Revista Cientifica Estudiantil MedEs

MedEst|2026 | Vol.6: e569| ISSN: 2789-7567 |RNPS: 2524| RESEARCH ARTICLE

Clinical characterization of patients with cervical cancer at the Provincial Gynecological-Obstetrical Hospital. Matanzas, 2023-2025

Caracterización clínica de pacientes con cáncer cervicouterino en Hospital Ginecobstétrico Provincial. Matanzas, 2023-2025

Lisbet González Díaz [1], Sandra García González [1]

Gonzalo González Rodríguez [1], Adrián Hernández La Rosa [1]

José Luis Homma Casto [1] Silvia Rendon García [1]

[1] Provincial Teaching Gynecological-Obstetrical Hospital "José Ramón López Tabrane", Matanzas, Cuba.

How to cite this article:
González-Díaz L, García-González S, González-Rodríguez G, Hernández-La-Rosa A, Homma-Casto JL, Rendón-García S. Clinical characterization of patients with cervical cancer at the Provincial Gynecological-Obstetrical Hospital. Matanzas, 2023-2025. MedEst. [Internet]. 2026 [cited access date]; 6:e569. Available in: https://revmedest.sld.cu/index.php/medest/article/view/569

Palabras Clave: Cáncer Cervicouterino; Factores de Riesgo; Prevención; Estadificación Neoplásica; Cuba.

Keywords: Cervical Cancer; Risk Factors; Prevention; Neoplasm Staging; Cuba.

Corresponding author: sandragarciamtz2020@gmail.com

Received: 30/06/2026

Accepted: 18/08/2026

Published: 21/08/2026

Editor(s) in charge: MSc. Yuniel Rosales Alcántara

Translator: Lic. Meliza Maura Vázquez Núñez

Layout designer: Carlos Luis Vinagera Hidalgo

RESUMEN

Introducción: El cáncer cervicouterino (CCU) constituye una de las principales causas de mortalidad femenina a nivel mundial, con elevada incidencia en países en desarrollo. En Cuba representa un importante problema de salud. **Objetivo:** Caracterizar las pacientes con diagnóstico de CCU atendidas en el Hospital Ginecobstétrico Provincial Docente "José Ramón López Tabrane" de Matanzas entre enero de 2023 y diciembre de 2025. **Métodos:** Estudio observacional, descriptivo y transversal. Se incluyeron 88 pacientes con diagnóstico histopatológico confirmado. Se analizaron variables sociodemográficas, factores de riesgo, antecedentes obstétricos, conductas sexuales, estadio clínico, tipo histológico y antecedentes de tamizaje. Se utilizó estadística descriptiva y pruebas de chi-cuadrado para explorar asociaciones. **Resultados:** Predominó el grupo etario 36-40 años (28,4 %), amas de casa (52,3 %), solteras (61,4 %), nivel preuniversitario (56,8 %), fumadoras (58,0 %), raza negra (44,3 %) y multíparas (43,2 %). El inicio sexual entre 14-19 años ocurrió en el 60,2 % y el número de parejas 3-4 en el 40,9 %. El carcinoma epidermoide fue el más frecuente (67,0 %) y el estadio II el predominante (38,6 %). El 67,0 % no tenía tamizaje en los últimos 3 años. El tabaquismo (p=0,041) y la multiparidad (p=0,032) se asociaron significativamente con estadios más avanzados. **Conclusiones:** El perfil de las pacientes coincide con los factores de riesgo clásicos. La asociación entre tabaquismo, multiparidad y estadios avanzados, junto con la baja cobertura de tamizaje, refuerza la necesidad de fortalecer la pesquisa y las intervenciones preventivas en la provincia.

