Implications of cancer in lesbians

Aaron Ong
4th Year Medical Student
School of Medicine
University of Auckland

Aaron Ong is a 4th year medical student at the University of Auckland. This essay was written by Aaron for his MBChB 311 Medical Humanities paper (Medicine, Sexuality and Gender Diversity). In his free time he enjoys travelling, photography, and drinking good coffee.

DEFINITION

The term lesbian originates from the Greek island of Lesbos and is used to refer to women whose emotional, social, and sexual relationships are primarily with women.[1] The lesbian identity encompasses different dimensions including how one self-identifies, the attraction a person feels for another and sexual behaviour.[2]

WHAT IS KNOWN ABOUT CANCER INCIDENCE AND RISKS IN THE LESBIAN POPULATION?

A lack of appropriate data in national databases and registries translates to a poor understanding of potential cancer incidence disparities in the lesbian population. Possible barriers to health service access and disparities regarding lesbian's health status have been identified as a research priority.[3]

The first section of this paper serves to highlight cancer risk factors among lesbians and the comparison of these factors between lesbians and heterosexual women. The second section seeks to look at common cancers (breast, cervical and lung cancers) and quality of life in the lesbian population, as well as possible interventions with particular emphasis from a psychosocial point of view. The final section will discuss the implications of cancer in lesbians before concluding with a summary of the issues that have been discussed.

RISK FACTORS FOR COMMON CANCERS AMONG LESBIANS & DIFFERENCES BETWEEN LESBIANS AND HETEROSEXUAL WOMEN

Several risk factors put lesbians at an increased risk for a number of cancers. Modifiable risk factors include smoking, alcohol consumption, obesity, lack of physical activity, poor cancer screening habits and sexual behaviour.[4] Compared to heterosexual women, a higher prevalence of these factors among lesbians suggests a disproportionately higher risk for multiple cancers.

Smoking and alcohol use

A study by Gruskin *et al* (see Table 1),[5] showed lesbians and bisexual women, are more likely to smoke (25.4% vs. 12.6%, P<0.001) and drink heavily (9.2% vs 2.6%, P<0.001) than heterosexual women. A multivariate logistic regression analysis (see Table 2) further revealed a higher incidence of current smokers and heavy drinkers among lesbians in the age groups of 20 to 34 years old and 35 to 49 years old compared to heterosexual women.

Physical activity and being overweight/obese

Aaron *et al*[6] (see Table 3) reported low levels of physical activity in the lesbian group: 34.2% (95% CI = 31.2, 37.2) had no physical activity in past month and 63.2% (95% CI = 60.1, 66.2) had no regular vigorous activity. As for obesity, Cochran *et al*[7] (see Table 4) estimates that 28% (95% CI = 25.6, 29.9) of lesbians surveyed are obese. This estimate is within normative expectations for women aged 18 to 75 years old in the United States, however the study found a significantly greater percentage of obese lesbians than expected after taking into account the demographic profile of the lesbians being surveyed (P< 0.05).

Sexual behaviour and history

Compared to their heterosexual counterparts, lesbians tend to have an earlier sexual debut, are more likely to have multiple sexual partners and engage in risky sexual activities.[8] As seen in Table 5, lesbians are more likely to report initiation of sexual intercourse before the age of 18 (64% vs. 56%, P<0.05) as well as higher numbers of sexual partners (10% vs. 6.7%, P<0.05). In addition, lesbians are found to use oral contraceptives (protective factor for cervical cancer) less frequently than heterosexual women,[9] and are 4.7 times more likely to be nulliparous (parity is a protective factor for breast cancer).[10]

Cancer screening behaviors

Lesbians are less likely to have a Pap test in the past 2 years[11] and are less likely to report annual participation in Pap testing.[8] It is postulated that poor cervical screening increases the risk of cervical cancer and poorer outcomes for lesbians. As for the development of breast cancer, it has been found that lesbians have the highest concentration of risk factors as compared to any subgroups of women.[14] Studies looking at mammography screening reported that lesbians are less likely than heterosexual women to have had a recent mammogram.[8, 11]

