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Description of deaths from cervical cancer in the population of Recife-PE, from 2019 to 2021

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Abstract: Cancer of the Uterus (UCC) is a disease that affects thousands of women worldwide, where, present the factor for the pathology, the presence of HPV viruses 16 and 18. The screening of UCC in Brazil is performed through the cytological exam, however, along with this and examination there are barriers that need to be overcome. It is identified that this neoplasm has a high incidence and prevalence in the Brazilian female population, especially in the State of Pernambuco in its capital Recife. Thence, in the State every day occurs a death as a result of UCC. So, to occur an organized screening of the and accurate to get diagnosis of where the women in the age group are for screening, focus on women of higher risk age group and who do not do the pathological cite examination. To verify the data for organized UCC screening, number of women in eligible age group, locality of residence and cytological coverage in the population of Recife-PE. This is an epidemiological cohort study with a cross-sectional, descriptive approach, with a quantitative approach, whose data were collected through the secondary database

of the Primary Care Information System (SISAB/SUS), E-SUS AB, provided by DATASUS/Ministry of Health. The population consisted of women registered in the E-SUS AB, registered in the Health Units of the Health Districts (SD) in the city of Recife-PE, in the temporal cohort from the years 2019 to 2021. The results showed that in a total population of 481,453 women, 164,650 women underwent the preventive examination. That is not even 34% of the population. Deaths from UCC is predominant among the 40-49 years, with 26% of the population, between the years 2019-2021. Confirming 67 deaths in 2021, with predominance in the II, IV and VII District. That with the high number of incidence and deaths from UCC, the present study can raise awareness of women for the participation of screening, whether by the "Papanicolau" or by HPV-DNA, and thus contribute to the reduction of the incidence and deaths from UCC.

Keywords: Cervical Neoplasms, Human Papillomavirus 16 and 18, Screening Programs, Cervical Cancer

1. Introduction

Cancer, according to the National Cancer Institute (INCA), is the name given to a set of more than 100 diseases that are characterized by disordered cell growth that invades tissues and organs and can spread to other parts of the body. Multifactorial disease, because it presents multiple causes, and may be related to environmental, socioeconomic, genetic, lifestyle and aging factors, among others (CARVALHO; COAST; FRANCE, 2019)

Cervical Cancer (UCC) in Brazil represents the third most frequent tumor in women, also represents the fourth cause of death from cancer among Brazilian women. According to the WHO, 2013, the incidence of this cancer is higher between 30 and 39 years, and reaches its peak in the fourth or sixth decade of life (VIEIRA, 2020).

It is often associated with persistent infection of the oncogenic subtypes of the HPV virus, especially HPV-16 and HPV-18, Sexually Transmitted Infection, which corresponds to about 70% of the causes of cervical cancers. The main technique currently used for the detection of disease is oncotic cytology through the examination popularly known as preventive or *Papanicolau* (APARECIDA; LEE; RIBEIRO, 2019).

In Brazil, the pathological Cito test (*Papanicolau*) is the method used for screening. Screening is a service that can be performed by several health professionals, for prevention or referral of suspected cases to other professionals. The screening of UCC is aimed at reducing mortality and incidence of the disease, for this it is necessary to systematically perform tests in asymptomatic populations aimed at identifying, confirming and treating precursor lesions (CLARO; FILE; ALMEIDA, 2021).

UCC screening is performed in women aged between 25 and 64 years and who have already had sexual activity. The exam is a cellular scraping of the cervix (*Papanicolau*). According to (WHO, 2013), with a coverage of the target population of at least 80% and the guarantee of adequate diagnosis and treatment of altered cases, it is possible to reduce, on average, from 60 to 90% the incidence of UCC. The performance in some developed countries shows that the incidence of this neoplasm was reduced by around 80% where cytological screening was implemented with quality, coverage, treatment and follow-up of women (VIEIRA, 2020).

Among the 25 - 64 years, the period required for

screening, the occurrence of high-grade injuries is greater. These lesions are likely to be treated effectively so as not to develop into cancer. The control of this pathology in the public sector is in accordance with the actions of the management and work of health professionals, organized according to the SUS. Depending on the degree of performance of the health system, easy access and the population through the search for health services, a decrease in the rate of UCC cases (APARECIDA; LEE; RIBEIRO, 2019).