ABSTRACT

Introduction: Cervical cancer (CC) is one of the leading causes of female mortality worldwide, with a high incidence in developing countries. In Cuba, it represents a significant health problem. **Objective:** To characterize patients diagnosed with CC treated at the "José Ramón López Tabrane" Provincial Teaching Gynecological and Obstetrical Hospital in Matanzas between January 2023 and December 2025. **Methods:** Observational, descriptive, cross-sectional study. Eighty-eight patients with histopathologically confirmed diagnosis were included. Sociodemographic variables, risk factors, obstetric history, sexual behavior, clinical stage, histological type, and screening history were analyzed. Descriptive statistics and chi-square tests were used to explore associations. **Results:** The predominant age group was 36-40 years (28.4%), housewives (52.3%), single (61.4%), pre-university education (56.8%), smokers (58.0%), Black (44.3%), and multiparous (43.2%). Sexual debut between 14-19 years occurred in 60.2% and 3-4 partners in 40.9%. Squamous cell carcinoma was the most frequent (67.0%) and stage II the predominant (38.6%). 67.0% had no screening in the last 3 years. Smoking (p=0.041) and multiparity (p=0.032) were significantly associated with more advanced stages. **Conclusions:** The patient profile matches classical risk factors. The association between smoking, multiparity, and advanced stages, together with low screening coverage, reinforces the need to strengthen screening and preventive interventions in the province.

MedEst. 2026| Vol. 6: e569
ISSN: 2789-7567 | RNPS: 2524

INTRODUCTION

Cervical cancer is the fourth most common cancer in women worldwide, with an estimated incidence of 604,000 new cases and 342,000 deaths in 2020. In low- and middle-income countries, it is the second leading cause of cancer death in women, with a disproportionate burden in Latin America, sub-Saharan Africa, and Southeast Asia [1]. More than 95% of cases are attributed to persistent infection with high-risk serotypes of the Human Papillomavirus (HPV), especially types 16 and 18, which cause approximately 70% of all cervical cancers globally [2,3].

The progression from HPV infection to invasive cervical cancer is slow (10–15 years), providing a wide window of opportunity for early detection through screening programs. The Pap test has been the most widely used method; However, its moderate sensitivity (50–70%) has led to the incorporation of high-risk HPV screening tests. The World Health Organization has launched the Global Strategy to Accelerate the Elimination of Cervical Cancer, with targets for 2030: 90% HPV vaccination coverage in girls, 70% screening with high-performance HPV testing, and 90% treatment of precancerous lesions and invasive cancer [4].

Several risk factors act synergistically with HPV infection: early onset of sexual activity (<18 years), multiple sexual partners, multiparity, smoking, prolonged use of oral contraceptives (>5 years), immunosuppression, coinfection with other STIs, and low socioeconomic status [3,5].

In Cuba, cervical cancer represents a priority health problem. According to the Statistical Yearbook of Health, the age-adjusted incidence rate was 15.2 per 100,000 women between 2015 and 2020, and the mortality rate was 7.3 per 100,000, with 1,590 new cases and 442 deaths reported in 2024 (6). The National Program for Early Diagnosis of Cervical Cancer was implemented in 1967, but challenges persist in coverage, screening quality, and follow-up of women with abnormal cytology [7].

In the province of Matanzas, the "José Ramón López Tabrane" Provincial Teaching Gynecological and Obstetrical Hospital is the referral center for the diagnosis and treatment of cervical cancer. However, there are no recent studies characterizing the women diagnosed at this institution, which limits the ability to adapt prevention and control interventions to local characteristics.

MedEst. 2026| Vol. 6: e569
ISSN: 2789-7567 | RNPS: 2524

For this reason, an investigation is being carried out with the objective of characterizing the patients diagnosed with cervical cancer treated at this center between January 2023 and December 2025.

METHODS

Study Design and Period

This was an observational, descriptive, and cross-sectional study. The research period spanned from January 2023 to December 2025.

Population and Sample

The population consisted of all patients who attended the cervical pathology clinic at the hospital during the study period (621 women). The sample was selected using consecutive non-probability sampling, including all patients who met the selection criteria until the estimated sample size was reached (n=88). The sample size calculation was based on an expected proportion of risk factors of 50%, with a margin of error of 10% and a confidence level of 95%, resulting in a minimum sample size of 96 patients; however, only 88 met all the inclusion criteria.