CANCERS

Breast cancer

Breast cancer is the second leading cause of cancer death in women, second only to lung cancer.[4] Lesbians are at an increased risk of breast cancer

	Current Smokers			Heavy Drinkers[a]			Abstinence from Drinking		
Age, y	L/B	H	X^2	L/B	H	X^2	L/B	H	X^2
Overall	25.4%	12.6%	P<.001	9.2%	2.6%	P<.001	19.8%	32.5%	P=.004
20-34	33.3%	13.2%	P<.001	23.3%	6.0%	P<.001	0%	27.7%	P<.001
35-49	29.1%	14.4%	P=.002	7.1%	2.7%	P<.001	24.5%	27.9%	P=.59
≥50	12.1%	11.3%	P=.89	0%	1.3%	P=.50	29.4%	37.0%	P=.36
X^2 20-34 vs. 35-49	P=0.69	P=.27		P=.03	P<.001		P<.01	P=.89	
X^2 20-34 vs. ≥50	P=.04	P=.06		P=.003	P<.001		P<.001	P<.001	
X^2 35-49 vs. ≥50	P=.07	P=.001		P=.11	P<.001		P<.61	P<.001	
Note. L/B = lesbian and bisexual women; H= heterosexual women. [a]More than 4 drinks per episode or more than 20 drinks per week over the past year.									

Table 1: Cigarette smoking and alcohol consumption, by sexual orientation and age.[5]

		Current Smoking			Heavy Drinking	
Risk Factor		20-34 y OR (95% CI)	35-49 y OR (95% CI)	≥50 y OR (95% CI)	20-34 y OR (95% CI)	35-49 y OR (95% CI)
Sexual Orientation	Lesbian/Bisexual	3.2 (1.4, 7.3)	3.4 (1.8, 6.5)	1.3 (0.4, 3.6)	4.6 (1.9, 11.4)	2.9 (1.0, 8.6)
	Heterosexual	1.0	1.0	1.0	1.0	1.0
Education	College degree/graduate degree	0.3 (0.2, 0.5)	0.2 (0.2, 0.3)	0.5 (0.4, 0.7)	0.3 (0.2, 0.5)	0.5 (0.3, 0.9)
	>College degree	1.0	1.0	1.0	1.0	1.0
Race ethnicity	White, non-Latina	1.8 (1.3, 2.4)	1.5 (1.2, 2.0)	1.3 (1.0, 1.7)	1.2 (0.8, 1.8)	2.0 (1.0, 3.8)
	Women of colour	1.0	1.0	1.0	1.0	1.0
Stress	High	1.6 (1.0, 2.5)	1.7 (1.2, 2.4)	1.5 (1.0, 2.1)	1.2, (0.6, 2.2)	1.9 (0.9, 4.2)
	Moderate	1.3 (0.9, 1.9)	1.1 (0.8, 1.4)	1.1 (0.9, 1.4)	1.1 (0.7, 1.9)	1.7 (0.9, 3.2)
	Low or none	1.0	1.0	1.0	1.0	1.0
Depression	Depression in the last 12 mo	1.6 (1.1, 2.4)	1.6 (1.2, 2.1)	1.2 (0.9, 1.7)	1.9 (1.2, 3.3)	2.0 (1.1, 3.5)
	No depression in the last 12 mo	1.0	1.0	1.0	1.0	1.0
	No. of observations	1526	2351	3920	1551	2381
Note. OR = odds ratio; CI= confidence interval.						

Table 2: Risk factors for current smokers and heavy drinkers, by age: Results of multivariate logistic regression analyses.[5]

than heterosexual women as a result of greater rates of risk factors as discussed previously, i.e. alcohol consumption, obesity, lower rates of breast cancer screening and nulliparity.[13] Studies have reported a relative risk of 1.74 (95% CI = 0.62 – 4.91) of an invasive breast cancer among lesbians,[14] which is a higher prevalence despite similar mammography screening rates as heterosexual women.[10]

Barriers on various levels, i.e. Personal issues, patient-practitioner relationships and healthcare systems can all create barriers that influence the adequacy of mammography screening in the lesbian population[13]. As seen in table 6, personal barriers include competing life demands and negative emotions such as fear and embarrassment; patient-practitioner barriers include homophobia and more significantly a lack of trust in the practitioner/health care system. Other system level barriers reported were: cost; discomfort; lack of lesbian-specific resources; and concern about quality and possible harm from mammogram. A study by Matthews *et al*[15] revealed that lesbians are less satisfied with the emotional support they receive from health care providers.

