetic testing	1.11 (0.71-1.75)	.65
Mastectomy	1.11 (0.59-2.11)	.74
Chest reconstruction	0.37 (0.09-1.50)	.17
Adjuvant radiation therapy after lumpectomy	0.88 (0.41-1.87)	.74
Neoadjuvant chemotherapy for stage III cancer	1.17 (0.44-3.11)	.76
Antiestrogen therapy for at least 5 y for ER positivity	0.46 (0.15-1.44)	.18
ERBB2 (HER2) drug for ERBB2 positivity	0.99 (0.17-5.71)	>.99
Time from diagnosis to treatment, d	0.96 (0.71-1.31)	.82

Abbreviations: ER, estrogen receptor; HR, hazard ratio; OR, odds ratio; SGM, sex and gender minority.

- * Adjusted by race and ethnicity, socioeconomic status, and private insurance status.
- ^b All binary outcomes are reported as ORs. All time-to-event analyses are reported as HRs.
- ^c Deemed as significant after the Benjamini-Hochberg correction with a false discovery rate of 20%.
- ^d Guideline-based screening in accordance with the National Comprehensive Cancer Network. Patients older than 50 years were assessed for whether they had a screening mammogram within 2 years of their cancer diagnosis, and patients known to carry a pathogenic variant in *BRCA1* or *BRCA2* before their cancer diagnosis were assessed for whether they had a screening mammogram within 1 year of diagnosis.

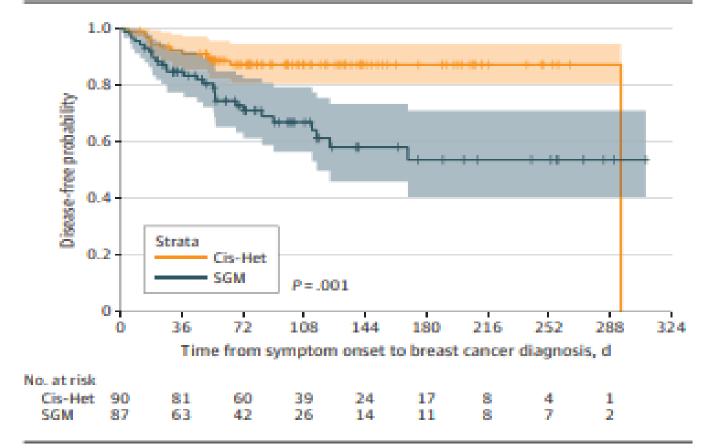


Figure 2. Kaplan-Meier Curves of Disease-Free Survival After Diagnosis

Patients from SGM groups experienced a higher rate of breast cancer recurrence compared with Cis-Het patients (32% vs 13%). Cis-Het indicates cisgender heterosexual; SGM, sex and gender minority. JAMA Oncology 2023, Eckhert E, et al

Key Points

Question Are there disparities in breast cancer treatment and outcomes of patients from sex and gender minority (SGM) groups compared with cisgender heterosexual patients?

Findings In this exposure-matched case-control study of 92 patients from SGM groups matched to cisgender heterosexual patients by year of breast cancer diagnosis, age, tumor stage, estrogen receptor status, and ERBB2 (HER2) status, those from SGM groups had delays in diagnosis, declined oncologistrecommended therapies more often, and experienced a 3-fold higher rate of breast cancer recurrence compared with cisgender heterosexual patients.

Meaning Findings suggest several potential health care disparities among patients from SGM groups with breast cancer, necessitating further evaluation to inform interventions.

