1. **Biological and Demographic Factors Influencing Stage at Diagnosis of Cervical Cancer in Botswana**

**Global Integrative Oncology: Use in Cancer Prevention**

**Background**: Cervical cancer is the most commonly diagnosed cancer and the leading cause of cancer death in Botswana. Presenting with an advanced stage tumor increases the risk of death. Factors associated cervical cancer stage in this low-resource setting are unclear.

**Aim**: To investigate biological and demographic factors associated with stage at diagnosis of cervical in Gaborone, Botswana.

**Methods**: A prospective cancer cohort study was initiated in January 2015 at Princess Marina Hospital in Gaborone. This cross-sectional study will information collected at diagnosis. All women were over 18 years of age, provided written consent, and had a confirmed cervical cancer diagnosis. Women were excluded if pathology was missing

**Results**: Factors associated with diagnosis of an advanced stage tumor included prior cervical cancer screening (OR 0.61, 95%CI: 0.46-0.81), recent sexual history (OR 0.66, 95%CI: 0.50-0.88) and gynecological symptoms (OR 5.93, 95%CI: 3.08-11.44)

**Analysis**: Primary outcome was stage of cervical cancer at diagnosis. Univariate analysis examined the differences among the cohort. Univariate and multivariable analysis investigated associations with stage.

**Findings**: There were 877 cervical cancer cases included. 402 (46%) were diagnosed with advanced stage tumors. Median age at diagnosis was 47.9 years (22.4-95.2), 59% of women reported screening, 70% were HIV-infected, and 45% reported recent sexual intercourse. Factors associated with an advanced stage tumor included prior screening (OR 0.61, 95%CI: 0.46-0.81), recent sexual history (OR 0.66, 95%CI: 0.50-0.88) and symptoms (OR 5.93, 95%CI: 3.08-11.44). No significant differences were observed for HIV status or age at diagnosis.

**Conclusion:** Women with screening and recent sexual activity had significantly lower odds of presenting with advanced stage tumors, while women reporting previous symptoms had increased odds. These results highlight the need for enhanced efforts to expand screening, provide educational programs, and ensure timely response to gynecologic symptoms in order to reduce morbidity and mortality from cervical cancer in Botswana.

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