African Urology 2026;6:74-75
https://doi.org/10.36303/AUJ.0322

AFRICAN UROLOGY
ISSN 2710-2750 EISSN 2710-2750

SCIENTIFIC LETTER/
SHORT REPORT

The epidemiological transition of prostate cancer in Morocco: a critical analysis of the mortality-incidence gap (2018–2025)

I Sadaoui,[1,2,3] **H Benomar**[2]

[1] *Laboratory of Cell Biology and Molecular Genetics, Faculty of Sciences, Ibn Zohr University, Morocco*
[2] *Department of Anatomic Pathology, Institut Pasteur du Maroc, Morocco*
[3] *Laboratory of Medical Genetics, Faculty of Medicine and Pharmacy, Morocco*

Corresponding author, email: i.sadaoui@uiz.ac.ma

Prostate cancer (PCa) has emerged as the leading malignancy among Moroccan men. This brief communication analyses recent data (2018–2025) to outline the epidemiological transition of PCa in Morocco, characterised by a 77% surge in incidence over a 30-year trajectory. Despite improved diagnostic capabilities, the mortality-to-incidence ratio (MIR) (0.49) remains significantly higher than in high-Human Development Index (HDI) countries (< 0.20). This analysis highlights the urgent need for structured early-detection strategies to address the crisis of late-stage diagnosis in the North African context.

Keywords: prostate cancer, Morocco, North Africa, mortality-to-incidence ratio, epidemiology

Introduction

In Morocco, PCa represents a major public health concern, currently ranking as the most frequent cancer in men.[1] As the country undergoes a rapid demographic and epidemiological transition observed over the last few decades, characterised by an ageing population and shifting lifestyles, the burden of PCa is projected to escalate further. This escalation poses significant challenges to the national urological infrastructure, necessitating a re-evaluation of current early detection and management policies.[2]

Methods

This analysis integrates the most recent data from the Grand Casablanca Cancer Registry (2018–2021), the Global Burden of Disease (GBD) 2024 updates, and the 2024/2025 Global Cancer Observatory (GLOBOCAN) estimates.[3-5] We analysed age-standardised incidence rates (ASIR) and age-standardised mortality rates (ASMR) per 100 000 person-years. The MIR, defined as the ratio of cancer-related deaths to new cases, serves as a standardised proxy for healthcare system effectiveness and diagnostic timeliness. A higher MIR ratio (approaching 1) typically reflects delayed diagnosis or suboptimal therapeutic outcomes.

Results

The ASIR for PCa in Morocco is currently estimated at 23.7 per 100 000.[5] Regional data confirms that PCa accounts for 14.2% of all male cancers, with an incidence surge of approximately 77% since 1990.[4] However, PCa remains the second leading cause of cancer-related death in Moroccan men (following lung cancer), with approximately 2 000 deaths annually (ASMR ≈ 11.7).[5] While PCa is often indolent, the high mortality observed here is a direct consequence of late-stage presentation [6]. Our analysis revealed a MIR of 0.49, which is disproportionately high compared with that of high-HDI countries (Table I).

Discussion

The "epidemiological explosion" of PCa in Morocco reflects the transition toward non-communicable diseases. The lower reported incidence in North Africa compared with Western Europe likely stems from population-based prostate-specific antigen screening and potential underreporting in regional registries, rather than purely biological differences.

The high MIR (0.49) is a major concern, indicating that a substantial proportion of patients still present at advanced or metastatic stages.[2,6] While the 2026 generalisation of mandatory health insurance (AMO) has improved access to healthcare, Morocco still relies on opportunistic screening. Unlike European nations, the lack of a structured national programme leads to significant diagnostic delays.

We argue for a risk-stratified screening programme targeting men aged 50–70 to optimise the use of urological resources and improve survival outcomes in North Africa.[2] To effectively reduce this MIR, we recommend several strategic clinical interventions:

Table I: Comparison of prostate cancer epidemiological indicators (2018–2025 estimates)

Country	ASIR (per 100k)	ASMR (per 100k)	MIR (ratio)
Morocco	**23.7**	**11.7**	**0.49**
France	65.2	9.1	0.14
United States	74.3	7.9	0.11
Tunisia	21.5	9.4	0.43

ASIR – age-standardised incidence, ASMR – age-standardised mortality, MIR – mortality-to-incidence ratio (A higher ratio indicates later diagnosis and lower survival.)
Sources: International Agency for Research on Cancer, Global Cancer Observatory 2022, and Grand Casablanca Cancer Registry

- Implementing a national risk-stratified screening programme.
- Improving the geographic distribution of radiotherapy centres.
- Subsidising access to next-generation hormonal therapies, such as novel androgen receptor signalling inhibitors, to prevent progression in locally advanced cases.

Study limitations

This analysis is subject to several limitations. First, our reliance on regional registry data (e.g. the Grand Casablanca Cancer Registry) may not fully capture the epidemiological realities of rural or underserved areas. Second, using MIR as a proxy for survival does not account for individual patient comorbidities or specific histopathological variations. Finally, the retrospective nature of the datasets introduces a time lag that may not yet reflect the most recent impact of the compulsory health insurance (AMO) rollout on the Moroccan healthcare infrastructure.

Conclusion

Morocco is at a tipping point. Addressing the 0.49 MIR requires strengthening the Moroccan National Plan for Cancer Prevention and Control (PNPCC) through institutionalised early-detection protocols. Strengthening national cancer registries is the only pathway to align Moroccan survival outcomes with international standards by 2030.

Conflict of interest

The authors declare no conflict of interest.

Funding source

None.

Ethical approval

Not applicable (analysis of public registries).

ORCID

I Sadaoui https://orcid.org/0000-0001-8327-9745

References

1. Belot A, et al. Cancer incidence in Morocco: report from Casablanca registry 2005-2007. Bull Cancer. 2013;100(3):211-218.
2. Royaume du Maroc, Ministère de la Santé. Registre des Cancers de la Région du Grand Casablanca 2013-2017. Casablanca: Édition 2021.
3. Registre des Cancers de la Région du Grand Casablanca. Rapport d'incidence 2018-2021. Casablanca: Association Marocaine des Registres des Cancers (AMRC) & Fondation Lalla Salma; 5ème Édition, 2024. Available from: https://www.contrelecancer.ma/site_media/uploaded_files/Registre_des_Cancers_de_la_Region_du_Grand_Casablanca_2018-2021_1_nJ8oeD2.pdf.
4. GBD 2023 Cancer Collaborators. Global burden of cancer, 1990-2023, with forecasts to 2050: a systematic analysis for the Global Burden of Disease Study 2023. Lancet. 2025;406(10502):1565-1586. https://doi.org/10.2139/ssrn.5533924.
5. gco.iarc.who.int [Internet]. Morocco fact sheet. GLOBOCAN; 2022. Available from: https://gco.iarc.who.int/media/globocan/factsheets/populations/504-morocco-fact-sheet.pdf. Accessed 28 February 2026.
6. El Khanoussi B, et al. Prostate cancer in Morocco: Analysis of pathological and clinical features. Pan Afr Med J. 2021;38:154.