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ORIGINAL ARTICLE

Trends in prostate cancer mortality in Consolación del Sur, 2019–2024

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ABSTRACT

Introduction: prostate cancer mortality in Cuba continues to show an upward trend, underscoring the need to assess local risk patterns, particularly in municipalities such as Consolación del Sur, Pinar del Río.
Objective: to analyze the trend of prostate cancer mortality in the municipality of Consolación del Sur during the period 2019–2024.
Methods: an observational, descriptive, and retrospective study with a population-based ecological approach was conducted (2019–2024). Crude and age-adjusted mortality rates, premature mortality rates, and years of potential life lost were calculated.
Results: the age-adjusted mortality rate in Consolación del Sur remained stable and below the national average, despite upward trends at the provincial and national levels. A discrepancy between adjusted risk and premature mortality indicates an increase in deaths among younger age groups.
Conclusions: the findings suggest deficiencies in active screening and a growing impact of prostate cancer among younger populations. Territorial heterogeneity in risk underscores the need for localized surveillance and healthcare strategies.

Keywords: Prostatic Neoplasms; Mortality; Years of Potential Life Lost.

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INTRODUCTION

Prostate cancer (PCa) is the second most diagnosed neoplasm in men worldwide, after lung cancer.[1,2,3] According to reports from the American Cancer Society, one in eight men will be diagnosed with this disease during their lifetime, and oneout of every 43 will die from this cause.[4] Epidemiological reports place its greatest impact on men aged 65 years or older. Its early onset (men under 40 years of age), although uncommon, is usually asymptomatic and more aggressive.[5]

This trend is observed in Latin America and the Caribbean, where the burden of this disease is projected to increase by 67 %, reaching 2.4 million new cases annually by 2040.[6,7] In this sense, the Lancet Commission for PCa proposes a preventive, comprehensive and systematic approach to themen's health, aimed at reducing cultural barriers and improving adherence to treatments that increase the quality of life and survival of patients worldwide.[8]

In Cuba, various sources have warned about the sustained increase in malignant tumors, associated with population aging and the persistence of risk factors, estimating more than 57,000 new cases by 2030.[9,10,11,12]

The impact of this disease at the country level has been the subject of various investigations whose common denominator lies in the need to activate observatories for its epidemiological control, given the limitations in its premature detection.[13,14,15]

Within the provincial context, a recent study on premature mortality due to prostate cancer (CaP) between 2015 and 2019 stands out.[16] During that period, Consolación del Sur ranked second in terms of the number of deaths and held a similar position regarding the rate of potential years of life lost. The objective of the present study was to analyze the trend in prostate cancer mortality in the municipality of Consolación del Sur, in the province of Pinar del Río, Cuba, during the 2019–2024 period.

METHODS

An observational, descriptive, retrospective study with a population-based ecological approach was carried out, aimed at analyzing mortality from PCa (ICD-10: C61) in the Consolación del Sur municipality (CS), during the period 2019–2024.

Comparisons were made with the Pinar del Río municipality (PR-M), the Pinar del Río province (PR-P) and the national total (Cuba).

The data on PCa mortality were extracted from the Health Statistical Yearbooks (2019–2024) and the Chronological Series of Non-Communicable Diseases provided by the Provincial Department of Statistics. All male deaths with PCa in this period were included as the underlying cause of death, excluding incomplete or inconsistent records.

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Crude (CR), age-adjusted (AMR) and premature mortality (PMR) rates were calculated, as well as years of life potentially lost (YLLP) and average annual percentage change (AAPC). To analyze the mortality ratio (MR), the following scale was considered:

- RM = 1. Mortality in the compared area is equal, equivalent risk.
- RM > 1. Mortality in the compared area is higher, risk lower.
- RM < 1. Mortality in the compared area is lower, risk higher.

The temporal trend of AMR was estimated using a log-linear regression model, with statistical significance $p < 0,05$ ($\alpha = 0,05$), applying the trend classification criteria defined by the World Health Organization (WHO): Ascending (AAPC > +0,5 %), Descending (AAPC <−0,5 %) and Stable (−0,5 % ≤ AAPC ≤ +0,5 %). Adjusted rates were calculated with Epi Info 7 (version 7.2.5.0), and the RM and AAPC variables were processed in Microsoft Excel 2021.

