Risk Factors for Ovarian Cancer: Lesbian and Heterosexual Women

Suzanne L. Dibble, RN, DNSc, Stephanie A. Roberts, MD, Patricia A. Robertson, MD, and Steven M. Paul, PhD

Purpose/Objectives: To compare the distribution of risk factors for developing ovarian cancer in lesbian and heterosexual women.

Design: Secondary analysis of a retrospective medical record review.

Setting: Urban health clinic with special outreach to lesbians.

Sample: Typical participant (N = 1,019) was 42.9 years old and white (70%). Most were without health insurance, and 99% were poor (< $15,780 annual income). The majority (58%, n = 586) described themselves as heterosexual; 42% (n = 433) said they were lesbian.

Methods: Data were collected from medical records and analyzed using analysis of covariance and logistic regression techniques.

Main Research Variables: Ovarian cancer risk factors (parity, exogenous hormone use, smoking, body mass index (BMI), and tubal ligation/hysterectomy).

Findings: Lesbians had a higher BMI; heterosexual women had higher rates of current smoking and a higher incidence of the protective factors of pregnancy, children, miscarriages, abortions, and use of birth control pills.

Conclusions: The results of this study indicate that lesbians may have an increased risk for developing ovarian cancer. A study designed specifically to explore the risk factors of lesbian and heterosexual women for developing ovarian cancer must be undertaken to confirm these findings.

Implications for Nursing Practice: Differences in risk levels may exist for lesbians; therefore, healthcare providers must become comfortable asking questions about sexual orientation and behavior.

Key Points...

- Approximately 23,400 women were diagnosed with ovarian cancer in 2001, and an estimated 1,451 of them were lesbian.
- Lesbians are a diverse group of women from all ethnic, religious, cultural, economic, and age groups.
- Women of all sexual orientations undoubtedly are being treated in oncology practices.
- Research suggests that lesbians may have a risk profile that would indicate a higher rate of ovarian cancer than heterosexual women.

If this is true, one can estimate that approximately 1,451 lesbians may be diagnosed with ovarian cancer in the United States in 2001. These figures may be conservative if the rate of ovarian cancer is eventually found to be higher among lesbians.

The term “lesbian” describes “not only sexual orientation, but also an identity based on psychological responses, cultural values, societal expectations, and a woman’s own choices in identity formation” (White & Levinson, 1995, p. 463). Lesbians are a diverse group of women from every ethnic, religious, economic, cultural, and age group. Because homosexuality is stigmatized and because lesbians often defy stereotypes, lesbians may remain a hidden population in their interactions.

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In the year 2001, an estimated 23,400 women in the United States were diagnosed with ovarian cancer and 13,900 women died from the disease (Greenlee, Hill-Harmon, Murray, & Thun, 2001). The five-year survival for women diagnosed with ovarian cancer is only 50%. Some of the women included in these statistics are lesbians. The actual number of lesbians is unknown; thus, any attempt to report the distribution of sexual orientation in women is subject to some bias and distortion (Solarz, 1999). In the National Health and Social Life Survey, 6.2% of women reported same-sex behavior or desire (Laumann, Gagnon, Michael, & Michaels, 1994).
with healthcare providers and researchers (Eliason, Donelan, & Randal, 1992). The assumption of heterosexuality is so prevalent (Denenberg, 1995; Rankow, 1995) that healthcare providers and researchers may perpetuate the invisibility of the lesbian experience. In 1999, the Institute of Medicine reported on its work examining lesbian health issues and concluded that the first priority for research was "...to better understand the physical and mental health status of lesbians and to determine whether there are health problems for which lesbians are at higher risk as well as conditions for which protective factors operate to reduce their health risk” (Solarz, 1999, p. 156.)