TABLE 2. Summary of Recommendations for Breast Cancer Screening Among Transgender Women		
Guideline	Summary of recommendations	
Fenway Health	Starting at age 50 y, transgender women who have received ≥5 y of feminizing hormone treatment should undergo annual screening mammography. ¹⁶	
UCSF Center of Excellence for Transgender Health	Starting at age 50 y, transgender women who have received ≥5 y of feminizing hormone treatment should undergo biennial screening mammography. ¹⁷	
Endocrine Society Clinical Practice Guidelines	Transgender women should undergo breast cancer screening similar to cisgender women. ¹⁸	
American College of Radiology	Higher-than-average-risk patients: screening mammography or digital breast tomosynthesis are usually appropriate. ¹⁹	
	Patients aged ≥40 y with ≥5 y of past or current hormone treatment: screening mammography or digital breast tomosynthesis may be appropriate. ¹⁹	
	Patients aged ≥25-30 y without hormone treatment but who have risk factors: screening mammography or digital breast tomosynthesis may be appropriate. ¹⁹	

MAYO CLINIC

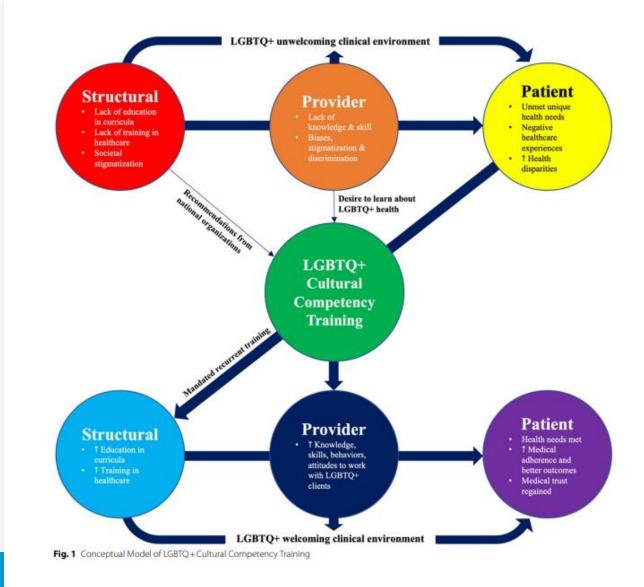
Breast Cancer Screening Recommendations for Transgender Patients: A Review; Suarez, Alex et al. Mayo Clinic Proceedings, Volume 99, Issue 4, 630-639.

Guideline	Summary of recommendations
Fenway Health	Patients who have not undergone total mastectomy: screening recommendations reflect recommendations for cisgender women. ¹⁶
	Patients who have undergone total mastectomy: consider performing yearly chest examinations. ¹⁶
UCSF Center of Excellence for Transgender Health	Patients who have not undergone total mastectomy: screening recommendations reflect recommendations for cisgender women. ¹⁷
	Patients who have undergone total mastectomy: ultrasound or MRI may be appropriate after thorough discussion with patients about risks, benefits, and lack of available data to guide decision making, ¹⁷
Endocrine Society Clinical Practice Guidelines	Patients who have not undergone total mastectomy: screening recommendations reflect recommendations for cisgender women. ¹⁸
	Patients who have undergone total mastectomy: no guidelines presented. ¹⁸
American College of Radiology	Patients who have not undergone total mastectomy: screening recommendations reflect recommendations for cisgender women. ¹⁹
	Patients who have undergone total mastectomy: no screening indicated. ¹⁹

MAYO CLINIC

Breast Cancer Screening Recommendations for Transgender Patients: A Review; Suarez, Alex et al. Mayo Clinic Proceedings, Volume 99, Issue 4, 630-639.

Conceptual Model of Cultural Competency Training



Resources: National



Family Acceptance Project

This organization uses a research-based, culturally grounded approach to help ethnically, socially and religiously diverse families to support their LGBT children, thereby decreasing negative health and mental health outcomes such as suicide.

www.familyproject.sfsu.edu

The Fenway Institute National LGBT Health Education Center

The mission of Fenway Health is to enhance the wellbeing of the lesbian, gay, bisexual and transgender community through access to the highest quality online education for health care professionals for the care of LGBTQ patients and populations. All online modules are free and qualify for continuing education credits.

http://fenwayhealth.org/the-fenway-institute/education/the-national-lgbt-health-education-center/