Inclusion Criteria: Patients with a histopathological diagnosis of cervical cancer (squamous cell carcinoma, adenocarcinoma, or other). Age ≥ 25 years. Complete medical records available. Participants agreed to participate voluntarily by signing an informed consent form.

Exclusion criteria: Patients with negative cytology or CIN without progression to invasive carcinoma. Previous diagnosis of cervical cancer treated at another institution. Previous hysterectomy for other reasons. Current pregnancy.

Variables and Operationalization

The study variables were grouped into five categories:

1-Sociodemographic: age, occupation, marital status, education level, race.

2-Behavioral: smoking habits, age at first sexual intercourse, number of sexual partners.

3-Obstetric: parity (nulliparous, secundiparous, multiparous).

MedEst. 2026| Vol. 6: e569
ISSN: 2789-7567 | RNPS: 2524

4-Clinical: clinical stage according to FIGO classification[8], histological type, screening history (cytology within the last 3 years), time from diagnosis to the start of treatment.

5-History: sexually transmitted infections, use of oral contraceptives.

All variables were operationalized in a table (not shown due to space limitations) and collected using an ad hoc data collection form. Each patient was coded with an alphanumeric identifier (CCU 001 to CCU 088) to ensure anonymity.

Research Methods and Techniques

A review of obstetric and oncological medical records was conducted, supplemented by a structured interview with the patients. A data collection form with predefined categories was designed.

Data Processing and Analysis

The data were transcribed into Microsoft Excel and analyzed using SPSS v25. Descriptive statistics were used: absolute and relative frequencies for categorical variables, and measures of central tendency (mean, median) and dispersion (SD, range) for quantitative variables. To explore associations between risk factors and clinical stage, the chi-square test was applied, considering a p-value <0.05 to be statistically significant.

Ethical Considerations

The research was conducted in accordance with the principles of the Declaration of Helsinki and current ethical regulations in Cuba. The protocol was approved by the Research Ethics Committee and the Scientific Council of the hospital. Confidentiality was ensured by anonymizing personal data with alphanumeric codes. Written informed consent was obtained from all participants (Appendix 1). Given its observational and non-interventional nature, the study did not entail any risks beyond those of routine clinical practice.

RESULTS

A total of 88 patients with a confirmed diagnosis of CC were studied. The mean age was 43.7 years (SD: 10.2; range: 27–68). The most frequent age group was 36–40 years (28.4%), followed by 41–45 years (20.5%) and ≥56 years (13.6%) (Table 1). The mean age at diagnosis was similar across all racial groups (p=0.342).

Table 1. Distribution by age groups (N=88)

MedEst. 2026| Vol. 6: e569
ISSN: 2789-7567 | RNPS: 2524

Age group	n	%
25–30 years	6	6.8
31–35 years	8	9.1
36–40 years	25	28.4
41–45 years	18	20.5
46–50 years	9	10.2
51–55 years	10	11.4
≥56 years	12	13.6

Source: Hospital Archive and Statistics Department.

Table 2 summarizes the sociodemographic, obstetric, and behavioral characteristics. Housewives predominated (52.3%), single women (61.4%), high school education level (56.8%), Black race (44.3%), smokers (58.0%), and multiparous women (43.2%). Sexual initiation between 14–19 years occurred in 60.2%, and the number of sexual partners of 3–4 was the most frequent (40.9%). A history of STIs was reported by 15.9%, and 25.0% had used oral contraceptives for more than 5 years.