The principles of medical ethics and the aspects established in the Declaration of Helsinki were complied with.

RESULTS

Between 22 and 35 annual deaths due to PCa were recorded in Consolación del Sur during the period 2019–2024, with an estimated male population between 22,500 and 23,160 inhabitants (Table 1). The annual variation showed consecutive increases until 2021 (+27,3 % and +25,0 %), followed by sustained decreases since 2022 (-25,7 % in 2022 and -8,3 % in 2024). The average age at death remained high, between 77,7 and 81,5 years, without relevant fluctuations.

Table 1. Mortality from prostate cancer in Consolación del Sur and its relative weight compared to Pinar del Río and Cuba, 2019–2024.

Year	Estimated male population (N)	Deceased	Annual variation (%)	Average age at death (years)	% of total PR-M	% of total PR-P	% of total Cuba
2019	22 500	22	0,0	80,1	1,33	4,31	0,70
2020	22 610	28	+27,3	78,7	1,55	4,68	0,80
2021	22 740	35	+25,0	81,5	1,01	3,74	0,87
2022	22 890	26	-25,7	80,6	1,21	4,85	0,76
2023	23 020	24	-7,7	79,4	1,24	4,54	0,69
2024	23 160	22	-8,3	77,7	1,09	4,33	0,57

Note: Positive (+) and negative (−) values indicate variations with respect to the previous year.

The municipality contributed between 1,0 % and 1,5 % of the deaths registered in the main municipality, 3,7-4,9 % of the provincial total and less than 1 % of the national deaths, which shows a low but stable relative weight. The interannual oscillations observed respond mainly to random variations or differences in notification, without defining a consistent epidemiological trend in the short term.

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Crude rates consistently outperformed aged adjusted mortality rates in all territories, even after correcting for the effect of age structure (Picture 1). The maximum CT value was observed in 2021 (CS = 80,1; PR-M = 44,9; PR-P = 52,3; Cuba = 72,7 per 100,000 men), followed by a progressive decrease until 2023 and a slight increase in 2024. The aged adjusted mortality rates showed an analogous pattern, with peaks in 2021 and minimums in 2024 (CS = 17,5; PR-M = 24,1; PR-P = 28,7; Cuba = 38,1).