While treatment needs of lesbians are similar to those of heterosexual women, the barriers to adequate care are amplified in the lesbian population. Lesbians who received tailored counselling on breast cancer screening, education and risk assessment by a health provider trained in lesbian health issues were found to have significantly increased adherence to breast self-exam and mammography after a follow up period of 2 years.[16, 17] Group therapy interventions for lesbians with breast cancer also helped to reduce emotional distress and improve coping.[18] Health care providers play a vital role and it is absolutely crucial that they receive appropriate training and education in lesbian health issues to be aware of and sensitive to psychosocial factors that influence responses to treatment,[19] and foster good communication with lesbian patients.[20]

Cervical cancer

Human papillomavirus (HPV) infection is the main cause of cervical cancer and risk factors include early sexual debut, multiple sexual partners, being overweight and cigarette smoking.[4] As discussed in the first section, lesbians have a higher prevalence of these modifiable risk factors than heterosexual women. Consequently, they have an increased susceptibility to HPV infection and cervical cancer. Variables that contribute to a higher cervical cancer screening rates among lesbians include higher educational attainment, higher income[21] and having a regular health care provider.[22] General barriers to cervical cancer screening included feeling uncomfortable, low perceived risk and access factors.[8] Lesbians are documented to have less frequent gynaecologic care compared to heterosexual women[23] and an additional barrier to screening for lesbians may be fewer referrals from medical providers for gynaecological screening.[8] Despite lower rates of adherence to cervical cancer screening recommendations, sexual behaviour risk factors for cervical cancer are prevalent among lesbians.

Similar to breast cancer, patient-provider communication has a substantial impact on whether the lesbian population has adequate cervical screening.[24]

		ESTHER Weighted Sample % (95% CI)	1998 BRFSS National Sample - Women Only % (95% CI)
Health Behaviour (n)	Current cigarette use (1007)	35.5 (32.5, 38.5)	20.5 (20.3, 20.9)
	Alcohol nonabstainer[a] (937)	57.5 (54.3, 60.7)	44.6 (43.7, 45.6)
	Heavy alcohol drinker[b] (937)	4.7 (3.3, 6.1)	1.1 (0.9, 1.3)
	No physical activity in past month (962)	34.2 (31.2, 37.2)	31.4 (31.1, 31.9)
	No regular vigorous activity (959)	63.2 (60.1, 66.2)	86.3 (86.0, 86.5)
	Overweight: BMI 27.3kg/m (972)	47.8 (44.7, 50.9)	31.6 (31.3, 31.9)
Health Screening (n)	Ever had Pap test (1002)[c]	94.2 (92.7, 95.6)	93.8 (93.6, 94.0)
	Pap test within past 2 years: women with intact cervix (793)	74.9 (71.9, 77.9)	80.3 (80.0, 80.6)
	Ever had mammogram: women aged 40 y (593)	93.3 (91.3, 95.3)	85.1 (84.8, 85.4)
	Mammogram within past 2 years: women aged 50 y (262)	88.1 (84.2, 92.0)	75.8 (75.3, 76.2)

Note. ESTHER = Epidemiologic Study of Health Risks in Lesbians; BRFSS = Behavioural Risk Surveillance Sytem; CI = confidence interval; BMI = body mass index.