Table 2. Distribution according to sociodemographic, obstetric and behavioral characteristics (n=88)

Variable	Category	n	%
Occupation	Housewife	46	52.3
	Worker	42	47.7
Marital status	Single	54	61.4
	Married	34	38.6
Education level	Primary	4	4.5
	Secondary	21	23.9
	High school	50	56.8
	University	13	14.8
Race	White	20	22.7
	Black	39	44.3
	Mixed	29	33.0
Smoking habit	Yes	51	58.0
	No	37	42.0
Parity	Nulliparous	24	27.3
	Secundiparous (1–2)	26	29.5
	Multiparous (≥3)	38	43.2
Age at sexual initiation	<14 years	20	22.7
	14–19 years	53	60.2
	>20 years	15	17.1
Number of partners	≤2	34	38.6
	3–4	36	40.9
	≥5	18	20.5

MedEst. 2026| Vol. 6: e569
ISSN: 2789-7567 | RNPS: 2524

History of STIs	Yes	14	15.9
	No	74	84.1
Oral contraceptives >5 years	Yes	22	25.0
	No	66	75.0

Source: Medical records and interviews.

Regarding clinical characteristics (Table 3), squamous cell carcinoma was the most frequent histological type (67.0%), followed by adenocarcinoma (23.9%) and other types (9.1%). Clinical stage according to FIGO predominated in stage II (38.6%), followed by stage I (31.8%), stage III (19.3%), and stage IV (10.2%). A total of 67.0% of patients had no screening in the last 3 years, and 70.5% reported that their last Pap smear had been more than 5 years ago. The mean time from diagnosis to treatment initiation was 28.5 days (SD: 12.3; range: 5–65).

Table 3. Distribution according to clinical characteristics (N=88)

Variable	Category	n	%
Histological type	Squamous cell carcinoma	59	67.0
	Adenocarcinoma	21	23.9
	Others	8	9.1
Clinical stage (FIGO)	I	28	31.8
	II	34	38.6
	III	17	19.3
	IV	9	10.2
Screening in last 3 years	Yes	29	33.0
	No	59	67.0
Diagnosis-to-treatment time	Mean (SD)	28.5 (12.3) days	–

Source: Oncology medical records.

The analysis of association between risk factors and clinical stage (Table 4) showed that smoking was significantly associated with more advanced stages (III–IV) (p=0.041), as well as multiparity (p=0.032). Age at sexual initiation (p=0.184), number of partners (p=0.209), and education level (p=0.312) did not show a statistically significant association in this series.

Table 4. Distribution according to association between risk factors and advanced clinical stage (III IV) (N=88)

Risk factor	Stage I–II (n=62)	Stage III–IV (n=26)	p
Smoking			
Yes (n=51)	31 (60.8%)	20 (39.2%)	0.041*

No (n=37)	31 (83.8%)	6 (16.2%)	
Parity			
Multiparous (n=38)	21 (55.3%)	17 (44.7%)	0.032*
Non-multiparous (n=50)	41 (82.0%)	9 (18.0%)	
Sexual initiation <14 years (n=20)	12 (60.0%)	8 (40.0%)	0.184
Initiation ≥14 years (n=68)	50 (73.5%)	18 (26.5%)	
Partners ≥3 (n=54)	35 (64.8%)	19 (35.2%)	0.209
Partners ≤2 (n=34)	27 (79.4%)	7 (20.6%)	

*Chi-square test, p<0.05.

DISCUSSION

In the present series, the most affected age group was 36–40 years (28.4%), similar to that reported by Hermida Lazcano [9] in Cuba (30–35 years, 52%) and by Palma Osorio et al. [10] in Paraguay. This distribution reflects the long latency period of the disease, which manifests between 35 and 55 years [11]. The mean age of 43.7 years is comparable to that of other Latin American studies [12].

The predominance of housewives (52.3%) and single women (61.4%) coincides with previous studies in Cuba [9,13]. The status of housewife, in low-income contexts, may limit access to information and health services [14]. Single marital status is associated with a greater number of sexual partners and less stability in relationships, which increases exposure to HPV [15].

Regarding education level, high school predominated (56.8%), similar to that obtained by Matos Bisset (58%) [16]. In Cuba, the high educational coverage explains the predominance of middle and higher levels [17].

