

## REFERENCES

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# Screening for Cervical Cancer in Brazil<sup>1</sup>

The current health scenario in Brazil is characterized by a mixture of chronic and degenerative diseases that are typical of developed societies, as well as nutritional and communicable diseases associated with underdevelopment. The former include cancers of all types, which invariably rank among the first four causes of death in that country (1). Cancer of the uterine cervix in particular is the most common type among women in poor countries, where 80% of all cases diagnosed worldwide occur (2), and constitutes a very significant health problem in Brazil (1).

Cervical cancer is preventable through the administration of cytologic screening tests and currently available treatments. Because this disease is closely linked to sexual practices (3, 4), educational programs dealing with sexually transmitted diseases may also aid in reducing deaths from this cause. The extent of the problem in developing countries points to a need to institute control measures. Three possibili-

ties have been proposed: Pap test screening of the entire at-risk population, colposcopic examinations of all women with abnormal cytology test readings, and referral of these women for biopsies of their lesions.

## CURRENT SITUATION IN BRAZIL

Table 1 shows the distribution of carcinoma *in situ* and invasive cervical cancer in Brazil from 1976 to 1980, by age group. In 1993, 146 308 Pap tests were conducted and the results for women of all ages showed the following distribution: grade I intraepithelial neoplasia, 29%; grade II intraepithelial neoplasia, 17%; grade III intraepithelial neoplasia, 17%; squamous cell carcinoma, 7%; and adenocarcinoma, 2%. Of all cancers occurring in either men or women, cervical cancer has ranked either first or second among the 10 most common primary cancers in Brazil since 1976, as shown in Figure 1.

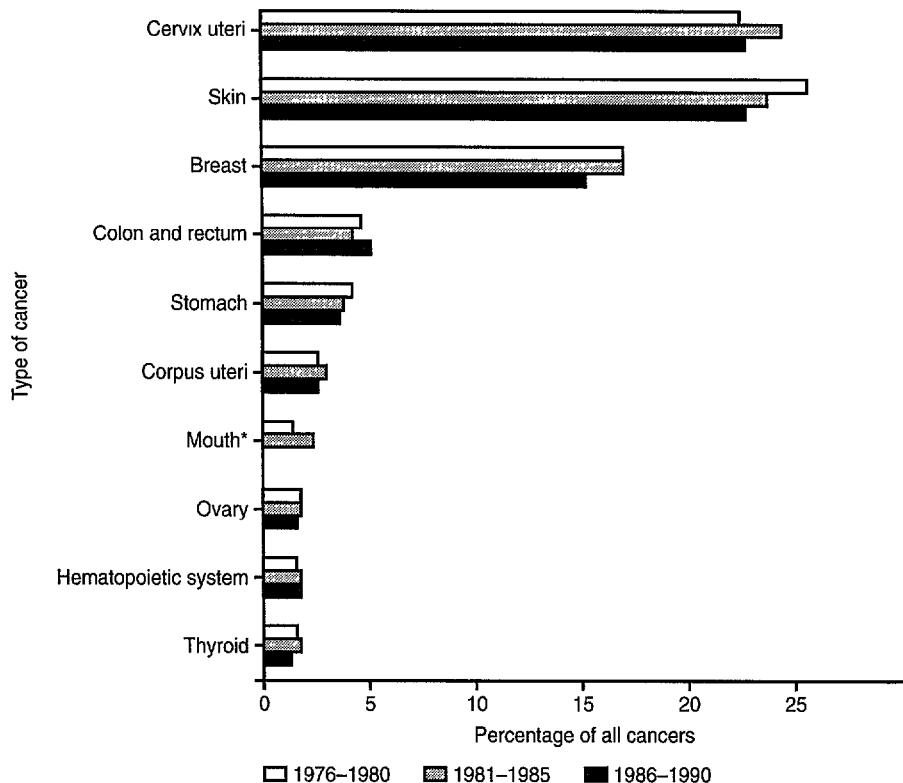
In Porto Alegre, a city located in the state of Rio Grande do Sul, the incidence of cervical cancer was 23.7 per 100 000 women in 1979 and 1982 and 23.8 per 100 000 in 1990. Table 2 shows the mortality associated with this disease in the city and in the state for selected years between 1970 and 1992.

<sup>1</sup>Extract from a study conducted by P. Naud in collaboration with M. Busetti, E. Becker, A. Camozzato, R. Siegler, J. Cavagnoli, E. Machado, G. Bender Lima, and A.R. Timm of the Federal University of Rio Grande do Sul and the Clinical Hospital of Porto Alegre, Brazil.