[a]At least one drink of alcohol in the past month

[b]Sixty or more drinks per month

[c]Confidence intervals for two samples overlap

Table 3: Self-reported health behaviors and health screening among lesbians (ESTHER, Pittsburgh, Pa) and Women in a national probability sample (1998 BRFSS).[6]

Health Risk Indicator		Lesbian/Bisexual Sample			Estimates for US Women			
					Standardized, %		Unstandardized, %	
		No.	%	(95% CI)	%	(95% CI)	%	(95% CI)
Obesity	Self-reported body mass							
	Index above normal weight	8115	27.7	(25.6, 29.9)	…	…	…	…
	NHIS estimate	…	…	…	18.3	(17.5, 19.1)	27.9	(27.3, 28.5)
	EHANES III estimate	…	…	…	19.0	(16.8, 21.1)	30.5	(28.4, 34.4)
	Self-reported obesity/weight problem[a]	7764	43.9	(40.8, 47.1)	55.8	(52.9, 58.7)	62.4	(60.6, 64.1)
Alcohol use	Current user (in past year for US women)[b]	11638	69.6	(67.0, 72.1)	66.9	(63.5, 70.4)	55.2	(51.3, 57.8)
	Alcohol problem history	11638	12.4	(10.8, 14.2)				
	Ever consumed 5+ drinks almost every day[b]				4.0	(2.6, 5.4)	6.8	(5.8, 7.7)
Tobacco use[c]	Current smoker	10752	21.2	(19.0, 23.6)	16.1	(14.8, 17.4)	24.3	(23.3, 25.3)
	Past smoker	9843	34.0	(30.1, 38.1)	20.1	(18.5, 21.8)	19.9	(19.0, 20.8)
Parity	Ever pregnant[b]	9962	28.1	(24.8, 31.6)	66.7	(63.1, 70.3)	81.5	(79.9, 83.2)
	Ever gave birth to live infant[b]	11547	16.0	(14.6, 17.5)	56.9	(52.6, 61.2)	74.5	(72.6, 76.4)
	Ever used birth control pills[b]	8329	36.2	(32.5, 40.1)	79.7	(76.6, 82.8)	65.1	(63.0, 67.2)
	Has health insurance	10171	86.4	(84.4, 88.1)	92.6	(91.2, 94.1)	85.0	(83.4, 86.5)
	Pelvic exam within past 2 years (past 3 for US women)[c]	10811	72.9	(68.9, 76.7)	87.4	(86.0, 88.7)	79.0	(77.9, 80.2)
Ever had mammogram, by age, y[c]	30 to 39	4686	32.2	(28.5, 36.1)	39.6	(36.2, 42.9)	33.8	(31.6, 35.9)
	40 to 49	2808	73.1	(70.0, 76.0)	86.7	(83.4, 89.9)	78.8	(76.0, 81.6)
	50 to 75	960	82.9	(80.2, 85.4)	90.2	(88.2, 92.2)	81.2	(79.4, 83.0)

Note. Prevalence rates among lesbian/bisexual women were estimated in a random effects model. NHIS = National Health Interview Survey; NHANES III = Third National Health and Nurtition Examination Survey.

[a]Individually standardized to the age, race/ethnicity (White, non-Hispanic vs other), education level, and geographic region of the lesbian sample for each measured health variable.

[b]Estimated from the 1994 NHIS.

[c]Estimated from NHANES III.

Table 4: Comparisons of health risk indicators among lesbians with standardized and unstandardized estimates for US women from NHANES III and the 1994 NHIS.[7]

Variable	Lesbian	Heterosexual
	N %	*N* %
Current Smoker	105 (19%)	52 (19%)
1st intercourse before age 18*	349 (64%)	152 (56%)
History of STD	7 (13%)	49 (18%)
Safer sex practices (never)***	389 (86%)	124 (54%)
Abnormal pap smear	138 (25%)	87 (31%)
History of gynecological cancer	20 (04%)	14 (05%)
HIV/AIDS diagnosis	02 (0.4%)	01 (0.4%)
	M (SD)	*M* (SD)
Number of male partners***	4.8 (8.9)	6.9 (6.2)
Number of female partners***	5.4 (5.6)	0.4 (1.3)
Number of total partners***	10.0 (10.0)	7.3 (6.7)
Note. Sexual orientation differences evaluated by chi-square and *t* tests. * $P < 0.05$. *** $P < 0.001$.		

