

# Human papillomavirus oncotypes and cervical cancer in multi-ethnic Sarawakian patients

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## ABSTRACT

**Introduction:** Cervical cancer remains a major health concern in Malaysia, with Sarawak reporting the highest incidence nationwide. Despite this, local data on HPV genotype distribution and its predictive value for cervical cancer remain limited. **Objectives:** This study aimed to evaluate the distribution of HPV genotypes among cervical cancer patients in Sarawak and the associations with clinical outcomes. **Materials and Methods:** Patients diagnosed with cervical cancer at Sarawak General Hospital from December 2023 to April 2025 were recruited. Cervical samples from 62 consenting patients were analysed using the Seegene Allplex HPV28 Detection kit. Demographic and clinical data were collected, with a 1-year follow-up. Statistical analysis was performed using SPSS v27. **Results:** The mean patient age was 50 years, with Iban ethnicity comprising 41.9%. Most patients (59.7%) were diagnosed at Stage III or IV, while only 14.5% were at Stage I. Squamous cell carcinoma accounted for 70.5% of cases. High-risk HPV genotypes 16, 18, and 52 were most prevalent, found in 45.2%, 27.3%, and 9.7% of patients, respectively. Low-risk types 6, 42, and 44/70 were detected in smaller proportions. Notably, HPV30 was identified via metagenomic sequencing in one case. Only two patients had prior HPV vaccination. Seven patients (11.3%) died within a mean of 124 days from diagnosis, and a mean of 67 days from treatment. **Conclusion:** The study highlights a high burden of late-stage cervical cancer in Sarawak and dominance of HPV 16, 18, and 52. Rare genotypes and low vaccination uptake underline the urgent need for enhanced screening, vaccination, and public health strategies.