

# The prevalence of HIV amongst women with cervix cancer

Nel CPG, Schoeman LC, Van Wyngaardt M, Horn H, Goedhals L, Joubert G

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**To the editor:** About 1 500 women die of cervix cancer in South Africa each year.<sup>1</sup> Cervix cancer is the commonest cancer amongst African women and the fourth commonest amongst white women in South Africa.<sup>1</sup> In addition, more than half a million people contract HIV in South Africa annually, and South Africa has the highest number of people living with AIDS in the world.<sup>2</sup>

A cross-sectional study of women attending family planning clinics in Harare, Zimbabwe found abnormal cervical cytology in 25.6% of HIV-infected women versus 6.7% in unaffected women.<sup>3</sup> A case-control study in the Ivory Coast found that cervix cancer was associated with HIV infection for women under the age of 40.<sup>4</sup> In Nairobi, Kenya, a case-control study indicated that cases of patients younger than 35 years with cervix cancer were more likely to be HIV positive than controls of similar age (odds ratio 2.6,  $p=0.043$ ). HIV-positive women were more likely to have poorly differentiated tumours than HIV-negative women (odds ratio 3.1,  $p=0.038$ ).<sup>5</sup> However, the same group of researchers found that the two- to threefold increase in national prevalence of HIV in Kenya from 1989 to 1998 did not have a proportional effect on the incidence of cervix cancer.<sup>6</sup> HIV-positive women presenting with cervix cancer were, however, significantly younger than HIV-negative women presenting with cervix cancer, as has also been found in studies in Johannesburg<sup>7</sup> and Durban.<sup>8</sup>

There are three basic methods of treatment for patients with cervix cancer, namely surgery, radiation therapy and chemotherapy.<sup>9</sup> Radiation<sup>10</sup> and chemotherapy both have the side effect that the procedure drastically reduces the CD4 + t-cell count, which dramatically reduces the patient's chances of survival if the patient is HIV positive, since AIDS is virtually induced with the dramatic reduction in CD4 + t-cell count.

The objective of this study was to compare the prevalence of HIV amongst cervix cancer patients with the prevalence of HIV in women in the general population.

The study was done in the form of a retrospective descriptive study. Data were obtained from patient records and noted on a data form. The study population included all patients treated for cervix cancer at the Department of Oncotherapy of the National Hospital, Bloemfontein from 1997 to 2000. The feed area of this department is the Free State and Northern Cape.

AIDS statistics were obtained from the Department of Health reports on The National HIV and Syphilis Sero-Prevalence Survey of Women attending Public Antenatal Clinics in South Africa 1998 to 2000<sup>11</sup> and the Nelson Mandela/HSRC study of HIV/AIDS.<sup>12</sup>

A total of 1 475 patients were treated, with numbers ranging from 303 in 1997 to 451 in 2000. The patients were predominantly African (92.8%) in the age groups 40 to 69 years (74.7%) with stage 3 (53.6%) and stage 4 (21.2%) disease. The HIV status of 5.6% of the patients was unknown. Of those for whom the HIV status was known ( $n=1\ 393$ ), 13.1% were HIV positive. This increased from 11.1% in 1997 to 14.5% in 2000. Table I gives the percentage of HIV-positive women per age group for the cervix cancer patients as well as the women included in the National HIV and syphilis sero-prevalence surveys of 1998 to 2000. Since only 25 (1.7%) of the cervix cancer patients were younger than 30 years, this group is omitted from the table. Women older than 50 years are omitted from the table due to a lack of data on these groups in the general population data sources. For the age group 30 to 34 years, the prevalence is significantly higher in the cervix cancer patients than the antenatal patients, and close to significantly higher for the age group 34 to 39. The confidence intervals

for the age groups 40 to 44 and 45 to 49 in the antenatal survey are wide due to small numbers, but the observed prevalence is higher in the cervix cancer patients than in the antenatal women throughout.

In 2002, the Nelson Mandela/HSRC study of HIV/AIDS found the following prevalence of HIV for women in South Africa: age group 30 to 34 years: 24.1% (95% CI 17.3%; 32.5%), 35 to 39 years: 13.8% (8.7%; 21.1%), 40 to 44 years: 19.0% (12.8%; 27.2%), and 45 to 49 years: 11.2% (6.5%; 18.7%).

It is difficult to find appropriate comparative figures for women from the general population. However, results from the National HIV and antenatal sero-prevalence surveys, as well as the Nelson Mandela/HSRC study, indicate that HIV prevalence among younger women with cervix cancer is higher than expected.

We suggest that all women presenting with cervix cancer be tested to ascertain their HIV status, so that the therapy can be adjusted to improve their prognosis. HIV-positive women should undergo regular screening for cervical carcinoma. ✎

**Nel CPG, Schoeman LC,  
Van Wyngaardt M, Horn H**

School of Medicine

**Goedhals L**

Department of Oncotherapy

**Joubert G**

Department of Biostatistics,

University of the Free State

**Correspondence:** Prof Gina Joubert

E-mail: gnbgsj.md@mail.uovs.ac.za

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**Table I:** Percentage (95% confidence interval) of HIV-positive cervix carcinoma patients by age group compared with the National HIV and syphilis sero-prevalence surveys

Cervix carcinoma patients		National HIV and syphilis sero-prevalence surveys		
Age group	HIV positive	1998	1999	2000
30-34	41.9% (29.5; 55.2)	19.1% (17.1; 21.1)	21.7% (19.1; 23.8)	23.3% (21.5; 25.1)
35-39	22.7% (15.2; 30.2)	13.4% (11.2; 15.6)	16.2% (14.1; 18.3)	15.8% (13.9; 17.7)
40-44	20.8% (14.7; 27.0)	10.5% (6.8; 14.1)	12.0% (8.5; 15.6)	10.2% (6.9; 13.3)
45-49	19.4% (13.9; 24.9)	10.2% (0.4; 20.0)	7.5% (0; 15.9)	13.1% (2.1; 24.0)