Table 5: Cervical cancer risk factors[8]

		*Sample 1** (N = 68) %	*Sample 2*† (N = 68) %
Personal Factors	Competing life demands	19	13
	Lack of motivation	10	38
	Negative emotions (e.g., fear, embarrasment)	7	5
	Not needed (e.g., asymptomatic, no risk, not needed every year)	0	26
	Concern about worth of mammogram	0	10
Client-practitioner relationship factors	Poor interpersonal experience with health practitioner		
	Insensitivity/hurriedness	6	10
	Homophobia/racism	4	0
	Lack of trust in practitioner/medical community	0	15
Systems factors	Discomfort/pain (comfort of procedure)	15	18
	Difficulties with scheduling/system	15	18
	Cost	15	33
	Lack of reminders from clinic	4	0
	Inassessibility because of special needs (e.g. ,disability)	3	8
	Lack of lesbian-specific resources	3	0
	Concern about quality, accuracy, and harm from mammogram	0	18
No barriers		41	0
*Responses to the question, "Although you have had a mammogram in the last year, what things did stand in your way of having one? That is, what barriers did you have to overcome, if any?" Interrater reliability: Total percentage of agreement = 98.6%; Occurance agreement – 85.0%; Non-occurance agreement – 98.5%. †Responses to the question, "What stands in your way of having regular mammograms?" Interrater reliability: Total percentage of agreement – 98.8%; Occurance agreement – 88.7%; Non-occurance agreement – 98.7%.			

Table 6: Barriers most commonly identified in obtaining mammograms[14]

Barriers in establishing good communication include a fear of discrimination if sexual orientation is disclosed, in addition to a perceived discomfort from health care providers when sexual orientation is revealed. A study by Rankow *et al*[21] demonstrated that a health care provider's sensitivity and knowledge of lesbian health issues was a predominant factor in influencing cervical screening rates of lesbians. Targeted education programs should be developed for lesbians and providers should stress the importance of adherence to recommendations for safer sex practices and regular gynaecological screenings.

Lung cancer

Lung cancer is the number one cause of cancer deaths in men and women.[4] Cigarette smoking accounts for one of the greatest risk factors for lung cancer development. A higher prevalence of cigarette smoking[5,6] in the lesbian population (see first section) predisposes this group to a higher incidence of lung cancer development. A study by Garofalo *et al*[25] examining the association between health risk behaviours and sexual orientation among school adolescents reported that lesbian, gay, bisexual and transsexual (LGBT) youth are significantly more likely to start smoking at an earlier age and on a daily basis compared to their heterosexual peers. This highlights the need for cigarette smoking prevention and cessation programs for the lesbian youth population as well as the LGBT youth population as a whole. Persuasion of youths to quit tobacco use with anti-smoking campaigns can be challenging and applying pressure on the youths to quit may potentially make matters worse. Ways to overcome this include: engaging positive adult role models to provide a sense of community in lesbian youth, having lesbian-specific services lead by lesbian ex-smokers, and create opportunities for youths to discuss and create non-smoking norms.[26]

QUALITY OF LIFE

Sexual orientation can have a negative impact on communication with health care providers, emotional support and acceptability of treatment interventions.[27] In a study by Sinding *et al*[28] that looked at the experiences of a group of lesbians receiving cancer care, the majority of participants reported a lack of psychosocial support while a handful reported being denied standard care. Many of them reported support from the lesbian community but experienced homophobia in the broader community.[29] Lesbians are also found to have lower satisfaction of care and higher levels of stress associated with diagnosis as compared to heterosexual women.[15]

IMPLICATIONS

As detailed above, lesbians have a higher tendency to report less satisfaction with the quality of care as well as poor communication with health care providers.[30] Interpersonal behaviour of physicians has been found to be a major predictor of satisfaction among lesbians[20] and tailoring interventions towards the lesbian communtiy improves physical and mental health up to a year.[18]

More effort should be made to educate health care providers about the importance of encouraging cancer screening and ways to improve the care they provide to lesbian patients. Improving medical provider's knowledge about general lesbian health issues and the risk factors for breast and cervical cancers will increase their recommendations for screenings and their ability to educate their lesbian patients in prevention and screening behaviours. Providers should also be encouraged to inquire about sexual orientation of all patients with the use of gender-neutral language.[30, 31] Providers can also advertise themselves as lesbian-friendly, attend sensitivity training regarding lesbian lifestyles and acknowledge patient's partners.[32]