Smoking (58.0%) was much higher than the 20–30% reported in the general population of Cuban women [18]. The carcinogenic mechanism involves the presence of nicotine and cotinine in cervical mucus, which promote DNA damage and chronic inflammation [19]. The finding of a significant association between smoking and advanced stages (p=0.041) coincides with the meta-analysis by Applebaum, which reported an RR of 2.5 (95% CI: 2.1–3.0) for CC in active smokers [20].

Black race was the most affected (44.3%), which coincides with reports from the U.S. and the Caribbean where incidence and mortality are higher in women of African descent [21,22]. In Cuba, although the health system is universal, social inequalities persist that could explain these differences [23].

MedEst. 2026| Vol. 6: e569
ISSN: 2789-7567 | RNPS: 2524

Multiparous women constituted 43.2% and were significantly associated with more advanced stages (p=0.032). This result coincides with the hypothesis that repeated cervical trauma during childbirth favors exposure of the transformation epithelium to carcinogens [24,25]. Various studies [26,29,30] confirmed that multiparity increases the risk of CIN 3 or worse in women with persistent HPV infection.

Sexual initiation between 14–19 years (60.2%) and the number of partners of 3–4 (40.9%) are well-documented risk factors [27]. Although in this series they were not significantly associated with advanced stages, their high frequency confirms their role in carcinogenesis.

The predominance of squamous cell carcinoma (67.0%) and stage II (38.6%) at diagnosis is consistent with the literature, where squamous cell is the most frequent type and diagnosis is usually made at intermediate stages in developing countries [28]. The low frequency of screening in the last 3 years (33.0%) is a concerning finding that explains diagnosis at advanced stages. Data from the Ministry of Public Health show a screening coverage in Cuba of approximately 60–70%, but with significant provincial variations [6]. The mean diagnosis-to-treatment time of 28.5 days is acceptable according to international standards (<60 days).

The main finding of this study is the association between smoking and multiparity with more advanced clinical stages, suggesting that these factors not only increase the risk of developing CC but also of presenting it in more aggressive phases. This finding has important implications for prevention and screening strategies, as women with these risk factors should be considered higher priority for screening and follow-up.

Limitations

The sample size (n=88) is limited for multivariate analyses and comes from a single hospital (selection bias). The absence of a control group prevents the calculation of association measures. HPV typing was not performed, nor were nutritional data recorded. Self-reporting of sexual behaviors introduces memory and social desirability biases. Data collection through medical records depended on the quality of prior recording. Race was based on self-declaration, without reflecting complex social determinants. Being single-center, the findings are not generalizable to other provinces or countries. Despite this, the study provides relevant information on the epidemiological profile in Matanzas and lays the groundwork for future analytical research.

CONCLUSIONS

In the series studied, CC predominated in women aged 36–40 years (28.4%), housewives (52.3%), single (61.4%), and with high school education level (56.8%). Smoking (58.0%), multiparity (43.2%), early sexual initiation (60.2%), and number of partners 3–4 (40.9%) were the main risk factors. Squamous cell carcinoma was the most frequent type (67.0%) and stage II (38.6%) was predominant. A total of 67.0% of patients had no screening in the last 3 years. Smoking (p=0.041) and multiparity (p=0.032) were significantly associated with advanced stages. These results confirm the importance of modifiable risk factors and the need to strengthen screening and sexual education programs in the province. It is recommended to prioritize the follow-up of women who smoke and multiparous women, guarantee universal access to screening, and evaluate the implementation of HPV testing as a primary screening method

BIBLIOGRAPHIC REFERENCES

1. Sung H, Ferlay J, Siegel RL, Laversanne M, Soerjomataram I, Jemal A, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. CA Cancer J Clin. 2021;71(3):209-49. doi:10.3322/caac.21660

2. Singh D, Vignat J, Lorenzoni V, et al. Global estimates of incidence and mortality of cervical cancer in 2020: a baseline analysis of the WHO Global Cervical Cancer Elimination Initiative. *Lancet Glob Health*. 2023;11(2):e197-e206. doi:10.1016/S2214-109X(22)00501-0

