

# The Prevalence of Human Papillomavirus Among the Indigenous Population in Serian, Sarawak, Malaysian Borneo

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## Research

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# Abstract

## Introduction:

Cervical cancer remains a significant problem worldwide, particularly in resource-limited countries, and having persistent HRHPV infection is a necessary risk factor. HPV16/18 are generally regarded as the cause of 70% cervical cancer incidences worldwide, and effective vaccines have been developed against these two HPVs. Although Malaysia has officially adopted an HPV vaccination strategy into the National Vaccination Program, the comprehensive prevalence data on each endemic HPV genotypes was absent in East Malaysia and most parts of the country except for major cities in Peninsular Malaysia.

## Objective:

The objective of this study is to elucidate the endemic HPV genotypes that are circulating in the suburban population in Serian Division, Sarawak, Malaysia.

## Methods:

Non-virgin women who were attending the Women's health campaign on the 5<sup>th</sup> and 23<sup>rd</sup> October 2018 were recruited. Informed consent was obtained, and a cervical swab was clinician-collected. The presence of HPV in the cervical swab was detected using MY09/MY11 followed by GP5+/GP6+ nested-PCR and its corresponding genotypes identified via sequencing. HRHPV positive women were screened using

## Results:

We have recruited 43 sexually active women with median age of 51-year-old. HPV18, 39, 52, 56, and 84 were detected at an equal ratio. The overall prevalence rate of HPV, HRHPV and URHPV were 11.62% (5/43), 9.3% (4/43) and 2.3% respectively. Only 20% (n=1/5) of the HRHPV positive women were positive by VIA.

## Conclusion:

HPV18, 39, 52, 56, and 84 were detected in Serian at an equal ratio. HPV16 was absent, and HPV18 was the only vaccine-genotype detected. HPV 39, 52, 56, and 84 were not covered by the bivalent and tetravalent HPV vaccines.

# Introduction

Cervical cancer is ranked as the 3<sup>rd</sup> most common cancer among women in Malaysia and is the second cause of mortality in Malaysian women. On average, about 1682 women are diagnosed with invasive cervical cancer, and 944 die from the disease annually (1). Sarawak has the highest cervical cancer incidence rate in Malaysia despite the 4-decade long free Pap smear program by the Ministry of Health with the national coverage of <22% with the non-adherence rate of 90.5%(2).