Besides educating health care providers, lesbian patients should similarly be educated via health promotion campaigns that help address risk reduction. With the significance of embracing psychosocial health and the importance of having engaging activities, health care organizations can partner with community lesbian groups to encourage healthy habits.[17] To facilitate early detection of breast cancer, partners can be encouraged to perform breast self-exam together and to promote it as a routine health habit.[33] Based on the higher prevalence of breast and cervical cancer risk factors as well as the lower rates of screening in the lesbian population, an educational curriculum for lesbians should include discussion of individual behavioural and sexual risk factors, possible barriers to screening, lifestyle modifications that may reduce the risk of developing these cancers and specific recommendations for surveillance.[8]

There is a dearth of data to guide policy and practice in the area of cancer prevention in the lesbian population. Studies that have looked at cancers in the lesbian population are mainly focused on issues relating to screening and prevention. There is a lack of research on aetiology, incidence, mortality and morbidity. It is therefore important to collect sexual orientation data in national health surveys and institution's databases to provide an accurate picture of the cancer disease burden in lesbians and to identify the nature of cancer disparities for lesbians. More research using innovative methodologies and standard registries is needed to determine differences in cancer risk and risk factors in the lesbian population.

CONCLUSION

Cancer is a major health issue for many people, including the lesbian population. Studies have shown that some risk factors for cancers are more prevalent in lesbians compared to heterosexual women and lesbians may be disproportionately affected by common cancers i.e. breast, cervical and lung cancers. More data is needed to determine cancer risk in the lesbian population and this can be achieved by identifying sexual orientation in data surveillance systems. Heterosexism in the health care system may result in lesbians not receiving preventative care and treatment, placing them at risk of higher cancer-related mortality. The ease of communication with health care providers and access to sensitive, competent health care is associated with the health risks of lesbians. Health care providers therefore play a vital role in influencing lesbian patient's knowledge and adherence to breast self-exam, mammography as well as cervical cancer screening. Public health programs directed at the lesbian community, in the form of health promotion campaigns and engaging activities, may play a role in improving health behaviours to prevent cancer. Finally, more research is needed to determine cancer incidence disparities in lesbians and to establish culturally appropriate methods of prevention and treatment interventions.

REFERENCES

1. Phillips-Angeles E, Wolfe, P, Myers R, Dawson P, Marrazzo J, Soltner S, *et al.*
Lesbian health matters: Pap test education campaign nearly thwarted by discrimination.
Health Promotion Practice 2004;5:314-325.

2. Bonvicini KA , Perlin MJ.
The same but different: clinician-patient communication with gay and lesbian patients.
Patient Education and Counseling 2003;51:115-122.

3. Solarz A L.
Lesbian health: current assessment and direction for the future.
Washington, DC: National Academy Press, 1999.

4. American Cancer Society.
Cancer facts and figures.
Atlanta: American Cancer Society, 2008.

5. Gruskin EP, Hart S, Gordon N, Ackerson L.
Patterns of cigarette smoking and alcohol use among lesbians and bisexual women enrolled in a large health maintenance organization.
Am J Public Health 2001;91(6):976-979.

6. Aaron DJ, Markovic N, Danielson ME, Honnold JA, Janosky JE, Schmidt NJ.
Behavioral risk factors for disease and preventive health practices among lesbians.
Am J Public Health 2001;91(6):972-975.

7. Cochran SD, Mays VM, Bowen D, Gage S, Bybee D, Roberts SJ, Goldstein RS, Robison A, Rankow EJ, White J.
Cancer-related risk indicators and preventive screening behaviors among lesbians and bisexual women.
Am J Public Health 2001;91(4):591-597.

8. Matthews AK, Brandenburg DL, Johnson TP, Hughes TL.
Correlates of underutilization of gynecological cancer screening among lesbian and heterosexual women.
Prev Med 2004;38(1):105-113.

9. Dibble SL, Roberts SA, Nussey B.
Comparing breast cancer risk between lesbians and their heterosexual sisters.
Women's Health Issues 2004;14(2):60-68.