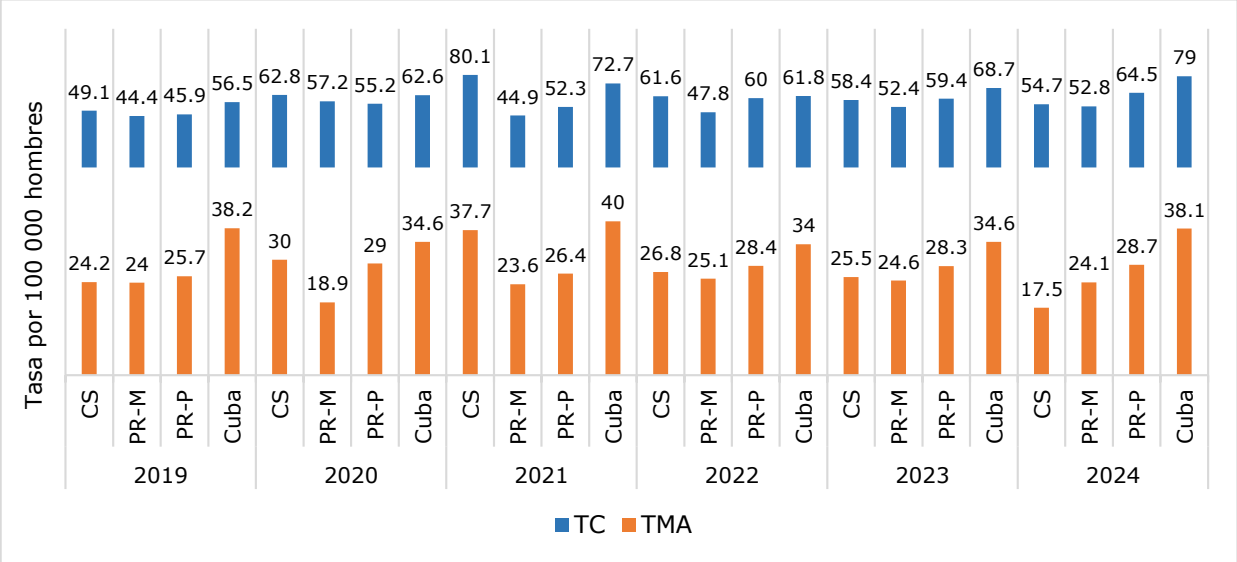

Fig. 1 Crude and age-adjusted mortality rates from prostate cancer by territory, Cuba, 2019–2024.

These oscillations reflect conjunctural variations associated with changes in diagnostic coverage and care capacity during the COVID-19 pandemic. The sustained decrease in the AMR in Consolación del Sur suggests a relative improvement in the mortality profile, in contrast to the stability observed at the national level.

The 95 % confidence intervals (95 %CI) of the aged adjusted mortality rates maintained a stable trend in the period 2019–2024, with partial overlap between territories and years (Picture 2). This distribution reflects global consistency in the estimation of mortality risk, without statistically significant differences between territories.

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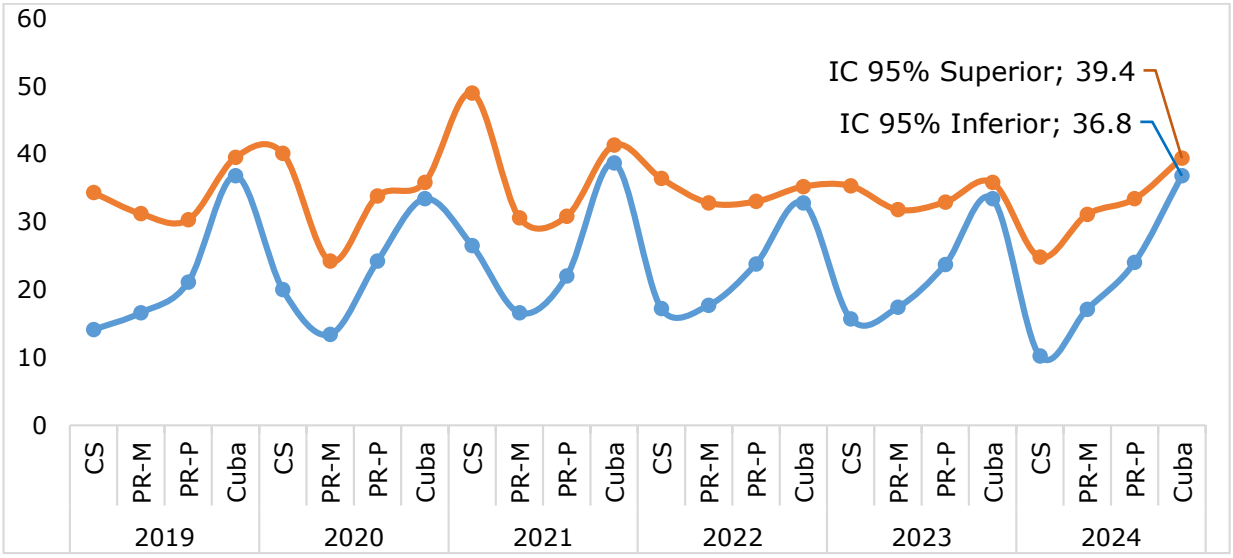

Fig. 2 2,95 % confidence intervals of age-adjusted prostate cancer mortality rates, by territory, Cuba, 2019–2024.

in the precision of the estimates, with wider intervals in 2021 and 2024, coinciding with the aged adjusted mortality rates peaks, mainly in Cuba and Consolación del Sur. The 95 % CI of the latter territory were systematically larger than those of the municipality and province of Pinar del Río, which indicates less statistical precision due to the low annual number of deaths.

