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Review article

Cancer epidemiology: incidence, mortality and survival in Morocco and the world; 2005-2025

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Abstract

Cancer is currently one of the major public health problems; any policy of prevention against this scourge and any implementation of international, national, or regional efforts to combat it requires statistical knowledge and increased epidemiological surveillance. This work is an epidemiological study filled with data and statistics. It aims to describe a cancerous pathology that is becoming a major global public health problem and whose incidence and mortality have increased dramatically in recent decades. For that, two main types of sources were used: the first is international and produced by the WHO (World Health Organization), and the other is national and based on data from cancer registries in Morocco. We also conducted exhaustive research on articles published over the last 10 years on cancer in Morocco using bibliographic search engines (PubMed, Google Scholar, etc.). Thus, our epidemiological study shows that cancer is spreading in both developed and developing countries, since already 50% of cancerous diseases occur in developing countries. According to the latest WHO report in 2025, this scourge is responsible for 13% of global mortality, with three-quarters occurring in developing countries, particularly in the poorest regions of Asia, South Asia, Sub-Saharan Africa, and Latin America. In Morocco, the collected data unequivocally confirm a general increase in cancer incidence across Morocco over the past decade. This trend is marked by a predominance of breast cancer among women and lung and prostate cancers among men. Moreover, significant regional disparities persist, reflecting both environmental variations and unequal access to healthcare services. A progressive decrease in the average age of patients affected by certain cancer types, such as colorectal and gastric cancers, has also been observed. Finally, enduring challenges remain regarding early screening, the comprehensiveness of cancer registries, and public awareness efforts.

Keywords: Morocco cancer statistics; Public health policy; Cancer epidemiology; Cancer survival analysis; Cancer surveillance data; Cancer control strategies

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1. Introduction

Around the world, cancer represents a major public health challenge and constitutes a leading cause of morbidity and mortality. In 2022, approximately 20 million new cancer cases were diagnosed globally, with about 9.7 million deaths attributed to the disease, making cancer the second leading cause of death after cardiovascular diseases (WHO, 2025). However, the incidence and mortality burden of cancer varies markedly across regions, reflecting differences in demographic structure, exposure to risk factors, socioeconomic development, and access to health care. Nearly half of all new cancer cases occur in Asia, which hosts close to 60% of the world's population. At the same time, cancer-related mortality is disproportionately concentrated in low- and middle-income regions characterized by lower Human Development Index (HDI) levels and limited economic resources (IARC, 2024). In high-income areas such as Europe and North America, age-standardized incidence rates are among the highest globally, largely due to improved diagnostic capacity and higher prevalence of certain risk factors. For instance, North America recorded an age-standardized incidence rate of approximately 364.7 per 100,000 in 2022 (IARC, 2023). In contrast, Africa reports lower incidence rates (132.3 per 100,000 in 2022), but relatively high mortality, mainly due to late diagnosis and restricted access to timely and adequate care (El Bouch et al., 2024).

Globally, lung, breast, and colorectal cancers are the most frequently diagnosed malignancies, accounting for a

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substantial proportion of new cases in 2022 (WCRF, 2025). Projections indicate that, if current trends persist and in the absence of strengthened cancer control strategies, the annual number of new cancer cases could reach 33–35 million by 2050, accompanied by a significant increase in cancer-related deaths (WHO, 2025). These trends underscore the growing and shifting burden of cancer worldwide, with an increasing impact anticipated in low- and middle-income countries.

In Morocco, cancer has emerged as a major public health concern, with a steadily increasing incidence over recent decades (Elbaylek & Ammor, 2025). Available epidemiological data suggest considerable heterogeneity across regions of the country, revealing important geographical disparities in cancer occurrence. In addition, a trend toward younger age at diagnosis and the predominance of certain tumor types have been observed, likely reflecting changes in lifestyle, environmental exposures, and population aging (Derkaoui et al., 2019). Despite these observations, comprehensive, up-to-date analyses characterizing cancer distribution by region, age, sex, and cancer type remain limited.
Despite the growing body of international literature on cancer, information on the epidemiological profile of cancer in Morocco remains fragmented across multiple sources, including international reports, national registries, and individual studies. This dispersion of data, combined with variations in reference periods, methodologies, and geographic coverage, limits a comprehensive and integrated understanding of the national cancer burden and hinders evidence-based public health planning.

In this context, the main objective of the present study is to provide a comprehensive and up-to-date overview of the epidemiological situation of cancer in Morocco through a narrative and descriptive synthesis of available data. Specifically, this study aims to summarize the most recent estimates of cancer incidence and mortality at the national and regional levels, describe the distribution of cancer according to age, sex, and major cancer types, and highlight temporal trends and regional disparities reported in the literature to identify priority areas for cancer prevention, early detection, and control strategies in Morocco.