Some believe that the risk factors for developing ovarian cancer may be different between lesbian and heterosexual women, resulting in higher rates of ovarian cancer among lesbians. Even if the actual incidence of ovarian cancer is similar between the two groups, whether a difference exists in the profile of risk factors is not known. Studies of ovarian cancer incidence or the risk factors associated with developing ovarian cancer among lesbians are noticeably absent in the literature. Therefore, the purpose of this pilot study was to determine the differences in the distribution of ovarian cancer risk factors in lesbian and heterosexual women. Some of the modifiable ovarian cancer risk factors that were compared were (a) parity, (b) exogenous hormone usage, (c) smoking, (d) body mass index (BMI), and (e) tubal ligation/hysterectomy.

Background and Significance

Data are needed to answer questions about risk status and various characteristics, including sexual orientation. However, in the cancer statistics of the National Cancer Institute’s Surveillance, Epidemiology, and End Results (SEER) program, no data are collected about sexual orientation. As a result, the number of lesbians actually diagnosed with ovarian cancer is unknown. Until researchers complete and publish studies comparing differences in the distribution of risk factors by sexual orientation, the prevalence of established risk factors for the development of ovarian cancer among lesbians can only be estimated by what is known about the differences between lesbian and heterosexual women.

The following is a description of the current state of knowledge about the differences between lesbian and heterosexual women as they relate to established risk factors for ovarian cancer. Although only some risk factors are modifiable, knowledge of every factor is necessary to develop appropriate screening and interventions.

Age

The most important risk factor for the development of ovarian cancer is age, because the rate of ovarian cancer increases with age (American Cancer Society [ACS], 1999). For instance, using the National Cancer Institute’s (NCI’s) SEER incidence rates per 100,000 women for the 11 registries from 1994–1998, white women had the highest rate of ovarian cancer diagnoses at 15.2 (confidence interval [CI] = 14.9–15.5), Latinas had the next highest rate at 11.1 (CI = 10.5–11.7), Asian/Pacific Islanders had a rate of 10.7 (CI = 10.0–11.3), black women had a rate of 10.3 (CI = 9.6–10.9), and AI/AN women had a rate of 7.2 (CI = 5.4–9.5) (NCI, 2001). The percentage of self-identified lesbians in various ethnic groups is unknown.

Ethnicity/Heritage Group

The risk of developing ovarian cancer varies by ethnic group (ACS, 1999). For instance, using the SEER Incidence Age-Adjusted Rates per 100,000 women for the 11 registries from 1994–1998, white women had the highest rate of ovarian cancer diagnoses at 15.2 (confidence interval [CI] = 14.9–15.5), Latinas had the next highest rate at 11.1 (CI = 10.5–11.7), Asian/Pacific Islanders had a rate of 10.7 (CI = 10.0–11.3), black women had a rate of 10.3 (CI = 9.6–10.9), and AI/AN women had a rate of 7.2 (CI = 5.4–9.5) (NCI, 2001). The percentage of self-identified lesbians in various ethnic groups is unknown.

Family History

Women with a family history of ovarian cancer in a first-degree relative (e.g., mother, sister) have a higher risk for developing ovarian cancer (Whittemore, 1994). Genetically determined ovarian cancers probably comprise only 10% of the total number of ovarian cancers (Berkuch, Carney, & Fureal, 1999). Although some evidence suggests that sexual orientation may be genetically determined (Bailey, Pillard, Neale, & Agyci, 1993), any potential or actual genetic linkages between ovarian cancer and sexual orientation have not been reported.

Parity

The risk of ovarian cancer is significantly higher among women who have not been pregnant and decreases with increasing numbers of pregnancies (Hankinson et al., 1995). A common assumption is that lesbians do not have children; however, surveys indicate that 6%–46% of lesbians do have children (O’Hanlan, 1995). This is in contrast to parity estimates for women in general of 85% (Bachu, 1995).

Breastfeeding

The longer total time that women breastfeed, the more protected they are from developing ovarian cancer (Riman, Persson, & Nilsson, 1998). Because lesbians theoretically have decreased opportunities to breastfeed as a result of decreased parity, an assumption is made that lesbians are at higher risk for the development of ovarian cancer. Again, no studies are available to support these inferences about differential risk by sexual orientation relative to breastfeeding.