In contrast, the years 2020 and 2023 showed greater stability and less interterritorial dispersion. Altogether, the results corroborate that the reduction of the AMR in Consolación del Sur represents a real and sustained decrease in the risk of mortality from PCa compared to the national average. The premature mortality rate in Consolación del Sur ranged between 8,4 and 21,1 per 100,000 men, with a specific increase in 2020 and a maximum YLLL in 2021 (265,2) (Table 2). In Pinar del Río (municipality), the premature mortality rate increased steadily until 2024 (28,7; YPLL = 396,8), indicating a greater burden of mortality and possible deterioration of the care response. In Pinar del Río (province), the behavior was more stable, although with a final rise (24,2; AVPP = 324,9). At the national level, a relatively stable risk is evident.

Table 2. Premature mortality rate (30-69 years) and years of potential life lost due to prostate cancer, Cuba, 2019-2024.

Year	CS (PMR)	CS YLPL	PR-M (PMR)	PR-M YLPL	PR-P PMR	PR-P AVPP	Cuba PMR
2019	8,4	162,2	9,9	170,8	9,5	167,3	18,7
2020	21,1	219,9	7,9	150,7	12,6	139,8	20,1
2021	12,8	265,2	14,2	250,5	8,3	324,9	20,6
2022	8,8	44,1	15,2	143,8	10,7	210,1	20,3
2023	18,2	231,9	13,9	196,5	17,4	240,7	22,3
2024	13,8	193,8	28,7	396,8	24,2	324,9	26,9

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The temporal trend analysis demonstrates territorial heterogeneity in the evolution of adjusted mortality rate PCa in the period 2019–2024. In Consolación del Sur, the trend was classified as stable (AAPC = –0,94 %; p = 0,697), which indicates that, despite the annual fluctuations observed, the real risk of mortality did not show significant variations over time (Table 3).

Table 3. Prostate cancer adjusted mortality rate and annual percentage change, 2019-2024.

Territory	R^2 (Adjusted)	Coefficient $\beta 1$	AAPC (%)	*p*-valor	WHO classification
CS	0,057	-0,0094	-0,94	0,697	Stable
PR-M	0,046	-0,0381	-3,4	0,320	Decreasing
PR-P	0,280	0,0267	+2,71	0,279	Increasing
Cuba	0,071	0,0055	+0,55	0,612	Increasing

In Pinar del Río (municipality), a slight downward trend was observed (AAPC = -3,74 %; p = 0,320), although without statistical significance. On the contrary, in Pinar del Río (province) and at the national level, increasing trends were identified (AAPC = +2,71 % and +0,55 %, respectively).

The contrast between the adjusted mortality rate and the YPLL rate between 2019 and 2024, quantified through the Δ adjusted mortality rate variations (absolute and relative), reveals a critical dissociation in the disease burden in Pinar del Río (Table 4).

Table 4. Absolute and percentage variation in TMA and AVPP (2019 vs. 2024).

Territory	AMR 2019	AAMR 2024	ΔAAMR	ΔAARM (%)	YLPL 2019	YLPL 2024	ΔYALPL	ΔRYLPL (%)
CS	24,2	24,1	-0,1	-0,4	162,2	193,8	+31,6	+19,5
PR-M	24,2	17,5	-6,7	-27,7	170,8	396,8	+226,0	+132,3
PR-P	25,7	28,7	+3,0	+11,7	167,3	324,9	+157,6	+94,2
Cuba	38,2	38,1	-0,1	-0,3				

At the national level, the actual risk of PCa mortality remained stable (AMR) = -0,3 %). The territorial disparity is marked. In Pinar del Río (municipality), the AMR decreased significantly (ΔAMR= -27,7 %), in contrast to a substantial increase in YLPL(ΔYLPL= +132,3 %), which shows a shift in risk towards younger age groups. In Pinar del Río (province), both rates increased (ΔAMR = +11,7 %; (YLPL = +94,2 %), confirming that premature mortality constitutes a growing and high-magnitude problem, independent of variations in the adjusted risk.

For the MR analysis, the average AMR for the period 2019-2024 was used, taking Consolación del Sur as a reference area, registering a value of 25,7 per 100,000 inhabitants. The comparative analysis using MRI shows clear differences

- Pinar del Río (municipality): with a AMR of 22,7, its MR was 0,88.
- Pinar del Río (province): registered a AMR of 29,1, resulting in an MR of 1,13.
- Cuba: the AMR was 37,1 and the MR reached 1,44.