10. Valanis BG, Bowen DJ, Bassford T, Whitlock E, Charney P, Carter RA.
Sexual orientation and health: comparisons in the women's health initiative sample.
Arch Fam Med 2000;9(9):843-853.

11. Kerker BD, Mostashari F, Thorpe L.
Health care access and utilization among women who have sex with women: sexual behavior and identity.
J Urban Health 2006;83(5):970-979.

12. American Cancer Society.
Cancer in our lives: raising awareness in the LGBTQI community.
San Francisco, CA: American Cancer Society, 2006.

13. Denenberg R.
Report on lesbian health.
Women's Health Issues 1995;5(2):81-93.

14. Lauver DR, Karon SL, Egan J, Jacobson M, Nugent J, Settersten L, Shaw V.
Understanding lesbian's mammography utilization.
Women's Health Issues 1999;9(5):264-274.

15. Matthews AK, Peterman AH, Delaney P, Menard L, Brandenburg D.
A qualitative exploration of the experiences of lesbian and heterosexual patients with breast cancer.
Oncol Nurs Forum 2002;29(10):1455-1462.

16. Dibble SL, Roberts SA.
Improving cancer screening among lesbians over 50: results of a pilot study.
Oncol Nurs Forum 2003;30(4):E71-E79.

17. Bowen DJ, Powers D, Greenlee H.
Effects of breast cancer risk counselling for sexual minority women.
Health Care Women Int 2006;27(1):59-74.

18. Fobair P, Koopman C, DiMiceli S.
Psychosocial intervention for lesbians with primary breast cancer.
Psychooncology 2002;11(5):427-438.

19. Arena PL, Carver CS, Antoni MH, Weiss S, Ironson G, Duran RE.
Psychosocial responses to treatment for breast cancer among lesbian and heterosexual women.
Women Health 2006;44(2):81-102.

20. Boehmer U, Case P.
Sexual minority women's interactions with breast cancer providers.
Women Health 2006;44(2):41-58.

21. Rankow EJ, Tessaro I.
Cervical cancer risk and Papanicolaou screening in a sample of lesbian and bisexual women.
J Fam Pract 1998;47(2):139-143.

22. Diamant AL, Schuster MA, Lever J.
Receipt of preventive health care services by lesbians.
Am J Prev Med 2000;19(3):141-148.

23. Robertson P, Schacter J.
Failure to identify venereal disease in a lesbian population.
Sex Transm Dis 1981;8:75-76.

24. Clark MA, Bonacore L, Wright SJ, Armstrong G, Rakowski W.
The cancer screening project for women: experiences of women who partner with women and women who partner with men.
Women Health 2003;38(2):19-33.

25. Garofalo R, Wolf RC, Kessel S, Palfrey SJ, DuRant RH.
The association between health risk behaviors and sexual orientation among a school-based sample of adolescents.
Pediatrics 1998;101(5):895-902.

26. Remafedi G, Carol H.
Preventing tobacco use among lesbian, gay, bisexual, and transgender youths.
Nicotine Tob Res 2005;7(2):249-256.

27. Matthews AK.
Lesbians and cancer support: clinical issues for cancer patients.
Health Care Women Int 1998;19(3):193-203.

28. Sinding C, Barnoff L, Grassau P.
Homophobia and heterosexism in cancer care: the experiences of lesbians.
Can J Nurs Res 2004;36(4):170-188.

29. Sinding C, Grassau P, Barnoff L.
Community support, community values: the experiences of lesbians diagnosed with cancer.
Women Health 2006;44(2):59-79.

30. Roberts SJ.
Health care recommendations for lesbian women.
J Obstet Gynecol Neonatal Nurs 2006;35(5):583-591.

31. Boehmer U, Case P.
Physicians don't ask, sometimes patients tell: disclosure of sexual orientation among women with breast carcinoma.
Cancer 2004;101(8):1882-1889.

32. Ott C, Eilers J.
Breast cancer and women partnering with women.
Nebr Nurse 1997;30(3):29.

33. Fish J, Wilkinson S.
Understanding lesbian's healthcare behaviour: the case of breast self-examination.
Soc Sci Med 2003;56(2):235-245.