Exogenous Hormones

Oral contraceptives have been associated with a decreased risk for developing ovarian cancer, and protection seems to increase with the duration of use (Riman et al., 1998). Presumably, lesbians use oral contraceptives infrequently (Harrison & Silenzio, 1996); however, Johnson, Smith, and Guenther (1987) reported that in a sample of 1,500 lesbians, 61% indicated past use of oral contraceptives. Another issue within the lesbian community is the administration of fertility medica-
tions to enhance the chances of pregnancy when donor sperm are used. The use of fertility drugs and their association with ovarian cancer is yet to be resolved (Riman et al.). Whether women are at increased risk for ovarian cancer secondary to exposure to hormone replacement therapy (HRT) is not clear. The prevalence of HRT usage among lesbians is unknown.

Tubal Ligation and Hysterectomy

Undergoing surgical tubal occlusion or hysterectomy may reduce one’s ovarian cancer risk (Riman et al., 1998). Presumably, lesbians do not undergo tubal ligation as often as heterosexual women, but no studies have been conducted to confirm this. Some preliminary evidence indicates that lesbians may have a high rate of hysterectomies (Harrison & Silenzio, 1996), but this study has not been replicated or expanded to include a comparison group of heterosexual women. No direct comparison studies have been reported to suggest clinically significant differences by sexual orientation in the rate of tubal ligation or hysterectomies.

Other Risk Factors

Other factors with conflicting evidence for increased risk of ovarian cancer include smoking (Engeland, Andersen, Haldorsen, & Trettli, 1996; Purdie et al., 1995), high BMI (Purdie et al.), use of talc in the perineal region (Purdie et al.; Wong, Hempling, Piver, Natarajan, & Mettlin, 1996), high dietary galactose intake (Westhoff, 1996), and antidepressant use (Harlow, Cramer, Baron, Titus-Ernstoff, & Greenberg, 1998). If cigarette smoking is proven to be a risk factor for some women, then older lesbians should be at a higher risk because they have been found to be three times more likely to smoke than heterosexual women (Bradford, Ryan, & Rothblum, 1994). Studies have reported conflicting evidence between lesbian and heterosexual women in body size. In Maine, researchers compared BMI (a relationship between height and weight) between 71 lesbian and 77 heterosexual women and were not able to demonstrate a significant difference (Patton et al., 1998); whereas in another study, lesbians did have a significantly higher BMI than heterosexual women (Roberts, Dibble, Scanlon, Paul, & Davids, 1998). If higher BMI is found to be associated with higher rates of ovarian cancer, lesbians may be at greater risk. Differences in talc use and dietary galactose intake are not clear. Antidepressant use also is not clear, although Cochran and Mays (2000) found no significant differences in depression between women with same-gender sex partner(s) and heterosexual women during the previous year.

Summary

An analysis of the limited data available suggests that lesbians may have different risk factor distributions for developing ovarian cancer than do heterosexual women. The question remains whether differences exist between lesbian and heterosexual women that would result in a higher risk for either lesbians or heterosexual women in developing ovarian cancer. Research is needed to explore the differences in risk factor distributions associated with the development of ovarian cancer between lesbian and heterosexual women. If lesbian or heterosexual women are at higher risk or if they have a different risk profile, then targeted intervention programs to alert healthcare providers and the various communities about their differential risk status need to be designed, implemented, and evaluated.
search assistants proceeded to the next name on the list. After
the research assistants completed the entire list, the process was
repeated with the same list to retrieve charts that were missing
the first time through. To protect patient confidentiality, each
audit form was given a study number, not the medical record
number. Patient lists were locked in a file cabinet when not in
use and were only accessible to project staff.

Data Analysis

Data were analyzed using the CRUNCH™ Program Version 4 (CRUNCH Software Corporation, Oakland, CA). Descriptive statistics were calculated to describe the demographic characteristics of the sample. Comparisons in the demographics by sexual orientation were generated using t-tests or chi-square analyses as appropriate for the level of data. Because the age, ethnicity, employment status, and disability status of the sample were different by sexual orientation, the comparisons of risk factors were completed with age, ethnicity, employment status, and disability status as covariates. Both analysis of covariance and logistic regression were used to compare the risk factors; the choice depended on whether the outcome was continuous or dichotomous data. Significance was preset at p < 0.05.

