

# Mortality of women with cervical cancer: integrative literature review

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Mortalidad de mujeres con cáncer cervical: revisión integradora de la literatura

## RESUMO

**Objetivo:** identificar produções científicas que apresentem dados significativos sobre mortalidade e sobrevida de mulheres com câncer do colo do útero. **Método:** revisão integrativa da literatura, realizada através de bases de dados Scientific Electronic Library Online (SciELO) e Literatura Latino-americana e do Caribe em Ciências da Saúde (LILACS), mediante a utilização de Descritores em Ciências da Saúde (DECS), abrangendo artigos publicados no período de 2008 a 2018. **Resultados:** foram incluídos 13 artigos ao estudo. Ao término dos resultados foram agrupados as seguintes categorias: Fatores associados a mortalidade por câncer do colo do útero; Mortalidade e sobrevida por CCU no Brasil; Ações para redução da mortalidade pelo câncer do colo do útero. **Conclusão:** o Câncer de Colo do Útero é considerado um problema de saúde pública, refletindo diretamente nos indicadores de morbimortalidade do País, variando de região para região e estando diretamente associado a oferta de serviços de rastreamento, diagnóstico e tratamento.

**DESCRITORES:** Mortalidade; Sobrevida; Câncer de Colo do Útero; Saúde da Mulher.

## ABSTRACT

**Objective:** to identify scientific productions that present significant data on mortality and survival of women with cervical cancer. **Method:** integrative literature review, carried out through Scientific Electronic Library Online (SciELO) and Latin American and Caribbean Literature in Health Sciences (LILACS) databases, using Health Sciences Descriptors (DECS), covering articles published from 2008 to 2018. **Results:** 13 articles were included in the study. At the end of the results, the following categories were grouped: Factors associated with mortality from cervical cancer; Mortality and survival due to CCU in Brazil; Actions to reduce mortality from cervical cancer. **Conclusion:** Cervical Cancer is considered a public health problem, directly reflecting on the country's morbidity and mortality indicators, varying from region to region and being directly associated with the provision of screening, diagnosis and treatment services.

**DESCRIPTORS:** Mortality; Survival; Cervical Cancer; Women's Health.

## RESUMEN

**Objetivo:** identificar producciones científicas que presenten datos significativos sobre mortalidad y supervivencia de mujeres con cáncer de cuello uterino. **Método:** revisión integrativa de la literatura, realizada a través de las bases de datos Scientific Electronic Library Online (SciELO) y Literatura Latinoamericana y del Caribe en Ciencias de la Salud (LILACS), utilizando Descriptores de Ciencias de la Salud (DECS), cubriendo artículos publicados de 2008 a 2018. **Resultados:** 13 artículos fueron incluidos en el estudio. Al final de los resultados, se agruparon las siguientes categorías: Factores asociados a la mortalidad por cáncer de cuello uterino; Mortalidad y supervivencia por UCC en Brasil; Acciones para reducir la mortalidad por cáncer cervicouterino. **Conclusión:** el cáncer cervicouterino se considera un problema de salud pública, que refleja directamente los indicadores de morbilidad y mortalidad del país, varía de región a región y está directamente asociado con la prestación de servicios de tamizaje, diagnóstico y tratamiento.

**DESCRIPTORES:** Mortalidad; Supervivencia; Câncer de cuello uterino; La salud de la mujer.

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## **INTRODUCTION**

Cancer is one of the most feared diseases in the world, largely due to the lack of effective treatment for most metastatic tumors. However, in the last 40 years there has been a progression in surgical treatment, radiotherapy and chemotherapy, resulting in an increase in life expectancy. 1

Cancer can be subdivided into three main phases, which clarify the sequential chronological events of carcinogenesis, they are: initiation and promotion (which begins in the latent phase) and progression (which begins in the clinical phase). 1

Cervical cancer (CC) also known as cervical cancer is the most frequent genital neoplasm in Brazilian women, with the exception of cases of non-melanoma skin cancer. It is characterized by being normally a disease of slow evolution that affects, mainly, women over 25 years old.