**Table 1.** Frequency of carcinoma *in situ* and invasive cervical cancer in Brazil, by age group, 1976 to 1980.

Age (in years)	Carcinoma <i>in situ</i>		Invasive cancer		Total	
	No.	%	No.	%	No.	%
15-19	28	58.3	20	41.7	48	100
20-24	313	61.7	194	38.3	507	100
25-29	1 025	56.1	802	43.9	1 827	100
30-34	1 531	46.9	1 734	53.1	3 265	100
35-39	1 737	36.8	2 977	63.2	4 714	100
40-44	1 634	30.5	3 728	69.5	5 362	100
45-49	1 400	25.7	4 037	74.3	5 437	100
50-54	809	17.7	3 756	82.3	4 565	100
55-59	482	14.0	2 955	86.0	3 437	100
60-64	298	11.2	2 369	88.8	2 667	100
Total	9 257	29.1	22 572	70.9	31 829	100

**Figure 1.** Percentage distribution of the 10 most common primary cancers in men and women, Brazil, 1976 to 1990.



\*Did not rank among the 10 most common cancers in 1986-1990.

**Table 2.** Mortality from cervical cancer in the city of Porto Alegre and in the entire state of Rio Grande do Sul, Brazil, selected years from 1970 to 1992.

Year	Mortality (per 100 000 women)	
	Porto Alegre	Rio Grande do Sul
1970	4.95	2.18
1980	7.23	4.41
1990	6.30	5.22
1991	5.64	5.82
1992	7.78	5.85

### Constraints to the Establishment of a National Screening Program

In Brazil, the reliability of morbidity and mortality records varies from place to place with a concomitant direct effect on the analysis of statistical data (5). Underregistration, which is the single most commonly occurring problem, interferes with analysis of the effectiveness of any widespread screening program. In addition, each Brazilian state coordinates its own public health activities, and the considerable differences that result from such an arrangement make it extremely difficult to establish a program that is national in scope. In Rio Grande do Sul, the Health Secretariat is responsible for the screening program, but numerous tests are conducted in private clinics and hospitals. This problem is aggravated by the lack of standardization in testing. The state has its own laboratory, which has standards that may differ from those in use in other public or private services.

### Recommendations of the Brazilian Ministry of Health

The Brazilian Ministry of Health recommends that, starting at age 25, all sexually active women have an annual cytopathological screening test; after two consecutive negative readings, the screening should be

repeated once every three years. However, as a consequence of the high prevalence of sexually transmitted diseases, the young age at which coitus is normally initiated, and the low socioeconomic level of the population, some experts believe that prevention programs should be directed toward sexually active women 15 and over. There would be a need to conduct a careful cost-benefit evaluation prior to implementing that recommendation. The authors of this study propose that screening be initiated at age 35 and that coverage subsequently be extended to all women over age 24.

### SCREENING PROGRAM REQUIREMENTS

In establishing a program to screen for cervical cancer, it is necessary to have epidemiologic proof that this type of cancer constitutes a public health problem. Also necessary are the following: knowledge of the ethical and behavioral characteristics of the population; definition of the target groups; establishment of guidelines for taking, examining, and interpreting Pap smears; availability of the appropriate conditions and resources for diagnosis, follow-up, and treatment; and a properly functioning information system.

### SCREENING OBJECTIVES

The general objective of any cervical cancer screening program should be to reduce the incidence of this disease and the mortality it causes. The program should also embrace the following specific objectives: (1) to study the women at risk of cervical cancer, (2) to devise strategies for maintaining an adequate rate of participation and ensuring appropriate follow-up, (3) to determine the prevalence of precancerous lesions in women at high risk, (4) to provide appropriate treatment for all lesions that

might become cancerous, (5) to evaluate the impact of the program on morbidity and mortality from cervical cancer, (6) to compare the effectiveness of a screening program based on visual inspection with that of the cytologic screening program, (7) to evaluate the effect of the screening program on hospital costs associated with treatment of cervical cancer, (8) to make recommendations for a national prevention policy based on the results of pilot studies, and (9) to promote early detection programs among the general public as well as among health professionals (gynecologists, family physicians, and nursing personnel) who work with at-risk population groups.

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# Community Promotion and Dissemination of Programs to Prevent Cervical Cancer<sup>1</sup>

Awareness of the risk of acquiring the disease and knowledge of the important function of the early detection test are key factors in determining participation by the female population in programs to prevent cervical cancer (1). These factors are in turn dependent on the efficient dissemination of information regarding the prevention of this type of cancer, bearing in mind its relevance to specific social groups (2).

Health knowledge and satisfaction of user expectations help to improve the results of the care provided, as they increase compliance with the recommended treatment as well as access to and use of ser-

vices. In other words, a well-informed, satisfied patient will have a greater incentive to seek care when she again perceives a need to do so (3).

This essay discusses a number of recommendations for programs designed to disseminate information on the early detection of cervical cancer at the populational level, within the framework of the overall geographic and regional diversity of Latin America. So pronounced is the heterogeneity of the population involved and so varied is the receptiveness of different groups to various communication strategies that it becomes necessary to define the scenarios in which early detection is to be promoted.

<sup>1</sup> Based on an essay by Xochitl Castañeda Camey, Patricia Nájera Aguilar, and Eduardo César Lazcano Ponce, Center for Research on Populational Health, National Public Health Institute, Cuernavaca, Morelos, Mexico.

## CONCEPTUAL ASPECTS

Health communication and information and, accordingly, health education require