HPV and cervical cancer in Kenyan women with HIV
Maureen I. Ogamba, John Michael Ong’echa, and Ann Moormann
University of Massachusetts Medical School, Academic Model Providing Access to Healthcare (AMPATH), and Kenyan Medical Research Institute (KEMRI)

Background
- Cervical cancer is the second most common form of cancer in Kenya [1].
- Along with cervical cancer, HIV is another medical issue in Kenya; the prevalence of HIV is more than 2.5% of the population [2].
- Studies show that HIV-positive women have a higher risk of developing opportunistic infections such as HPV [3].
- The co-infection of HIV and HPV may lead to the increased prevalence of cervical cancer.

Objectives
- The purpose of the study is to understand how HIV and HPV play a role in the development of cervical cancer.

Methods
- This study is collaborative effort with AMPATH which includes Moi University School of Medicine, Moi Teaching & Referral Hospital, and a consortium of US medical schools.
- Reproductive aged women in Kisumu county were screened.
- Visual inspection with acetic acid (VIA) was used to test for cervical cancer.
- VIA-negative women were asked to return in 6 months for retest.
- VIA-positive women:
  - Cryotherapy was performed on small lesions
  - Large lesions were biopsied and LEEP (Loop Electrosurgical Excision Procedure) was performed

Preliminary data from the last 5 months of the study were analyzed. The data shows that about 47.4% of the women screened were HIV positive.
60% of the HIV positive women, were between the ages of 25-49.
Of the women screened, 3.3% were VIA positive.

Table 1. Number of women screened in Kisumu county region.

<table>
<thead>
<tr>
<th>Screened using VIA</th>
<th>&lt;25 years</th>
<th>25-49 years</th>
<th>&gt;50 years</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV Positive</td>
<td>185</td>
<td>561</td>
<td>142</td>
<td>888</td>
</tr>
<tr>
<td>Positive VIA</td>
<td>35</td>
<td>317</td>
<td>69</td>
<td>421</td>
</tr>
<tr>
<td>Suspected Cancerous Lesions</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Treated using Cryotherapy</td>
<td>0</td>
<td>4</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Treated using LEEP</td>
<td>0</td>
<td>6</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

Figure 2 – Healthy cervix (left) and aceto-white, VIA positive cervix (right). Wiky Brew. Retrieved August 1, 2016 from http://wikybrew.com/wp-content/uploads/2014/11/cervix.png

Discussion
- The high percentage of HIV positive women shows that HIV infection is a concerning issue in the region.
- HIV prevention and education needs to be addressed to fill the gap in the healthcare system.
- The data needs to be further analyzed to allow for comparison of VIA results between HIV positive vs. negative women.
- Processing of HPV results needs to be addressed.
- This is an ongoing study, as a result the study cannot be conclusive until further analysis of the data.
- Despite the free service, many women did not want to be screened.
- As a result, future studies should address the misconceptions and fears of cervical cancer screening in Kenyan women.

Acknowledgement
- This study is funded by U54 CA190151 grant.
- Dominic Owuor – Data Analyst

References