Gay and Lesbian Medical Association (GLMA) GLMA's mission is to ensure equality in healthcare for lesbian, gay, bisexual and transgender (LGBT) individuals and healthcare providers. Offered online: *GLMA: Guidelines for Care of LGBT Patients.*

www.glma.org

Center of Excellence for Transgender Health (San Francisco)

The mission of the Center of Excellence for Transgender Health is to increase access to comprehensive, effective, and affirming health care services for trans and gender-variant communities. <u>http://www.transhealth.ucsf.edu/</u>



Welcoming Environment

Including sexual orientation, gender identity, name, and preferred pronouns on intake forms (he/she/they)

Consider the impact of gendered titles, such as "women's breast cancer support group" or "men's prostate cancer center"

Reducing the use of pink and blue in various aspects of the clinical encounter

Offering every patient of reproductive age the option to discuss fertility preservation, and making referrals to a reproductive specialist

Advocate for patients with insurance companies

TABLE 1.

Guidelines for Providing Culturally Humble Care for SGM Patients With Cancer

TABLE 1. Guidelines for Providing Culturally Humble Care for SGM Patients With Cancer

1. Educate yourself on the impact of stigma and marginalization on minority groups.

2. Ensure your institutional policies are inclusive and respectful of SGM patients.

3. Include sexual orientation, gender identity, preferred name, and pronouns on intake forms.

- Create welcoming environments that may include: gender-neutral bathrooms, health literature that is inclusive of SGM populations, pronoun pins, and rainbow flags.
- 5. Rename any gendered spaces such as "women's breast practice" or "men's prostate center."
- 6. Reduce use of pink and blue to gender clothing or other aspects of the clinical encounter.

7. Ask patients, "What is your preferred name?"

8. Ask patients what pronouns they use (eg, they/them, he/him, she/her).

9. When relevant, ask patients what terms to use for their reproductive organs.

10. Do not make assumptions about the person accompanying a patient to appointments. Find out if patients have support and by whom.

11. Offer every patient of reproductive age the option to discuss fertility preservation and make referrals to reproductive specialist.

12. Ensure institutional policies are in place to enforce SGM inclusion.

13. Ensure input from local SGM populations to improve SGM inclusion.

Abbreviation: SGM, sexual and gender minority.

ASCO Cancer Disparities and Health Equity Policy Statement

ASCO's Health Equity Goals

Addressing Structural Barriers

Increasing Awareness and Action

Ensuring Equitable Access to High-Quality Care

Ensuring Equitable Research

Cancer Disparities and Health Equity: A Policy Check for Updates **Statement From the American Society of Clinical Oncology** Manali I. Patel, MD, MPH, MS¹; Ana Maria Lopez, MD, MPH²; William Blackstock, MD³; Katherine Reeder-Hayes, MD, MBA, MS⁴; E. Allyn Moushey, MSW⁵; Jonathan Phillips, MPH⁵; and William Tap, MD⁶ ASCO strives, through research, education, and promotion of the highest quality of patient care, to create a world where cancer is prevented and every survivor is healthy. In this pursuit, cancer health equity remains the guiding institutional principle that applies to all its activities across the cancer care continuum. In 2009, ASCO committed to addressing differences in cancer outcomes in its original policy statement on cancer disparities. + Over the past decade, despite novel diagnostics and therapeutics, together with changes in the cancer care delivery system such as passage of the Affordable Care Act, cancer disparities persist. Our understanding of the populations experiencing disparate outcomes has likewise expanded to include the intersections of race/ ethnicity, geography, sexual orientation and gender identity, sociodemographic factors, and others. This updated statement is intended to guide ASCO's future activities and strategies to achieve its mission of conquering cancer for all populations. ASCO acknowledges that much work remains to be done, by all cancer stakeholders at the systems level, to overcome historical momentum and existing social structures responsible for disparate cancer outcomes. This updated statement affirms ASCO's commitment to moving beyond descriptions of differences in cancer outcomes toward achievement of cancer health equity, with a focus on improving equitable access to care, improving clinical research, addressing structural barriers, and increasing awareness that results in measurable and timely action toward achieving cancer health equity for all.