Results

Sample

The typical participant (N = 1,019) was 42.9 years old (SD
± 6.85, range 35–75), white (70%), and employed (50%). Most of the women were without health insurance, and 99%
had incomes at less than 200% of Federal Poverty Guidelines (< $15,780 per year) (U.S. Federal Register, 1997). Of this
sample, 58% (n = 586) identified themselves as heterosexual
and 42% (n = 433) described themselves as lesbian. Table 1
contains a comparison of demographic information by sexual
orientation. The sample sizes varied because of missing data.
Significant differences were found in age, with the lesbian
group approximately two years younger than the heterosexual
group. Significant differences were found in ethnicity, with
fewer black women and more white women in the lesbian
group. Significantly more lesbians were employed, and more
heterosexuals were disabled. Most of the heterosexual women
(98%) had sex only with men, whereas 88% of the lesbians
reported having sex with both men and women during their
lifetimes. The extent of missing data on lifetime sexual behavior
for lesbians was extensive—32% for the lesbians compared
with 3% for the heterosexuals.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Lesbians (N = 433)</th>
<th>Heterosexuals (N = 586)</th>
<th>Statistic</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>X 41.8</td>
<td>43.8</td>
<td>t = 4.74</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>SD 6.3</td>
<td>7.1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ethnicity</td>
<td>Asian American 5 1</td>
<td>18 3</td>
<td>( \chi^2 = 26.64 )</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Black 36 8</td>
<td>105 18</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Latina 32 7</td>
<td>51 9</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>White 323 75</td>
<td>366 63</td>
<td></td>
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<tr>
<td></td>
<td>Other 20 5</td>
<td>26 4</td>
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<tr>
<td></td>
<td>Missing data 17 4</td>
<td>20 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employment status</td>
<td>Employed 230 53</td>
<td>220 38</td>
<td>( \chi^2 = 33.65 )</td>
<td>0.001</td>
</tr>
<tr>
<td></td>
<td>Other 144 33</td>
<td>308 53</td>
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<td></td>
<td>Missing data 59 14</td>
<td>58 10</td>
<td></td>
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</tr>
<tr>
<td>Disability status</td>
<td>Disabled 58 13</td>
<td>125 21</td>
<td>( \chi^2 = 8.53 )</td>
<td>0.004</td>
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<td></td>
<td>Other 316 73</td>
<td>403 69</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Missing data 59 14</td>
<td>58 10</td>
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<tr>
<td>Sexual behavior</td>
<td>Only women 35 8</td>
<td>0 0</td>
<td>( \chi^2 = 825.32 )</td>
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</tr>
<tr>
<td></td>
<td>Only men 0 0</td>
<td>560 96</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Both 259 60</td>
<td>9 2</td>
<td></td>
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<td>Celibate 1 &lt; 1</td>
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</tr>
<tr>
<td></td>
<td>Missing data 138 32</td>
<td>17 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note. Percents do not equal 100 because of rounding.
Table 2. Comparison of Risk Factors by Sexual Orientation After Controlling for Age, Ethnicity, Employment, and Disability Status