The National Cancer Institute (INCA, 2018) clarifies that the lesions present in the cervix are called low-grade intraepithelial lesions or grade I intraepithelial neoplasia, reflecting only the presence of the virus. On the other hand, high-grade intraepithelial lesions or grade II or III intraepithelial neoplasms are the true percussive lesions of cervical cancer. The Inca also states that HPV virus infection is a necessary factor for the development of UCC, but it is not enough for it to be involved (CARVALHO; COAST; FRANCE, 2019).

HPV-DNA tests are recommended in an organized screening scenario to identify women with precursor lesions or asymptomatic cancer, for a possible early diagnosis, presenting a higher level of efficacy, increasing sensitivity and allowing a longer collection interval, going from 3 years to 5 years apart. An advantage of HPV-DNA tests is their high negative predictive value. When oncogenic HPV-DNA is undetectable, the occurrence of precursor lesions or UCC is very unlikely (Zeferino *et al.*, 2018).

UCC is a global public health problem, with approximately 570,000 cases and 311,000 women killed worldwide. About 87% to 90% of deaths caused by the disease occur in low- and middle-income countries (CLARO; FILE; ALMEIDA, 2021).

In Brazil, the estimate of new cases in 2018 was 16,370 and the number of deaths from this type of neoplasm in 2017 was 6,685. The (INCA, 2018), points out that 1975 the UCC occupied the second position of neoplasm with higher incidence and since 2012 this type of cancer has been descending its position in the world ranking, this advance is due to the implementation and implementation of programs of prevention and effective control of the disease. In fact, UCC can be avoided as long as there is effective coverage of the population at risk through preventive examinations and appropriate treatment (CARVALHO; COAST; FRANCE, 2019).

The relationship between HPV and UCC means that cases can be prevented. The present study aims to verify the data for organized UCC screening, number of women in eligible age group, locality of residence and cytological coverage in the population of Recife-PE. And, it contributes to decrease in the incidence of UCC, and especially in mortality rates.

2. Methodology

This is a comparative, cross-sectional, descriptive epidemiological cohort study with a quantitative approach, whose data were collected through the secondary database of the Primary Care Information System (SISAB/SUS), E-SUS AB, provided by DATASUS/Ministry of Health. The population by the registration of the female population from 25 to 64 years in the E-SUS AB, of the city of Recife / PE, in the temporal cohort of the years 2019 to 2021 .

The tabulation of the E-SUS AB data was performed analyzing the variables age, registration by Health District, time without doing cytology and Health Unit, mortality and enrolled population.

For the project's enforceability, as inclusion criteria: registration in the city of Recife of women, at an eligible age of 25 to 64 years, registered in the E-SUS AB in the family health units of the health districts of the city of Recife/PE. The exclusion criteria were: pregnant women, women outside the age group, who changed their homes, not registered in the city of Recife.

For the analysis of these data, the biostat database was used, where percentage calculations were used to observe the dispersion between the collected variables, analyzed through a simple percentage.

3. Results and Discussion

Table 1 has been presenting in the year 2021, the number of existing women for a possible performance of the screening, total population of 481,453, with a greater coverage in the IV District, with 90,886 women and a smaller population in the I District, with 24,174 women.

Cervical cancer is a neoplasm that can be prevented at different stages. However, organized search and screening in an eligible age group brings effective results in some European countries. However, due to several factors, the pathological citation does not affect the entire target population, especially working women and those who see various taboos in the examination. In this sense, it is essential that women are informed about what this test is, and about its importance. Death due to cervical cancer is associated with the fact that often the disease is diagnosed late (CARVALHO; COAST; FRANCE, 2019).

Table 1. The number of women eligible for cervical cancer screening by Health District, in the city of Recife/PE

Year	DS	Women from 25 to 64	ANS	SUS
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2021	I	24.174	10.298	13.876
2021	Ii	68.694	29.264	39.430
2021	Iii	44.572	18.988	25.584
2021	Iv	90.886	38.717	52.169
2021	V	83.516	35.578	47.938
2021	Saw	81.806	34.849	46.957
2021	Vii	45.719	19.476	26.243
2021	Viii	42.086	17.929	24.157
Recife		481.453	205.099	276.354

Figure 2 complements the number of women who in 2021 took the test, a total of 164,650 women, which is not even 34% of the total population. The peak was in the IV district, reaching about 32.5% of the existing population in the district.

Some of the responsibilities of primary care are actions focused on women's health, among the activities stands out the prevention of UCC, through the pathological cite examination, also known as *Papanicolau* (VIEIRA, 2020).

For Vieira, 2022, in a work carried out in the city of Campinas/SP, there are no waiting lines for the exam and most of the time there are scheduling vacancies for the collection of the pathological examination of the cervix. The teams are acting systematically and the actions are being developed within the health programs recommended by the Ministry of Health. Nevertheless, in relation to the examination for uterine cancer, there was low adherence of women and little registration in the eligible age group.