2. Methodology

The present study is based on a narrative and descriptive literature review aimed at synthesizing available epidemiological and statistical data on cancer in Morocco. This review combines international and national sources to provide the most comprehensive possible overview of the country's cancer situation. The inclusion criteria comprised reports, databases, and scientific articles addressing cancer epidemiology in Morocco, published by recognized international organizations (notably the World Health Organization (WHO)) or derived from national cancer registry data. Original articles, reviews, and reports containing relevant quantitative data and published in English or French were included. The exclusion criteria encompassed publications not specifically focused on the Moroccan context, studies lacking exploitable epidemiological data, duplicate records, and sources for which the methodology or data origin was insufficiently documented.

The bibliographic search covered publications available from 2007 to 2025. The most recent data were prioritized to accurately reflect the current situation, while historical series were used when necessary to analyze temporal trends.

In cases of discrepancies between different data sources, a predefined hierarchy was applied. Data from national cancer registries and official WHO publications were considered the primary sources. When inconsistencies persisted, the data were critically compared to account for differences in data collection methods, reference years, and geographic coverage. Unresolved discrepancies were explicitly reported and discussed rather than arbitrarily adjusted, to ensure transparency and methodological rigor.

3. Results and discussion

3.1. The main types of cancer in the world

In 2025, the global cancer landscape continues to be dominated by a relatively small number of tumor types that together account for the bulk of new diagnoses and cancer-related deaths. According to recent estimates reported by the WHO and other major international bodies, the leading incident cancers (by new case numbers) are lung, breast (in women), colorectal, prostate (in men), and stomach cancers (WHO.,2025).
From a mechanistic and epidemiologic perspective, lung cancer remains the most frequent single anatomical site of cancer globally, representing approximately 12.4 % of all new cases in 2022; in addition, lung cancer is the leading cause of cancer-related mortality (about 18.7 % of all cancer deaths) worldwide (IARC.,2024). Breast cancer is the most diagnosed cancer in women and the second most common overall (roughly 11.6 % of new cases) and remains a major contributor to female cancer mortality. Colorectal (colon and rectum) cancer is the third most common globally, accounting for around 9.6 % of new cases and about 9.3 % of cancer deaths (Bray *et al*.,2024). Prostate cancer, primarily affecting men, constitutes about 7.3 % of new diagnoses worldwide and is one of the top five incident cancers (El Anssari *et al*.,2023). Stomach (gastric) cancer, while less common in high-income countries than it once was, still accounts for nearly 4.9 % of new global cancer cases and remains among the top causes of cancer death (≈6.8 %) worldwide (WHO.,2025).
It is important to stress that the global burden of cancer is not only about incidence: disparities in outcomes are driven by socioeconomic status, access to prevention, early detection, and treatment. The burden is increasing due to demographic changes (ageing and population growth) and shifts in risk-factor exposures (such as tobacco use, obesity, alcohol, low physical activity, dietary patterns, infections, and environmental carcinogens) (Bray et al., 2024).
Thus, in summary, while there are many distinct cancer types, by 2025 the main types by volume and by impact are lung, breast, colorectal, prostate, and stomach cancers, and these reflect both biological processes (such as carcinogenesis, metastasis) and societal patterns (behavioral, environmental, and healthcare system differences) (WHO.,2025).

Despite advances in prevention, the burden has remained largely constant. Breast cancer is the most diagnosed cancer in 154 of the 185 countries covered by GLOBOCAN 2018. It is the leading cause of cancer deaths in women, with 15% of the total; second is lung cancer, with 13.8% of deaths; third is colorectal cancer, with 9.5% followed by uterine cancer, with 7.5% mortality (Globocan, 2018).
In humans, lung cancer is the leading cancer, in terms of mortality, with 14.5% of deaths; this increase in terms of mortality is due to its poor prognosis in the world as well as its delayed diagnosis, followed by prostate cancer with13.5% and colorectal cancer with 10.9%. Taken together, lung, breast, and colorectal cancers account for a third of all cancer deaths worldwide (Yang *et al*.,2019).

2.2. Regional Epidemiology of Cancer in Morocco

In Morocco, cancer represents a major public health challenge and has become the second leading cause of death after cardiovascular diseases (MSM, 2024). Data related to cancer in Morocco are not always consistent or regularly updated between 2018 and 2025, making precise analysis difficult.