J Clin Oncol 38:3439-3448. © 2020 by American Society of Clinical Oncology

Patel H et al, J Clin Oncol 38 (29): 3439-3448. 2020 https://ascopubs.org/doi/10.1200/JCO.20.00642

NIH Definition of SGM

"Sexual and gender minority (SGM) populations include, but are not limited to, individuals who identify as lesbian, gay, bisexual, transgender, two-spirit, queer and/or intersex. Individuals with same-sex or -gender attractions or behaviors and those with a difference in sex development are also included. These populations also encompass those who do not self-identify with one of these terms but whose sexual orientation, gender identity or expression, or reproductive development is characterized by nonbinary constructs of sexual orientation, gender and/or sex." Breaking Down Barriers to Clinical Trials Enrollment: Broadening Eligibility Criteria

SPECIAL SERIES ASCO SPECIAL ARTICLES

Broadening Eligibility Criteria to Make Clinical Trials More Representative: American Society of Clinical Oncology and Friends of Cancer Research Joint Research Statement

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Making Cancer Clinical Trials Available to More Patients

Subscribe

March 7, 2019, by P. Ivy, A. Denicoff, G. Mishkin & F. Arnaldez

The authors are from NCI's Division of Cancer Treatment and Diagnosis. Percy Ivy, M.D., and Fernanda Arnaldez, M.D., help manage NCI's Experimental Therapeutics Clinical Trials Network. Andrea Denicoff, R.N., M.S., and Grace Mishkin, M.P.H., help manage NCI's National Clinical Trials Network. Ivy, Arnaldez, and Denicoff are members of working groups assembled by the American Society of Clinical Oncology and Friends of Cancer Research to develop new recommendations for expanding trial eligibility criteria.

With so many new and promising cancer treatments being developed, the need for clinical trials to efficiently and effectively test them has never been greater.





IH NATIONAL CANCER INSTITUTE

SGM as a Health Disparity Population

- October 2016, NIMHD announced SGM as an officially designated health disparity population for NIH
- This designation has since facilitated the creation of tailored research projects, program, and activities intended to tackle the distinct issues encountered by SGM individuals
- SGM populations are automatically included in all health disparities related FOA's, initiatives and programs



An Obligation to Make Things Better- Coping with Cancer Disparities Among LGBTQ+ Communities

- 2023 CDC analysis found that lesbian women were 2.26 times more likely to be diagnosed with cancer than heterosexual women and gay men were 1.73 times more likely than heterosexual men to be diagnosed with cancer.
- American Cancer Society points to factors that could lead to worse outcomes-discrimination, stigma, fear and behavioral risk factors
- LGBTQ+ people are more likely to experience unemployment, lack access to health care and delay health care due to prior experiences of stigma and discrimination in health care settings





References

1.Quinn GP, Sanchez JA, Sutton SK, et al: Cancer and lesbian, gay, bisexual, transgender/transsexual, and queer/questioning (LGBTQ) populations. *CA Cancer J Clin* 65:384-400, 2015

2. Gates GJ: How many people are lesbian, gay, bisexual and transgender? https://williamsinstitute.law.ucla.edu/wp-content/uploads/Gates-How-Many-People Gates GJ: How many people are lesbian, gay, bisexual and transgender? https://williamsinstitute.law.ucla.edu/wp-content/uploads/Gates-How-Many-PeopleLGBT-Apr-2011.pdf

3. Patterson CJ, D'Augelli AR (eds): Handbook of Psychology and Sexual Orientation. New York, NY, Oxford University Press, 2013

4.. Graham R, Berkowitz B, Blum R, et al: The Health of Lesbian, Gay, Bisexual, and Transgender People: Building a Foundation for Better Understanding. Washington, DC, National Academic Press, 2011, pp 89-99.