3. Liu Y, Ai H. Comprehensive insights into human papillomavirus and cervical cancer: Pathophysiology, screening, and vaccination strategies. *Biochim Biophys Acta Rev Cancer*. 2024;1879(6):189192. doi:10.1016/j.bbcan.2024.189192

4. World Health Organization. Global strategy to accelerate the elimination of cervical cancer as a public health problem. Geneva: WHO; [Internet] 2020 [cited 24/11/2025]. Available in: https://www.who.int/publications/i/item/9789240014107

5. Muñoz N, Franceschi S, Bosetti C, Moreno V, Herrero R, Smith JS, et al. Role of parity and human papillomavirus in cervical cancer: the IARC multicentric case-control study. Lancet. 2002;359(9312):1093-101. doi:10.1016/S0140-6736(02)08151-5

6. Ministerio de Salud Pública (MINSAP). Anuario Estadístico de Salud 2024. La Habana: MINSAP; [Internet] 2025 [cited 24/11/2025].

Available in: https://files.sld.cu/bvscuba/files/2025/05/Anuario-Estadistico-de-Salud-2024.pdf

7. Figueredo Fonseca M, Fernández Núñez D, Hidalgo Rodríguez M, Rodríguez Reúna R, Álvarez Paneque T. Intervención educativa sobre cáncer cervicouterino. Multimed. [Internet] 2021 [cited 24/11/2025];23(4). Available in: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1028-48182019000400731

8. Bhatla N, Aoki D, Sharma DN, Sankaranarayanan R. Cancer of the cervix uteri: 2021 update. Int J Gynaecol Obstet. 2021;155(Suppl 1):28-44. doi:10.1002/ijgo.13865

9. Hermida Lazcano I. Caracterización de mujeres con diagnóstico de cáncer cervicouterino. Rev Cuba Obstet Ginecol. [Internet] 2021 [cited 24/11/2025];47(2). Available in: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0138-600X2021000200007

10. Palma Osorio M, Romero Flores AD, Torres Mesa AI. Factores de riesgo en las lesiones intraepiteliales del cuello uterino. Rev Finlay. [Internet] 2019 [cited 24/11/2025];9(4). Available in: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S2221-24342019000400291

11. Castellsagué X. Natural history and epidemiology of HPV infection and cervical cancer. Gynecol Oncol. 2008;110(3 Suppl 2):S4-7. doi:10.1016/j.ygyno.2008.07.045

12. Cuzick J, Arbyn M, Sankaranarayanan R, Tsu V, Ronco G, Mayrand MH, et al. Overview of human papillomavirus-based and other novel options for cervical cancer screening in developed and developing countries. Vaccine. 2008;26(Suppl 10):K29-41. doi:10.1016/j.vaccine.2008.06.019

13. Bravo Polanco E, Águila Rodríguez N, Guerra Villarpanda D, Blanco Vázquez Y, Rodríguez González O, Oliva Santana M. Cáncer cérvico uterino: prevención y tratamiento. Medisur. [Internet] 2020 [cited 24/11/2025];18(4). Available in: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S1727-897X2020000400685

14. Akinyemiju TF. Socio-economic and health access determinants of breast and cervical cancer screening in low-income countries: analysis of the World Health Survey. PLoS One. 2012;7(11):e48834. doi:10.1371/journal.pone.0048834

15. Wang X, Ji Y, Liu J, Li X, Jiang J. Marital status and the risk of cervical cancer: a systematic review and meta-analysis. Medicine (Baltimore). 2020;99(51):e23554. doi:10.1097/MD.0000000000023554

16. Matos Bisset A, Ali Pérez NA, Padrón Castillo M, Matos Bayeau AA, Cuevas Ramos B. Eficacia de la intervención educativa sobre el conocimiento del cáncer cérvicouterino. Acta Méd Centro [Internet]. 2019 [cited 24/11/2025];13(4):552-61. Available in: https://revactamedicacentro.sld.cu/index.php/amc/article/view/987

