Epidemiology and histological classification of lung cancer patients in Zimbabwe: A five-year retrospective study

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No conflicts of interest to declare

A retrospective descriptive study reviewing medical records of patients who presented with pathologically confirmed primary lung cancer from January 2014 to 31 December 2018 was done.

- A total of 73 patients were treated with a median age at diagnosis of 60 years. (Table 1)
- Rural residents who mainly use firewood for energy made up 44% of the study population.
- Less than half of the patients had a history of smoking with an average pack-year of 28.1
- 1 in 5 patients were HIV positive and 57% of HIV infected patients were smokers compared to 31% among HIV negative patients.
- HIV positive patients with lung cancer younger at diagnosis compared to HIV negative patients by 4 years and a higher smoking prevalence & pack-years.
- High-risk occupations were identified in 8% of cases.
- Non-Small cell lung carcinoma (NSCLC) was the most common type with adenocarcinoma being the most prevalent subtype. (fig. 2)
- Most patients had stage IV disease at diagnosis. (Fig.3)

**Background**

- Globally lung cancer represents about 11% of all new cancers.
- It is the leading cause of cancer-related deaths in 87 countries and 26 countries for women.
- However, only 1% of these deaths were reported in Africa.
- In Zimbabwe it accounts for only 3% of cancers in men and 1.6% in women ranking at number 8 and 12 respectively.
- There is a discrepancy in lung cancer incidence ranking globally and that observed in Zimbabwe and Africa.
- Here we describe the epidemiology and histological classification of lung cancer cases at Zimbabwe's largest clinical oncology centre

**Methodology**

A retrospective descriptive study reviewing medical records of patients who presented with pathologically confirmed primary lung cancer from January 2014 to 31 December 2018 was done.

**Results**

- A total of 73 patients were treated with a median age at diagnosis of 60 years. (Table 1)
- Rural residents who mainly use firewood for energy made up 44% of the study population.
- Less than half of the patients had a history of smoking with an average pack-year of 28.1
- 1 in 5 patients were HIV positive and 57% of HIV infected patients were smokers compared to 31% among HIV negative patients.
- HIV positive patients with lung cancer younger at diagnosis compared to HIV negative patients by 4 years and a higher smoking prevalence & pack-years.
- High-risk occupations were identified in 8% of cases.
- Non-Small cell lung carcinoma (NSCLC) was the most common type with adenocarcinoma being the most prevalent subtype. (fig. 2)
- Most patients had stage IV disease at diagnosis. (Fig.3)

**Table 1: Patient characteristic & Risk factors**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (%)</th>
</tr>
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<tbody>
<tr>
<td>Sex: Male</td>
<td>43 (58.9)</td>
</tr>
<tr>
<td>Female</td>
<td>30 (41.1)</td>
</tr>
<tr>
<td>Age group: &lt;65</td>
<td>33 (45.2)</td>
</tr>
<tr>
<td>&gt;65</td>
<td>40 (54.8)</td>
</tr>
<tr>
<td>Primary Residence: Urban</td>
<td>37 (56.3)</td>
</tr>
<tr>
<td>Rural</td>
<td>29 (43.9)</td>
</tr>
<tr>
<td>Tobacco Smoking history: No</td>
<td>33 (45.3)</td>
</tr>
<tr>
<td>Yes</td>
<td>34 (46.5)</td>
</tr>
<tr>
<td>HIV status: Negative</td>
<td>35 (49.3)</td>
</tr>
<tr>
<td>Positive</td>
<td>14 (19.7)</td>
</tr>
<tr>
<td>Unknown</td>
<td>22 (31)</td>
</tr>
<tr>
<td>Family history of cancer: No</td>
<td>65 (89)</td>
</tr>
<tr>
<td>Yes</td>
<td>8 (11)</td>
</tr>
<tr>
<td>History of high risk occupation: No</td>
<td>67 (91.8)</td>
</tr>
<tr>
<td>Yes</td>
<td>6 (8.2)</td>
</tr>
</tbody>
</table>

**Conclusion**

- Most of the lung cancer patients were diagnosed with metastatic adenocarcinoma with no history of smoking.
- Other significant risk factors include HIV infection, indoor pollution and occupational exposure.

**References**