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The risk of mortality from PCa in Pinar del Río (municipality) is 12 % lower than that of Consolación del Sur. In contrast, the parameters of Pinar del Río (province) are 13 % higher than those of Consolación del Sur. At the national level, the risk of mortality from CaP is 44 % higher than that recorded in Consolación del Sur, which confirms that the risk in Consolación del Sur is significantly lower than the country average.

DISCUSSION

The AMR showed that, although a stable trend remained in the municipality of Consolación del Sur, at the provincial and national level the adjusted risk showed a sustained increase. This behavior contrasts with what has been observed in developed countries such as the United States, Japan and Sweden, where mortality from PCa has decreased continuously, mainly due to early detection using prostate-specific antigen (PSA), improved treatments andstrengthening of oncology registration systems.[1,2,6]

Consequently, Orzechowska et al.,[18] emphasize that the analyzes carried out "very clearly establish the need to see PCa not as a single disease, but as two different entities based on the age of onset."From which it is inferred that these profound biological differences require a change in the preventive management of PCa since, on the one hand, traditional tools such as the Gleason score are insufficient to evaluate the risk in young men; and on the other hand, a transition is neededurgent need for a standardized approach to an age-conscious precision medicine framework.

At the national level, the persistence of an upward trend is consistent with what is reported by international specialized literature, and with reports in other provinces,[14,19] leaving in question the effectiveness of active research programs, as well as with the predominance ofdiagnoses in advanced clinical stages.[20] According to Islas et al., [14] the limited information available on PCa shows the need to strengthen health education aimed at the male population and to promote timely detection, since late diagnosis is associated with aless favorable prognosis.

In Pinar del Río, the studies carried out by Pérez et al.,[16] showed a decrease in premature mortality due to CaP in the period 2015-2019. However, the stability observed in Consolación del Sur and the downward trend in Pinar del Río municipality suggest that local variations could be due more to differences in the quality of therecord than to real improvements in disease control. These results reinforce the need to strengthen epidemiological surveillance and implement sustained strategies for early detection and comprehensive attention to men's health in primary care to achieve a tangible impact on reducing mortality.

Another relevant finding is the critical dissociation between the real risk (AMR) and the burden of premature mortality (PM). In territories such as Pinar del Río (municipality) and Consolación del Sur, it was observed that the burden of YLPL increased substantially despite the stability or decrease in the adjusted risk. This phenomenon implies that deaths from PCa are progressively concentrating at younger ages (less than 75 years), exacerbating the social and economic impact of the disease.

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The increase in YLPL is a sensitive indicator of potentially avoidable deaths, and its growth suggests that men are dying at ages when they should enjoy good productive health.[18] This pattern could be linked to disparities in access to diagnosis andtreatment that accelerate the progression of the disease in younger cohorts.[19,20] In addition, uncontrolled risk factors, such as obesity and smoking, have been associated in Cuba with the development of more aggressive PCa, which could directly influence this increase in risk. premature mortality.[14,15,20]

Contradictorily, Li et al.,[17] point out that their analysis reveals a considerable and incessantly increasing global burden of PCa among the elderly population, with notable geographic heterogeneity. These data underscore the urgent need for adapted public health strategies to mitigate their growing impact on the world's aging population.

The comparative analysis of MR highlights the heterogeneity of risk within the province. Pinar del Río as a whole exhibits a significantly higher risk than the municipality of Consolación del Sur. In contrast, the adjusted mortality risk in Pinar del Río (municipality) was lower than that of Consolación del Sur and notably lower than the national average. These territorial variations in PCa risk require deeper etiological investigation.

The lower risk profile in Pinar del Río (municipality) could be linked to differences in the ethnographic composition or to specific protective factors, while the high national risk constitutes a documented phenomenon and associated with the demographic patterns of the population. Cuban.[14,19,20] In Consolación del Sur, the Comprehensive Health Situation Report (2024) identifies limitations in educational actions and in the availability of reagents for determining the PSA, which restricts active screening in men over 50 years of age. These findings support the need for targeted epidemiological surveillance strategies, aimed at timely detection and comprehensive management of the disease in the highest risk areas, rather than uniform interventions at the provincial level, in line with guidelinesnational plans outlined in the Program for Comprehensive Cancer Control and in its implementation strategy.