<table>
<thead>
<tr>
<th>Variable</th>
<th>Lesbians N = 433</th>
<th>Heterosexuals N = 586</th>
<th>Odds Ratio</th>
<th>95% Confidence Interval</th>
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</thead>
<tbody>
<tr>
<td><strong>Exogenous hormones</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever used birth control pills*</td>
<td>Yes</td>
<td>168 39</td>
<td>354 60</td>
<td>3.03</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>255 59</td>
<td>224 38</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>10 2</td>
<td>8 1</td>
<td></td>
</tr>
<tr>
<td>Ever used hormone replacement therapy</td>
<td>Yes</td>
<td>31 7</td>
<td>71 12</td>
<td>1.26</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>32 7</td>
<td>58 10</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>370 86</td>
<td>457 78</td>
<td></td>
</tr>
<tr>
<td><strong>Smoking</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current smoking status**</td>
<td>Yes</td>
<td>124 29</td>
<td>224 38</td>
<td>1.45</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>213 49</td>
<td>238 41</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>96 22</td>
<td>124 21</td>
<td></td>
</tr>
<tr>
<td>Ever smoked</td>
<td>Yes</td>
<td>222 51</td>
<td>324 55</td>
<td>1.07</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>115 27</td>
<td>138 24</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>96 22</td>
<td>124 21</td>
<td></td>
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<tr>
<td><strong>Family history</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family history of breast cancer</td>
<td>Yes</td>
<td>80 19</td>
<td>96 16</td>
<td>1.00</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>348 80</td>
<td>483 82</td>
<td></td>
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<tr>
<td></td>
<td>Missing</td>
<td>5 1</td>
<td>7 1</td>
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<tr>
<td><strong>Hysterectomy</strong></td>
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<td></td>
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<tr>
<td>Undergone menopause earlier than 45 years old</td>
<td>Yes</td>
<td>12 3</td>
<td>26 4</td>
<td>1.60</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>43 10</td>
<td>71 12</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Missing</td>
<td>378 87</td>
<td>489 83</td>
<td></td>
</tr>
<tr>
<td><strong>Endogenous hormones</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever pregnant*</td>
<td>Yes</td>
<td>161 37</td>
<td>488 83</td>
<td>7.14</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>271 63</td>
<td>98 17</td>
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<tr>
<td></td>
<td>Missing</td>
<td>1 &lt; 1</td>
<td>0 0</td>
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</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Lesbians n = 433</th>
<th>Heterosexuals n = 586</th>
<th>Adjusted</th>
<th>SD</th>
<th>n</th>
<th>Adjusted</th>
<th>SD</th>
<th>n</th>
<th>F</th>
<th>p</th>
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<tr>
<td><strong>Endogenous hormones</strong></td>
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<tr>
<td>Age at menarche</td>
<td>12.71 1.53 327</td>
<td>12.81 1.65 452</td>
<td>0.64</td>
<td></td>
<td></td>
<td>0.872</td>
<td></td>
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<tr>
<td>Number of children</td>
<td>0.87 1.08 122</td>
<td>1.48 1.39 392</td>
<td>18.88</td>
<td></td>
<td></td>
<td>0.0001</td>
<td></td>
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<tr>
<td>Number of miscarriages</td>
<td>0.25 0.68 119</td>
<td>0.44 0.92 381</td>
<td>4.18</td>
<td></td>
<td></td>
<td>0.042</td>
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<tr>
<td>Number of abortions</td>
<td>0.95 1.02 120</td>
<td>1.42 1.60 381</td>
<td>8.84</td>
<td></td>
<td></td>
<td>0.003</td>
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<tr>
<td>Age at menopause</td>
<td>47.0 4.93 48</td>
<td>47.2 5.61 70</td>
<td>0.03</td>
<td></td>
<td></td>
<td>0.872</td>
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<tr>
<td><strong>Body mass</strong></td>
<td></td>
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<tr>
<td>Height (inches)</td>
<td>65.03 2.65 304</td>
<td>64.99 2.58 416</td>
<td>0.04</td>
<td></td>
<td></td>
<td>0.844</td>
<td></td>
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<tr>
<td>Weight (pounds)</td>
<td>159.96 41.08 302</td>
<td>152.97 36.91 422</td>
<td>5.52</td>
<td></td>
<td></td>
<td>0.019</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Body mass index</td>
<td>26.66 6.15 327</td>
<td>25.52 5.97 409</td>
<td>5.66</td>
<td></td>
<td></td>
<td>0.018</td>
<td></td>
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</tr>
</tbody>
</table>

* p < 0.05; ** p < 0.01
Note. Percents do not equal 100 because of rounding.
cantly more likely to currently smoke (38% versus 29%), although past smoking did not differ between the two groups. No significant differences were found in family history of breast cancer (see Table 2).