According to data obtained from the National Cancer Institute (INCA), cervical cancer represents the second most common type of cancer among women, with approximately 500,000 new cases per year worldwide and is responsible for the death of approximately 230,000 women per year. 2

According to the Ministry of Health, if we disregard non-melanoma skin tumors, cervical cancer is the most incident in the North region (1,360/100,000). In the Midwest (2,020/100,000) and Northeast

(5,050/100,000) regions, they occupy the second most frequent position, in the Southeast (8,610/100,000) the third, and in the South (2,000/100,000), the fourth position. Data analysis allows us to verify that the data distribution is heterogeneous. 2

The control of this neoplasm follows the secondary prevention strategy based on cervical cytology. This detection method, popularly known as Pap smear or preventive examination, has been performed for over 30 years. Although the preventive examination is extremely simple, harmless, efficient, and inexpensive, cervical cancer still has a high incidence among Brazilian women. 3

According to studies carried out, the main risk factor for the development of high-grade intraepithelial lesions and cervical cancer is HPV infection. Although HPV is a necessary condition for the existence of this type of cancer, it is not a sufficient condition for the existence of cervical cancer without the existence of other predisposing factors. 4

Based on the problem that involves cervical cancer, it is relevant to carry out a research whose object of study is to know and analyze the mortality and survival data of this clinical condition.

## **METHODS**

This work is configured as an integrative review. This type of review consists of

collecting information in a database, thus allowing conclusions to be drawn from a guiding question. In the process of elaborating the integrative review, it must be carried out using rigorous methods, presenting clarity and consistency in the methods used to extract information from primary studies. 5

Data collection was performed through Scientific Electronic Library Online - SciELO, and Latin American and Caribbean Literature on Health Sciences - LILACS databases, using Health Science Descriptors (DeCS), covering articles published from 2008 to 2018.

The selection of studies for analysis complied with the following inclusion criteria: 1) Approach to the investigated theme, 2) In article form, 3) Portuguese language, 4) Published between 2008 and 2018, 5) Full text available. Exclusion criteria were: 1) Article not available, 2) Repetition of the same article in more than one database, 3) Not corresponding to the research topic, 4) Review article.

From the combination of descriptors, application of exclusion and inclusion criteria, 54 articles were selected. After analytical reading of the works, only 13 articles met all the requirements, being part of this research.

To carry out the analysis of the selected works, the division by stages was carried out following the recommendations of Souza, Silva and Carvalho. 6 The research

was operationalized through systematized and interrelated steps, initially consisting of the elaboration of the guiding question, investigation of the literature, data collection, critical analysis of the included studies, discussion of the results and presentation of the integrative review.

The evaluation of the articles was based on the steps of carrying out a critical review of the literature by JAMA (Journal Of American Medical Association), which are: 1) identification and selection of studies; 2) critical reading; 3) abstract of the article; 4) presentation; 5) questions; 6) synthesis. 7 For the analysis of the information, the organization of the content found was carried out regarding the title, year, methodologi-

cal approach, and objectives of the study.

## RESULTS

Table 01 presents the disposition of the articles, according to the authors' data, title of the publication, journal, year and objective of the work, allowing the visualization of the works that are part of this review.

## DISCUSSION

### Factors associated with mortality from cervical cancer

CC is associated with numerous factors, among them the strong association between age and cancer risk, recommending the

need to analyze the behavior of cancer mortality in different age groups of the female population, from different perspectives, highlighting that research for this purpose is limited in Brazil, making it difficult to know its distribution in the female population and its possible relationship with mortality trends. 8

In one study, when observing the overall survival rate for a period of 60 months, it corresponded to 66.7%, with a mean survival time of 23.5 months, and the median survival time was 18.5 months. The overall 60-month survival rate was 63.6% in women under 50 years of age and 71.4% in those aged 50 years and over. 9

A study showed that the most prevalent

Quadro 01. Artigos selecionados para revisão compreendidos no período de 2008 a 2018 (BRASIL, 2018).t

