In the United States, endometrial carcinoma incidence rates, uncorrected for hysterectomy prevalence, are higher among white women than black women. We estimated corrected endometrial carcinoma rates by racial/ethnic groups and age (30–74 years) for 1992–2000 using data from the Surveillance, Epidemiology, and End Results program and the Behavioral Risk Factor Surveillance Survey. Hysterectomy prevalence was higher among black women than among Hispanic and white non-Hispanic women. Correcting for hysterectomy prevalence increased age-adjusted endometrial carcinoma rates per 10^5 woman-years from 29.2 to 48.7 (66.8% increase) overall, from 14.6 to 28.5 (95.3% increase) in blacks, from 18.8 to 29.6 (57.6% increase) in Hispanics, and from 33.2 to 54.9 (65.1%) in white non-Hispanics. This correction reduced the rate ratio for white non-Hispanics compared with blacks from 2.27 to 1.93. Among blacks but not Hispanics or white non-Hispanics, the endometrial carcinoma risk factors of obesity and diabetes were more prevalent among hysterectomized than non-hysterectomized women. Failure to correct for hysterectomy prevalence may lead to underestimates of endometrial carcinoma risk, especially among blacks. The high prevalence of hysterectomy among blacks with strong endometrial cancer risk factors may partly account for lower cancer rates in this group. [J Natl Cancer Inst 2005;97:1700–2]
Hysterectomy procedures performed for benign indications may selectively reduce the number of women at markedly elevated risk for endometrial carcinoma if women with strong risk factors for endometrial carcinoma are more likely to have their uterus removed than those lacking such factors. In this analysis, two endometrial carcinoma risk factors, obesity and diabetes, were more prevalent among black and Hispanic women than among white non-Hispanic women, regardless of hysterectomy status (Table 1). Moreover, among blacks, the prevalence of obesity and of diabetes was much higher among those who had undergone hysterectomy than among those who had not (by 51% and 69%, respectively). In contrast, among Hispanics and white non-Hispanics, there was less variation in the prevalence of these risk factors by hysterectomy status. Furthermore, Hispanics and white non-Hispanics who underwent hysterectomy included a substantially higher percentage of smokers (in whom endometrial carcinoma risk is reduced) than those who retained their uteri, whereas among blacks smoking varied less by hysterectomy status. The higher relative percentage of blacks with strong endometrial carcinoma risk factors who undergo hysterectomy compared with Hispanics and white non-Hispanics may partly explain the lower endometrial cancer incidence among blacks, even after correcting for hysterectomy.

Our analysis has several limitations. Although it was based on large datasets that are generally representative of women in the United States, our findings may not necessarily apply to populations that are not proportionately represented in SEER or BRFSS. In particular, BRFSS participants are limited to persons with working telephones. Nevertheless, self-reports of hysterectomy are reasonably accurate (13), and hysterectomy prevalence determined using BRFSS data has been validated against that found using other data sources (14). This analysis was also limited to endometrial cancer risk factors that are available in the BRFSS and did not include expert pathology review. Nevertheless, our analysis demonstrates that failure to account for hysterectomy prevalence can result in grossly underestimated endometrial carcinoma rates in the United States, especially for blacks. In addition, patterns of hysterectomy performance among blacks may greatly reduce the prevalence of endometrial carcinoma risk factors (i.e. obesity and diabetes) among blacks who retained their uteri, but only slightly reduce them among Hispanics and white non-Hispanics.

Growing enthusiasm for treating benign uterine diseases without surgery could expand the population of women with intact uteri, thereby increasing the endometrial carcinoma burden in the United States. Although averting hysterectomy is desirable, women with endometrial carcinoma risk factors might experience increased endometrial carcinoma incidence and mortality if hysterectomy prevalence declines. In the future, monitoring of endometrial

**Table 1.** Prevalence of endometrial cancer risk factors stratified by hysterectomy status (1992–2000)*

<table>
<thead>
<tr>
<th>Risk factor by hysterectomy status†</th>
<th>Blacks</th>
<th>Hispanics</th>
<th>White non-Hispanics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obese‡</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uterus removed</td>
<td>44.2</td>
<td>22.9</td>
<td>15.8</td>
</tr>
<tr>
<td>Uterus retained</td>
<td>29.3</td>
<td>22.4</td>
<td>14.9</td>
</tr>
<tr>
<td>Diabetic§</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uterus removed</td>
<td>13.2</td>
<td>6.2</td>
<td>5.0</td>
</tr>
<tr>
<td>Uterus retained</td>
<td>7.8</td>
<td>6.6</td>
<td>3.9</td>
</tr>
<tr>
<td>Current smoker</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uterus removed</td>
<td>23.9</td>
<td>17.4</td>
<td>26.1</td>
</tr>
<tr>
<td>Uterus retained</td>
<td>20.1</td>
<td>12.9</td>
<td>18.5</td>
</tr>
</tbody>
</table>

*Data for white non-Hispanics and Hispanics were based on results of the Behavioral Risk Factor Surveillance System (BRFSS) for states in which nine of the registries in the Surveillance, Epidemiology, and End Results program (SEER) are located, Connecticut, metropolitan Atlanta, Iowa, New Mexico, Seattle Puget Sound, Utah, San Francisco–Oakland, San Jose–Monterey, and Los Angeles, that is, excluding the registries in Hawaii and metropolitan Detroit. Data for blacks include results from Hawaii and Detroit.

†Factors related to endometrial carcinoma risk available in BRFSS.

‡Obesity was defined as having a body mass index of ≥30 kg/m².

§Data for gestational diabetes have not been included.
carcinoma incidence rates using improved methods that correct for hysterectomy prevalence and include information about the characteristics of women who undergo hysterectomy are needed to address these concerns and to provide the basis for prevention efforts.

**REFERENCES**


**NOTE**

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