5. Siegel RL, Miller KD, Jemal A: Cancer statistics, 2020. CA Cancer J Clin 70:7-30, 2020

6. Quinn GP, Alpert A, Sutter, M, et al: What Oncologists should know about treating sexual and gender minority patients with cancer. *JCO Oncol Pract* 16:309-316. 2020.

7. Islami F, Goding Sauer A, Miller KD, et al: Proportion and number of cancer cases and deaths attributable to potentially modifiable risk factors in the US. CA Cancer J Clin. Jan 2018;68(1):31-54.

8. Gruskin EP, Byrne KM, Altschuler A, et al. Smoking it all away; influences of stress, negative emotions, and stigma on lesbian tobacco use. *J LGBT Health Res* 2008;4(4): 167-79.

9. Beckerley S, Fernandez P, Matter C, et al: This free life campaign: increasing intention to quit among LGBTQ+ young adult daily smokers in Minneapolis. *Tob Use Insights*. 2022;15:117913X221133978.

10. Green AE, Taliaferro LA, Price MN. Understanding risk and protective factors to improve well-being and prevent suicide among LGBTQ+ youth. Handbook of Suicide Prevention; Integrating Research into Practice. 2022:177-194.

11. Belt O, Stamatakos K, Ayers AJ, et al: Vested interests in addiction research and policy. Alcohol brand sponsorship of events, organizations and causes in the US. 2010-2013. *Addiction*. 2014;109(12):1977-1985.

12. Cancer Facts and Figures 2024; Special Section: Cancer in People who Identify as Lesbian, Gay, Bisexual, Transgender, Queer or Gender Nonconforming; American Cancer Society 2024. <u>https://www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-</u> cancer-facts-and-figures/2024/special-section-facts-and-figures-2024.pdf

References

14. Eckhert E, Lansinger O, Ritter V, et al: Breast Cancer Diagnosis, Treatment, and Outcomes of Patients from Sex and Gender Minority Gaps; JAMA Oncology April 2023, Vol 9, Number 4, p473-480.

15. Haviland K, Swette S, Kelechi T, et al: Barriers and Facilitators to Cancer Screening Among LGBTQ Individuals with Cancer; *Oncol Nurs Forum*. 2020 Jan1;47(1);44-45.

16. Clark C, Cortina C, Fayanju O, et al: Breast Cancer Risk and Screening in Transgender Persons: A call for inclusive care. *Annals of Surgical Oncology*. 2022; 29:2176-2180.

17. Griggs, J; Improving the Care of Lesbian, Gay, Bisexual, Transgender and Queer People with Cancer through Transformational Approaches; *JCO Oncol Pract* 16. 317-318. (2020)

18. Kratzer T, Star J, Minihan A, et al: Cancer in people who identify as lesbian, fay, bisexual, transgender, queer, or gender-nonconforming. Cancer. 2024;130:2948-2967.

19. Jackson S, Patel S, Parker K; Cancer disparities among sexual and gender minorities; *J Natl Med Assoc*. 2023 May;115 (2 Suppl): S32-S37.

20. Heer E, Peters C, Knight R, et al: Participation, barriers, and facilitators of cancer screening among LGBTQ+ populations; A review of the literature. March 13, 2023; *Preventative Medicine*; 170 (2023) 107478.

21.Calas M, Dantas R, Ciscotto C, et al; Integrative review on breast cancer screening in the transgender population; What do we know? *Mastology* 2022;32:e20210051.

22. Warwar S, Beach L, Jordan S; Breast cancer disparities among sexual and gender minority populations; *Transl Cancer Res* 2023;12(8):2219-2223.

23. Miller C, Bleicher R, Williams A; Breast cancer diagnosis, treatment, and outcomes of patients from sex and gender minority groups; *Transl Cancer Res*;12(10):2458-2460.

24.Yu H, Flores D, Bonnet, Bauermeister J; LGBTQ+ cultural competency training for health professionals: a systematic review; *BMC Medical Education* 2023: 23:558.