According to Nazaré *et al.*, 2020, the importance of active search, associated with didactic actions, early detection and work of nurses in primary care aimed at prevention and promotion of UCC in women's health according to public policies. We emphasize that only the search for free demand of women is not enough for effective coverage of the examination. Public policies represent an effort to improve cancer screening by providing humanized and comprehensive care. And as an alternative, organized screening in the age group of 25 to 64 years has been shown to be an efficient and effective alternative.



Figure 2. The number of women undergoing cytological examination by district, in 2021.

Figure 3 represents the number in percentage of deaths by age group, showing how much is predominant

between 40-49 years, with 26%, between the years 2019-2021.

According to the (WHO, 2013), the incidence of this cancer is higher between 30 and 39 years, and reaches its peak in the fourth or sixth decade of life (VIEIRA, 2020). Death due to UCC is associated with the fact that the disease is often diagnosed late (CARVALHO; COAST; FRANCE, 2019)

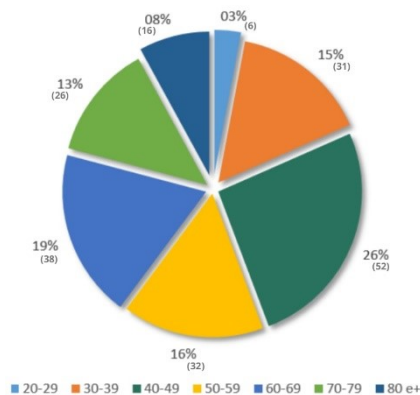


Figure 3. Distribution of cervical cancer deaths by age group, 2019-2021.

Figure 4 shows the number of deaths by Health District in the years 2019, 2020 and 2021. The lowest average of deaths is in the I District, while the highest average is that of the II District, tying with the IV District in the last two years. In 2019 the number was higher in the II District, with 13 deaths; 2020 prevailed in districts II and IV, with 15 deaths; 2021 the peak extends between Districts II, IV and VII, with 12 deaths.

Arbyn *et al.*, 2020, the approximately 570,000 women developed cervical cancer and 311,000 women died because of it. Worldwide, cervical cancer was the fourth most common cancer among women, 84% of all UCC and 84% of all deaths caused by UCC occurred in developing and poor countries and 1.3% died from the disease before the age of 75. UCC kills approximately 300,000 women and affects about 600,000 women annually, mostly middle-aged women and those living in resource-poor environments.

With the numbers of deaths so significant, research affirms the existence of another screening method and the beginning of its use in Brazil. In 2017, in the state of São Paulo, the city of Indaiatuba was the first in Brazil to decide to replace cervical cytology with the primary HPV-DNA test for UCC screening. Extended screening of at least five years. Seeking a greater and more efficient coverage of the population. (Teixeira, *et al.*, 2020).

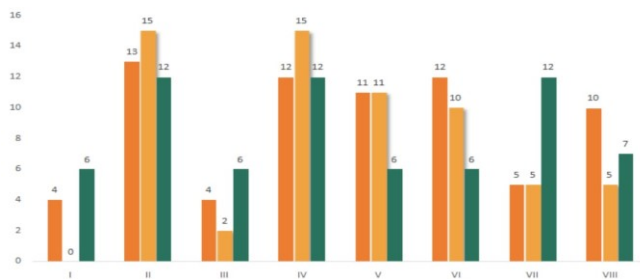


Figure 4. Number of Cervical Cancer Deaths by Year by Health District, 2019-2021.

4. Conclusion

UCC is the third most frequent tumor in women in Brazil, and worldwide, the fourth most common cancer among women. Often associated with HPV, which causes about 70% of UCC cases. The importance of screening and how much a quality screening would contribute to a decrease in the incidence and cases of death from this neoplasm has been proven. Age 25 - 64 years is recommended for screening. In the survey conducted in the city of Recife in 2021, of 481,453 existing women, 164,650 women underwent the preventive examination, also showed how much death from this neoplasm is predominant among the 40-49 years, with 26% of the population, between the years 2019-2021, confirming 67 deaths from UCC in 2021. Deaths that are often a consequence of a late diagnosis. Which shows us how much it would help a well-informed and cared for population. That the present study can raise awareness of women for the participation of screening, either by the "Papanicolaou" or by HPV-DNA, and thus contribute to the reduction of the incidence and deaths from UCC.

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