AUTORES	TÍTULO	PERIÓDICO	ANO DE PUBLICAÇÃO	OBJETIVO
Neves, Silva, Ribeiro et al.,	Adversidades encontradas pelo enfermeiro para a realização da prevenção do câncer do colo de útero	Rev. Saúde Coletiva	2019	Avaliar as adversidades encontradas pelo enfermeiro para realização da prevenção do câncer do colo de útero.
Barbosa, Sousa, Bernal et al.,	Desigualdades regionais na mortalidade por câncer de colo de útero no Brasil:tendências e projeções até o ano 2030	Ciência & Saúde Coletiva	2016	Analisar a tendência temporal da mortalidade por cancer de colo de útero no Brasil e calcular uma projeção até o ano de 2030.
Meira; Silva; Silva et al.,	Efeito idade-período-coorte na mortalidade por câncer do colo uterino	Rev. Saúde Pública	2013	Estimar o efeito da idade, período e coorte de nascimento na mortalidade por câncer do colo do útero.
Gonzaga, Freitas Júnior, Barbaresca et al.,	Tendências de mortalidade por câncer do colo do útero no Brasil: 1980-2009	Cad. Saúde Pública	2014	Descrever as tendências temporais nas taxas de mortalidade por câncer do colo do útero no Brasil e nas principais regiões geográficas e estados do país de 1980 a 2009.
Nakagawa, Espinosa, Barbieri et al.,	Carcinoma do colo do útero: taxa de sobrevivência e fatores prognósticos em mulheres no Estado de Mato Grosso	Acta. Paul. Enferm.	2011	Analisar a taxa de sobrevivência de mulheres submetidas ao tratamento de câncer do colo do útero no Estado de Mato Grosso.
Santos, Melo	Mortalidade e assistência oncológica no Rio de Janeiro: Câncer de mama e colo uterino	Esc. Anna Nery	2011	Analisar a trajetória dos óbitos por câncer de mama e colo uterino no município do Rio de Janeiro.
Bottero, Cervantes, Becerra	Diferenças socioeconômicas nos anos de vida perdidos por câncer de mama e câncer cervical na Colômbia, 1997 e 2007	Rev. Gerenc. Polit. Saúde	2011	Contribuir para o conhecimento do efeito da mortalidade por cancer cervical na Colômbia, de acordo com os grupos etários e status sócio-econômico para os anos de 1997 e 2007.

Carmo, Luiz	Sobrevivência de uma coorte de mulheres com câncer de colo uterino diagnosticadas em um centro de câncer brasileiro	Rev. Saúde Pública	2011	Avaliar a sobrevivência global de mulheres com câncer de colo uterino.
Gamarra; Valente; Silva	Magnitude da mortalidade por câncer do colo do útero na Região Nordeste do Brasil e fatores socioeconômicos	Rev. Panam. Salud Pública	2010	Analisar a tendência temporal da mortalidade por câncer do colo do útero em mulheres com 20 anos ou mais residentes no Nordeste do Brasil (capital e interior) no período de 1996 a 2005.
Silva, Girianelli, Gamarra et al.,	Tendências de mortalidade por câncer do colo do útero no Brasil, 1981-2006	Cad. Saúde Pública	2010	Descrever as tendências da mortalidade por câncer do colo do útero no Brasil para o período de 1981-2006.
Alves; Guerra; Bastos	Tendência de mortalidade por câncer de colo de útero para o Estado de Minas Gerais, Brasil, 1980-2005	Cad. Saúde Pública	2009	Avaliar a tendência da mortalidade por câncer cervical no Estado de Minas Gerais, Brasil, no período compreendido entre 1980-2005.
Basílio, Mattos	Câncer em mulheres idosas das regiões Sul e Sudeste do Brasil: Evolução da mortalidade no período 1980 - 2005	Rev. Bras. Epidemiol.	2008	Analisar a tendência da mortalidade por localizações selecionadas de câncer na população feminina de 60 anos ou mais das regiões Sul e Sudeste do Brasil, no período 1980-2005.
Zefferino	O desafio de reduzir a mortalidade por câncer do colo do útero	Rev. Bras. Ginecol. Obstet.	2008	Relatar o desafio de reduzir a mortalidade por câncer do colo do útero.

Fonte: próprio autor, 2021.

histological type of tumor was squamous cell carcinoma (84.5%). Locally advanced disease, stages II and III was observed in 68.3% of the cohort. Most cases were followed up for at least two years (80.7%) and 1,499 deaths were recorded (50.1% of cases). Deaths occurred more frequently in the first two years of follow-up (71.2%) and in stages II or III, corresponding to 84.9% of all deaths. 10

Women with a paid occupation had a survival rate of 70% and those without a paid occupation, housewives, had a lower survival rate of 65.9%. As for the clinical variables, it was observed that women who had complaints or symptoms suggestive of the disease had a worse prognosis, with a survival rate of 53.1%, and those without symptoms or complaints had a survival rate of 86.4%, whose difference was statistically significant. 9