No statistically significant differences were found in age at menarche (lesbian = 12.71; heterosexual = 12.81), age at menopause (lesbian = 47.0; heterosexual = 47.2), or HRT use between the two groups (lesbian = 7%; heterosexual = 12%); however, the extent of missing data for both menopause and HRT was extensive. Information about women who had gone through early menopause as a result of hysterectomy was not readily available in the medical records. As a rough proxy estimate of potential hysterectomies, the authors explored the differences in the number of lesbian and heterosexual women who had gone through early menopause (< 45 years of age). No significant differences were found.

Discussion

This is the first reported study comparing ovarian cancer risk factors between lesbian and heterosexual women. The finding that more of the heterosexuals smoked than did the lesbians was not expected. Data from the Women’s Health Initiative indicated significant differences in cigarette smoking status by sexual orientation, with lesbians smoking more (Solarz, 1999). Bradford et al. (1994) previously reported daily smoking rates for lesbians over age 35 to range from 30%–38%, with the highest percentage in the over 55 age group. Skinner and Otis (1996) reported smoking rates during the prior month for lesbians over age 35 to be 38%, as compared with the national average of 22% in 1997 of women over age 35 who smoked (American Lung Association, 1999).

This study’s findings may reflect geographic differences in smoking rates or reflect a true change within the lesbian community. This study's findings may reflect geographic differences in smoking rates or reflect a true change within the lesbian communities from the earlier studies.

Previous contributions to the lesbian health literature have measured self-report of weight problems (Bradford et al., 1994) or weight (Herzog, Newman, Yeh, & Warshaw, 1992), but none except the Houston Health Care Needs Assessment (Becker & Robison, 1996) have measured both height and weight. Whether the finding of a significantly higher BMI in lesbians is in the range to have adverse health consequences is questionable. Neither the average BMI for lesbians or heterosexuals in this study was more than 27.3 kg/m², a figure used as a cut-point for overweight in the Second National Health and Nutrition Examination Survey study (Kuczmarski, 1992). However, newer guidelines for a healthy BMI set the cut-off for overweight at 25 kg/m², which would mean that, on average, both groups were overweight (National Heart, Blood, and Lung Institute, 2000). Another factor to consider is that differences in age exist in the correlation of BMI with body fat, with BMI more highly correlated with estimates of body fat in younger women and muscle mass in older adults (Micozzi & Harris, 1990). Because lesbians are reported to exercise more than their heterosexual counterparts (Becker & Robison), the differences in BMI may reflect increased muscle mass in lesbians.

As expected from previous reports, the lesbians had significantly fewer pregnancies, miscarriages, and abortions, and lower use of birth control pills. These variables place lesbians at higher risk for developing ovarian cancer. However, no significant differences were found in age at menarche or age at menopause between the two groups. No significant differences were found in HRT use between the two groups either, although data about HRT use in both groups was incomplete. This was probably, in part, because direct questions about the use of HRT are not included in the LMWHS intake form. Also, given the relatively young age of the sample, the providers may not have asked about these issues. Missing from the analysis is data about the use of fertility drugs because this information was not collected in the original breast cancer risk study.

Limitations

This study has significant limitations, primarily because of the nature of medical chart review and because the charts were originally reviewed for breast cancer risk factors. Medical record information may be limited by what the healthcare providers believed should be recorded for future reference. Therefore, medical record information may be sparse for the categories of interest. For example, in this study, ascertaining whether someone was a current smoker was possible, but the duration and amount of cigarettes smoked was not consistently available in the record.

In addition, this sample consisted of relatively young women from one economic group residing in a single urban area. Almost all of the women in this study lived at less than 200% of the poverty level (< $15,780 annual income, U.S. Federal Register, 1997) in the San Francisco Bay area. Also, the average age of the sample was only 42 years and the sample was primarily white. More women of color were represented in this sample (30%) than in other studies (Becker & Robison, 1996; Bradford et al., 1994; Skinner & Otis, 1996). Nevertheless, these sample characteristics limit the generalizability of our findings to other lesbian and heterosexual women.