CONCLUSIONS

The analysis of PCa mortality in the Consolación del Sur municipality (2019-2024) shows persistent limitations in active screening and early detection, with a growing impact on younger age groups. Etiological research is required to delve into the relationship between premature mortality and modifiable or structural factors of the health system, to support more effective control policies in Pinar del Río.

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Conflict of interest
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Authors' contribution
GFMD: conceptualization, formal analysis, research, writing – original draft, writing – review and editing.
JLML: conceptualization, formal analysis, research, writing – original draft, writing – review and editing.
MRL: conceptualization, formal analysis, research, writing – original draft, writing – review and editing.
BFG: conceptualization, formal analysis, research, writing – original draft, writing – review and editing.
JSCA: conceptualization, formal analysis, research, writing – original draft, writing – review and editing.

Statement on the use of artificial intelligence
During the preparation of this work, the authors did not use any generative artificial intelligence tools.

BIBLIOGRAPHICAL REFERENCES

1. Bray F, Laversanne M, Sung H, Ferlay J, Siegel RL, Soerjomataram I, et al. Global cancer statistics 2022: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. CA Cancer J Clin [Internet]. 2024 [citado 06/03/2025]; 74(3): 229-63. Disponible en: https://doi.org/10.3322/caac.21834

2. Ferlay J, Ervik M, Lam F, Colombet M, Mery L, Piñeros M, et al. Global Cancer Observatory: Cancer Today [Internet]. Lyon: International Agency for Research on Cancer; 2022 [citado 06/03/2025]. Disponible en: https://gco.iarc.fr/today

3. Carrillo-Ruiz RA, Guevara-Hernández SP, Moina-Veloz AP. Diagnóstico del cáncer: avances en métodos moleculares y de imagen para una detección temprana. Rev Ciencias Médicas [Internet]. 2025 [citado 10/06/2026]; 29(1): e6745. Disponible en: http://revcmpinar.sld.cu/index.php/publicaciones/article/view/6745

4. American Cancer Society. Key Statistics for Prostate Cancer [Internet]. Atlanta: American Cancer Society; 2025 [citado 10/06/2026]. Disponible en: https://www.cancer.org/cancer/prostate-cancer/about/key-statistics.html

5. Adam S, Thong M, Martin-Diener E, Camey B, Hayoz C, Konzelmann I, et al. Identificación de clases del grupo de síntomas de dolor, fatiga y depresión en supervivientes de cáncer de próstata a largo plazo: resultados del estudio multirregional de supervivencia al cáncer de próstata en Suiza (PROCAS). Support Care Cancer [Internet]. 2021 [citado 10/06/2026]; 29:6259-69. Disponible en: https://doi.org/10.1007/s00520-021-06132-w

6. Organización Mundial de la Salud. Cáncer [Internet]. Ginebra: Organización Mundial de la Salud; 2022 [citado 10/06/2026]. Disponible en: https://www.who.int/es/news-room/fact-sheets/detail/cancer

CC-BY-NC- 4.0

ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e7124

7. International Agency for Research on Cancer. Cancer Today [Internet]. Lyon: World Health Organization; 2025 [citado 10/06/2026]. Disponible en: https://gco.iarc.who.int/today/

8. James ND, Tannock I, N'Dow J, Feng F, Gillessen S, Ali SA, et al. The Lancet Commission on prostate cancer: planning for the surge in cases. Lancet [Internet]. 2024 [citado 10/06/2026]; 403(10437): 1683-722. Disponible en: https://doi.org/10.1016/S0140-6736(24)00651-2

9. Ministerio de Salud Pública de Cuba. Dirección de Registros Médicos y Estadísticas de Salud. Anuario Estadístico de Salud 2021 [Internet]. La Habana: MINSAP; 2022 [citado 10/06/2026]. Disponible en: https://instituciones.sld.cu/fatesa/files/2022/11/Anuario-Estad%C3%ADstico-de-Salud-2021.-Ed-2022.pdf

