Surveillance of histologic lung cancer types is important for monitoring population trends that may have implications for etiology and prevention, and understanding underlying causes of lung cancer over time. In the United States, there has been a shift in lung cancer incidence rates and trends by histologic type. From 1973 to early 1980s, squamous cell carcinoma was most prevalent in men, and the most common type of lung cancer reported in women. By the 1980s, the incidence rate of adenocarcinoma had surpassed that of squamous cell carcinoma. Variant adenocarcinoma has remained the most common histologic subtype in men and women.

This study provides a comprehensive and recent description of disparities (e.g., sex, race, and geographic location) in histologic lung cancer incidence rates and trends for U.S. adults.

BACKGROUND AND OBJECTIVE

- Surveillance of histologic lung cancer types is important for monitoring population trends that may have implications for etiology and prevention, and understanding underlying causes of lung cancer over time.
- From 1973 to early 1980s, squamous cell carcinoma was the most prevalent in men, and the most common type of lung cancer reported in women. By the 1980s, the incidence rate of adenocarcinoma had surpassed that of squamous cell carcinoma.

METHODS

- Data were derived from CDC/National Program of Cancer Registries (NPCR) and the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program.
- Together, these two programs collect cancer incidence data for the entire U.S. population.

RESULTS

- Lung Cancer Incidence Rates for Men and Women by Histologic Type – United States, 2004-2009

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>40-49</td>
<td>0.8</td>
<td>0.1</td>
</tr>
<tr>
<td>50-59</td>
<td>2.8</td>
<td>2.6</td>
</tr>
<tr>
<td>60-69</td>
<td>6.2</td>
<td>5.6</td>
</tr>
<tr>
<td>70-79</td>
<td>9.1</td>
<td>8.9</td>
</tr>
<tr>
<td>80-89</td>
<td>12.6</td>
<td>11.9</td>
</tr>
</tbody>
</table>

- Lung and bronchus cancer cases were defined using site codes reported in U.S. tumor registries. By the 1980s, the incidence rate of adenocarcinoma had surpassed that of squamous cell carcinoma (95% CI).

- Rates are per 100,000 and age-adjusted to the 2000 U.S. Standard Population (19 age groups–Census P25-1130) standard.

- Histologic rates for women were lower in the West compared to those living in other Census regions.

- Squamous Cell
- Small cell
- Large cell
- Adenocarcinoma
- Other

- APC: Average Percent Change

- **Background and Objective**

**Strengths**
- Lung adenocarcinoma is the most frequently diagnosed histologic type of lung cancer in the U.S.
- APC describes trends in lung cancer incidence rates and trends for the entire nation.
- Rates for other histologic types have decreased or remained relatively stable.
- Among women, squamous cell carcinoma rates have increased with rates being highest among NH white and NH AI/AN.

**Limitations**
- Lack of data on smoking and inability to examine incidence by smoking behavior/status.
- Potential for misclassification of race/ethnicity, particularly among NH AI/AN.

**Conclusion**

- Lung adenocarcinoma is the most frequently diagnosed histologic type of lung cancer in the U.S.
- APC describes trends in lung cancer incidence rates and trends for the entire nation.
- Rates for other histologic types have decreased or remained relatively stable.
- Among women, squamous cell carcinoma rates have increased with rates being highest among NH white and NH AI/AN.

**Acknowledgements**

We gratefully acknowledge the contributions of the state and regional cancer registry staffs for their work in collecting the data used in this study.

**References**


**Contact Information**

- Division of Cancer Prevention and Control
- National Center for Chronic Disease Prevention and Health Promotion
- CDC

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