From this perspective, it is essential that 50-year-old women undergo mammography every two years, even if they do not present visible symptoms according to the technical standard, however, not to disqualify the potential role of self-exploration

from an early age, for which it is essential that women are properly educated about the technique. 11

### Mortality and survival by CC in Brazil

In Brazil, in the period referring to 1996 and 2005, the values of the average annual rates of CC deaths corresponded to 4.6 and 5.1 deaths per 100,000 woman-years. The values referring to mortality rates showed increases of 103.4% in Brazil, with a variation of 35% for the capitals of the South region and up to 339% for the interior of the Northeast region. 12

The assessment of the risk of death from cervical cancer according to birth cohorts showed that women born between 1900-1920 had a high risk of death from this neoplasm. Birth cohorts from 1930 onwards had a progressive reduction in the risk of death, with a protective effect (RR < 1) in women born after 1960. 13

Analysis of the mortality trend in Brazil showed the occurrence of stabilization, there was a downward trend in the main geographic regions in the South from 1999, Southeast from 2001 to 2009, and the

Center-West. However, the Northeast and North regions showed an upward trend in mortality, while the south of Brazil showed a downward trend in all federation units from the year 2000 onwards. 14

From 1996 to 2010, 89,764 deaths from malignant neoplasm of the cervix were registered in Brazil. The standardized mortality rate for the world population for Brazil ranged from 8.04 deaths per 100,000 inhabitants in 1996 to 6.36 deaths per 100,000 inhabitants in 2010. 15

The organization, comprehensiveness and quality of the screening program through the Pap smear, the follow-up of patients, significantly contributes to the reduction of specific mortality, as the offer and quality of health services provided have a direct influence on patient survival. 16

Thus, the importance of implementing and consolidating the National Cervical Cancer Control Program (PNCCC - Programa Nacional de Controle do Câncer do Colo do útero) is emphasized in reducing the risk of death from cervical cancer, including in women with greater exposure to risk factors for this neoplasm. 13

It is important to emphasize that the trends in mortality from cervical cancer showed a differential pattern according to the geographic regions of the country, indirectly reflecting a relationship with the socioeconomic profile of the populations residing in these regions. Among the municipalities in the interior, there was an upward trend in the North and Northeast, a downward trend in the South and Southeast, and a stable trend in the Midwest. 17

### Actions to reduce mortality from cervical cancer

The cancer on the agenda in this work, when it occurs in developed countries that have point technologies in their framework for diagnosis and treatment, has limited the effectiveness of treatment, since data on survival rates have not exceeded the values of 70 % to 75%. In this way, it is understood that, in order to combat the disease, it is necessary to intervene in the early stages, using precautionary measures and early diagnosis, at the lowest possible cost, in order to make a resource accessible to all lower classes, emphasizing education and

self-care of the female population. 9

A study showed that women only feel motivated to perform the preventive examination only when there are signs and symptoms capable of causing some discomfort. This demonstrates that individuals seek the health service only when the disease is already installed in the body, which makes early diagnosis and disease prevention impossible. 18

Performing screening tests, however, is not enough to guarantee a reduction in mortality. Appropriate treatment is necessary when changes are detected. The efficient control of the CC is closely related to the quality of the health system, and in addition to providing an accurate diagnosis and treatment; easy and agile access to services; flexibility for scheduling and rescheduling appointments and agility in service. 19

Finally, it is worth noting that health education, the improvement of screening programs, the improvement of the quality of information and even the increase in the coverage of Population-Based Cancer Registries should be considered as important strategies to be adopted for the reduction

in mortality and in the physical, psychological and social repercussions of cervical cancer in our country. 20

### CONCLUSION

Cervical Cancer is a public health problem, which has a direct impact on morbidity and mortality indicators, affecting women of different ages, where the literature points out that women under 60 years of age, in advanced stages of the disease, in which metastasis occurs, they are more prone to reduced survival.

The studies evaluated also demonstrate the interrelationship between mortality and survival with the different regions of the country, where there are great changes according to the region analyzed and the Municipality, since places where there is lower income, higher are the morbidity and mortality indicators, the vulnerability of women due to the health services provided, being associated with the provision of early diagnosis, treatment, inadequate prevention actions.

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