10. Ministerio de Salud Pública de Cuba. Dirección de Registros Médicos y Estadísticas de Salud. Anuario Estadístico de Salud 2023 [Internet]. La Habana: MINSAP; 2024 [citado 10/06/2026]. Disponible en: https://files.sld.cu/dne/files/2024/09/Anuario-Estad%c3%adstico-de-Salud-2023-EDICION-2024.pdf

11. Ministerio de Salud Pública de Cuba. Dirección de Registros Médicos y Estadísticas de Salud. Anuario Estadístico de Salud 2024 [Internet]. La Habana: MINSAP; 2025 [citado 10/06/2026]. Disponible en: https://www.infomed.scu.sld.cu/anuario-estadistico-de-salud-2024/

12. Yanes Chacón AN, Villalobos Campos NP, Cubas González SA. Cáncer de próstata: una perspectiva global. Rev Med Sinergia [Internet]. 2023 [citado 10/06/2026]; 8(12): e1124. Disponible en: https://revistamedicasinergia.com/index.php/rms/article/view/1124

13. González González A, Barros Hernández JB, Lara Laza BI. Análisis de la mortalidad por cáncer en Habana del Este, en el quinquenio 2019–2023. Rev Mapa [Internet]. 2025 [citado 10/06/2026]; 9(40). Disponible en: https://revistamapa.org/index.php/es/article/view/519

14. Islas Pérez LA, Martínez Reséndiz JI, Ruiz Hernández A, Ruvalcaba Ledezma JC, Benítez Medina A, Beltrán Rodríguez MG, et al. Epidemiología del cáncer de próstata, sus determinantes y prevención. JONNPR [Internet]. 2020 [citado 10/06/2026]; 5(9):1010-22. Disponible en: https://doi.org/10.19230/jonnpr.3686

15. Sagué Larrea JL, Franco Camejo L, Doimeadios Rodríguez Z. Análisis de la mortalidad por cáncer de próstata en pacientes de la provincia de Holguín. CCM [Internet]. 2017 [citado 10/06/2026]; 21(1): 33-43. Disponible en: http://scielo.sld.cu/pdf/ccm/v21n1/ccm04117.pdf

16. Pérez-García S, Valdés-Villafranca R, Valdés-Villafranca R, Cruz-Rosete L, Pérez-García S. Mortalidad prematura por cáncer de próstata en Pinar del Río, 2015–2019. Rev Ciencias Médicas [Internet]. 2022 [citado 10/06/2026]; 26(1): e5356. Disponible en: https://revcmpinar.sld.cu/index.php/publicaciones/article/view/5356/pdf

17. Li Y, Tang M, Shao J, Li S, Teng Y, Xu Y, Shu P. Global, regional, and national burden and trends of prostate cancer in elderly from 1990 to 2021: results from global burden of disease 2021. World J Surg Oncol [Internet]. 2025 [citado 10/06/2026]; 23(1): 303. Disponible en: https://doi.org/10.1186/s12957-025-03937-5

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ISSN: 1561-3194 **RNPS:** 1877
Rev Ciencias Médicas. 2026; 30(2026): e7124

18. Orzechowska MJ, Bednarek AK. Molecular landscape of prostate cancer across age groups: impact on prognosis and treatment outcomes. Int J Mol Sci [Internet]. 2025 [citado 10/06/2026]; 26(19):9777. Disponible en: https://doi.org/10.3390/ijms26199777

19. Verdecia Rodríguez HM, López Peñalver MÁ. Caracterización clínica epidemiológica del cáncer de próstata. Rev Estud HolCien [Internet]. 2024 [citado 10/06/2026]; 5(1). Disponible en: https://revholcien.sld.cu/index.php/holcien/article/view/350

20. Tamayo Muñiz S, Pérez Perea L, Pérez González RD. Enfermedades no transmisibles en Cuba [Internet]. La Habana: Editorial Ciencias Médicas; 2022 [citado 10/06/2026]. 164 p. Disponible en: https://files.sld.cu/rededitores/files/2022/10/Enfermedades-no-trasmisibles-en-Cuba.pdf

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