17. Díaz Brito Y, Báez Pupo MM, Pérez Rivero JL, García Placeres M. Presencia de algunos factores de riesgo de cáncer de cérvix en mujeres con citologías normales. Rev Cub Med Gen Integr. [Internet] 2014 [cited 24/11/2025];30(2). Available in: http://scielo.sld.cu/scielo.php?script=sci_arttext&pid=S0864-21252014000200005

18. Fernández Milán AM. Tabaquismo y su relación con otros factores de riesgo aterogénico en mujeres de edad mediana. Rev Cubana Med. [Internet] 2021 [cited 24/11/2025];60(2):1-9. Available in: https://www.medigraphic.com/pdfs/revcubmed/cm-2021/cm212f.pdf

19. Hecht SS, Hatsukami DK. Smokeless tobacco and cigarette smoking: chemical mechanisms and cancer prevention. *Nat Rev Cancer*. 2022;22(3):143-155. doi:10.1038/s41568-021-00423-4

20. Applebaum KM, Furniss CS, Zeka A, Posner MR, Smith JF, Bryan J, et al. Lack of association of alcohol and tobacco with HPV16-associated head and neck cancer. J Natl Cancer Inst. 2007;99(23):1801-10. doi:10.1093/jnci/djm234

21. Clarke MA, Devesa SS, Hammer A, Wentzensen N. Racial and Ethnic Differences in Hysterectomy-Corrected Uterine Corpus Cancer Mortality by Stage and Histologic Subtype. *JAMA Oncol*. 2022;8(6):895-903. doi:10.1001/jamaoncol.2022.0009

22. Gopalani SV, Sawaya GF, Rositch AF, et al. The impact of adjusting for hysterectomy prevalence on cervical cancer incidence rates and trends among women aged 30 years or older-United States, 2001-2019. *Am J Epidemiol*. 2024;193(8):1097-1105. doi:10.1093/aje/kwae041

23. Chacón Estrada L, Robert Brady Y, Martínez Casanova M. Desigualdades por condición racial en el complejo Osha-Ifá de Sagua la Grande. Ch [Internet]. 2024 [cited 24/11/2025];(25):176-95.

Available in: https://chakinan.unach.edu.ec/index.php/chakinan/article/view/1161

24. Tamayo Lien TG, Varona Sánchez J, Borrego López J, Areces Delgado G. Relación colpohistológica en lesiones de cuello de alto grado. Rev Cubana Obstet Ginecol. [Internet] 2010 [cited 24/11/2025]; 36(3). Available in: http://scielo.sld.cu/pdf/gin/v36n3/gin12310.pdf

25. Hewavisenti RV, Arena J, Ahlenstiel CL, Sasson SC. Human papillomavirus in the setting of immunodeficiency: Pathogenesis and the emergence of next-generation therapies to reduce the high associated cancer risk. *Front Immunol*. 2023;14:1112513. doi:10.3389/fimmu.2023.1112513

26. Jensen KE, Schmiedel S, Frederiksen K, Norrild B, Iftner T, Kjær SK. Risk for cervical intraepithelial neoplasia grade 3 or worse in relation to parity among women with persistent human papillomavirus infection: a cohort study. Cancer Epidemiol Biomarkers Prev. 2012;21(11):1949-55. doi:10.1158/1055-9965.EPI-12-0434

27. Oyouni AAA. Human papillomavirus in cancer: Infection, disease transmission, and progress in vaccines. *J Infect Public Health*. 2023;16(4):626-631. doi:10.1016/j.jiph.2023.02.014

28. Nelson CW, Mirabello L. Human papillomavirus genomics: Understanding carcinogenicity. *Tumour Virus Res*. 2023;15:200258. doi:10.1016/j.tvr.2023.200258.