Implications for Research and Practice

The results of this study suggest that a basis exists for future research about the differences in the risk factor profiles between lesbian and heterosexual women. These studies should include a sample of lesbian and heterosexual women from various economic groups, geographic regions, and ages. Surveying older lesbians particularly is important because of the increased incidence of ovarian cancer with age. Including questions about sexual orientation in tumor registry data also would aid researchers in determining the numbers of lesbians affected by ovarian cancer each year.

Healthcare providers must understand that lesbians are part of every racial, economic, religious, cultural, and age group. They are a part of every practice and have increased or, at least, different risk factors for developing ovarian cancer. Therefore, sexual orientation and behavior is an essential part of the screening process.

Many healthcare professionals likely use assumptions about language that prevents the exchange of open and trusting communication. An example of this includes asking a woman if she has a husband. Another way that this question could be asked in the context of care is “Is your partner picking you up?” or “Should we include your partner or friend in this discussion?” Questions such as these will signal to lesbian clients that sharing information about their lives is safe, enabling nurses to provide better care.

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Micozzi, M.S., & Harris, T.M. (1990). Age variations in the relation of body
Kuczmarski, R.J. (1992). Prevalence of overweight and weight gain in the
American Lung Association, Epidemiology and Statistics Unit. (1999).
testing and prophylactic oophorectomy. European Journal of Obstetrics,
Gynecology, and Reproductive Biology, 82, 159–164.
care survey: Implication for mental health care. Journal of Consulting
Cochran, S.D., & Mays, V.M. (2000). Relation between psychiatric syn-
dromes and behaviorally defined sexual orientation in a sample of the
tional, 5(2), 81–91.
Care for Women International, 13, 131–144.
habits and risk of cancers other than lung cancer; 28 years’ follow-up of
26,000 Norwegian men and women. Cancer Causes and Control, 7, 497–
506.
Hankinson, S.E., Colditz, G.A., Hunter, D.J., Willett, W.C., Stampfer, M.J.,
of reproductive factors and risk of epithelial ovarian cancer. Cancer, 76,
284–290.
Harlow, B.L., Cramer, D.W., Baron, J.A., Titus-Ernstoff, L., & Greenberg,
cancer. Cancer Epidemiology, Biomarkers, and Prevention, 7, 697–702.
Harrison, A.E., & Silenzio, V.M. (1996). Comprehensive care of lesbian and
gay patients and families. Primary Care, 23, 31–46.
satisfaction in homosexual and heterosexual women. International
ecologic healthcare problems between lesbians and bisexual women: A
Kuczynski, R.J. (1992). Prevalence of overweight and weight gain in the
United States. American Journal of Clinical Nutrition, 55(Suppl. 2),
495S–502S.
social organization of sexuality: Sexual practices in the United States.
Chicago: University of Chicago Press.
Micozzi, M.S., & Harris, T.M. (1990). Age variations in the relation of body
mass indices to estimates of body fat and muscle mass. American Jour-
nal of Physical Anthropology, 81, 375–379.
National Cancer Institute. (2001). Surveillance, epidemiology, and end re-

References

American Cancer Society, California Division, & Public Health Institute,
California Cancer Registry. (1999). California: Cancer facts and figures,
American Lung Association, Epidemiology and Statistics Unit. (1999).
Trends in cigarette smoking. Atlanta: Author.
current population reports (Report No. 20-482). Washington DC: U.S.
Government Printing Office.

For more information...

Lesbians and Breast and Ovarian Cancer Issues
www.annieappleseedproject.org/lesandbreasa.html

National Ovarian Cancer Coalition
www.ovarian.org

The Lesbian Cancer List
How to subscribe: e-mail majordomo@Queernet.org with
"subscribe lcl" as the body of the message.

These Web sites are provided for information only. The hosts are re-
sponsible for their own content and availability. Links can be found
using ONS Online at www.ons.org.