29. Harper DM, Navarro-Alonso JA, Bosch FX, et al. Impact of human papillomavirus vaccines in the reduction of infection, precursor lesions, and cervical cancer: A systematic literature review. *Hum Vaccin Immunother*. 2025;21(1):2497608. doi:10.1080/21645515.2025.2497608

30. Henschke N, Bergman H, Buckley BS, et al. Effects of human papillomavirus (HPV) vaccination programmes on community rates of HPV-related disease and harms from vaccination. *Cochrane Database Syst Rev*. 2025;11(11):CD015363. doi:10.1002/14651858.CD015363.pub2

AUTHORSHIP CONTRIBUTION

LGD: Conceptualization, data curation, research, methodology, project management, resources, software, supervision, validation, visualization, drafting, writing, revision, and editing of the final work.

MedEst. 2026| Vol. 6: e569
ISSN: 2789-7567 | RNPS: 2524

SGG: Conceptualization, data curation, research, methodology, validation, visualization, drafting, writing, revision, and editing of the final work.

GGR: Conceptualization, data curation, research, methodology, validation, visualization, drafting, writing, revision, and editing of the final work.

AHLR: Conceptualization, research, methodology, validation, original draft writing, and revision.

JLHC: Conceptualization, research, methodology, validation, original draft writing, and revision.

SRG: Conceptualization, research, and supervision.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

FUNDING SOURCES

The authors received no funding for the development of this article.

USE OF ARTIFICIAL INTELLIGENCE

The authors declare that no artificial intelligence was used in the writing of this manuscript.

MedEst. 2026| Vol. 6: e569
ISSN: 2789-7567 | RNPS: 2524

ANNEX 1. INFORMED CONSENT

Information for the participant

Dear patient:

You are invited to take part in a research study entitled: "Clinical characterization of patients with cervical cancer at the Provincial Gynecological and Obstetric Hospital of Matanzas." The main objective of this study is to characterize patients diagnosed with cervical cancer treated at this institution, in order to contribute to the knowledge of this disease in our setting and to improve the care offered.

Your participation is entirely voluntary. You may decide not to participate or withdraw at any time, without this affecting the medical care you receive, your relationship with health personnel, or any other right you are entitled to as a patient.

What does your participation consist of?

If you decide to participate, the following will be carried out:

1. Review of the data contained in your oncology and obstetric medical records.
2. A structured interview about your personal history, obstetric history, and health behaviors.
3. Recording of sociodemographic and clinical information on a data collection form specifically designed for this research.

The entire process will be carried out without intervening or modifying the medical decisions established by the health team caring for you.

What are the possible benefits?

- Contribute to scientific knowledge about cervical cancer in our population.
- Receive detailed information about your condition and treatment options.
- Contribute to the improvement of care protocols for future patients.

Are there any risks?

The research does not imply any additional risk for you, beyond those inherent to routine clinical practice. No experimental intervention will be performed, nor will the management established by your physician be modified.

MedEst. 2026| Vol. 6: e569
ISSN: 2789-7567 | RNPS: 2524

Confidentiality:

The strictest confidentiality of all your personal and clinical data is guaranteed. Your identity will not be revealed in any report, publication, or presentation of the results. To this end, all information will be dissociated through an alphanumeric coding system (e.g., CC-001, CC-002), without names, surnames, or personal identity numbers appearing. Only the research team will have access to the data, which will be used exclusively for scientific purposes and to improve healthcare.

Do you have any obligation?

No. Your participation is completely free and voluntary. You may decide not to participate or withdraw from the study at any time, without the need to give explanations and without this affecting the quality of medical care you receive.

DECLARATION OF CONSENT

I, _____, with identity card number _____,

- I have read (or have had read to me) the information contained in this document.
- I have had the opportunity to ask questions and have received clear and satisfactory answers.
- I understand that my participation is voluntary and that I may withdraw at any time without this affecting my medical care.
- I understand that my data will be treated confidentially and anonymously.

Therefore, I agree to participate in this study freely and with full knowledge.

Participant's signature: _____ Date: _____

Full name: _____

Investigator's signature: _____ Date: _____

Full name: _____

Witness's signature (if applicable): _____ Date: _____

MedEst. 2026| Vol. 6: e569
ISSN: 2789-7567 | RNPS: 2524

Full name:
_____