According to the most recent national estimates (2024–2025), approximately 40,000 new cancer cases are diagnosed each year, corresponding to an incidence rate of about 137.3 per 100,000 inhabitants (Bensalah *et al*.,2024), while cancer accounts for nearly 13.4% of all deaths nationwide (El Bouch *et al*.,2024). This growing burden reflects both demographic transitions and the persistence of preventable risk factors (El Idrissi *et al*.,2021). The most recent epidemiological data highlight notable gender and regional disparities. Among Moroccan women, breast cancer is by far the most frequent malignancy, representing about 36% of all female cancers, followed by cervical cancer (≈11%) and colorectal cancer. Among men, lung cancer remains predominant, accounting for approximately 22% of male cancers, followed by prostate cancer (≈12.6%) and bladder cancer (Alaoui *et al*., 2023). Regionally, the Souss-Massa region reports one of the highest estimated incidence rates in the country (≈146.3 per 100,000 inhabitants), with a marked female predominance (≈179 per 100,000 women vs. 113.6 per 100,000 men) (Boudouaya *et al*., 2017). These findings confirm the increasing cancer incidence in Morocco, characterized by significant geographic heterogeneity and a predominance of breast and lung cancers. Strengthening early detection, improving registry coverage, and reinforcing prevention programs remain critical to reducing the national cancer burden (Bensalah *et al*.,2024).
According to the Greater Casablanca Regional Cancer Registry (RCRC), the gross incidence rate for the period 2008-2012 is 120.4/100,000, with a gross female incidence of 131.3 and a gross male incidence of 109.3 (RCRC, 2008). Similarly, in 2005, the Rabat Cancer Registry (RCRAB) recorded 777 new cases, including 392 female cases and 399 male cases, with gross incidences of 115.9 / 100,000 and 125.5 / 100,000, respectively (RCRAB,2005). Thus, the WHO states that 12,500 Moroccan men and 10,400 Moroccan women died of cancer in 2014 (WHO.2014-Morocco), so women are more affected than men in the Casablanca region, while the latter are the most affected in the area. In the Rabat region, male cancers are more lethal in Morocco than female cancers.
A study carried out at the Al Azhar center specialized in the treatment of cancer between July 1994 and December 2004 by Arfaoui *et al*, revealed that 8.44% of the cases recorded during this period present pulmonary cancer (593 for 7023 cancer cases studied), of which 88.5% are male and 11.5% are female, thus male mortality by this cancer reaches 90.2% against only 9.8% of female mortality (Arfaoui *et al*.,2008)

Taking into account national cancer statistics, the Fez-Boulemane region recorded, between 2004 and 2010, 5532 incident cases with a male predominance of 52.5% compared to 47.4% of female cases, the most common cancers being those of the digestive system (cancers of the colon-rectum and stomach cancers) with 20.25%, skin cancers with 17.66% and gynecological cancers with 16.83%, in this period the gross incidence rate of cancer in women reaches 431 for 100,000 cases (El Messaoudi *et al*., 2023). The most common cancers in women are breast cancer, which is present in more than half of the cases, with a percentage of 62%, followed by colorectal cancer, with a rate of 22.6%. At the same time, the most common cancers in men are bladder cancer and colorectal cancer, with 9% and 8% of cases, respectively (Chbani *et al*.,2013).
According to the WHO, the most common cancers among Moroccan women are successively breast cancer (6,650 cases), cervical cancer (2,258 cases), and colorectal cancer (1,126) (Figure 1), with a mortality rate of 27.6%, 10.3% and 7.4% (Figure 2). While among Moroccan men, we first notice lung cancer (3497 cases), followed by prostate cancer (2332 cases) and bladder cancer (1429 cases) (Figure 3), mortality rates follow the incidence rates and are noted respectively and successively.
24.9%, 13.2% and 6.2% (WHO 2014-Morocco) (Figure 4). IARC (2010) published in its Globocan report (2008) that the most common location in Morocco, considering both sexes combined, was breast cancer, which ranked first with a standardized incidence rate of 36.5%. Lung cancer ranked second with a standardized incidence rate of 13.3%, pharyngeal and testicular cancers were the least common with a standardized incidence rate of 0.5% each (IARC, 2010) (Table 1). The RCRC reinforces published data from the International Agency for Research on Cancer (IARC) and states that, among both sexes, the most common cancers in the Casablanca region between 2008 and 2012 are breast, lung, and colorectal (Globocan, 2018).

Taken together, the available regional data reveal a steady increase in cancer incidence in major Moroccan cities, consistent with the effects of demographic ageing, urbanization, and lifestyle transitions (including smoking, obesity, and dietary changes) (Bensalah *et al*.,2024). They also demonstrate persistent disparities in cancer profiles between sexes and regions. However, the lack of comprehensive national coverage and irregular data-collection intervals underscores the need for a fully integrated, nationwide cancer surveillance system to accurately monitor trends and guide policy interventions to prevent, detect early, and ensure equitable access to care.
For 2025, national data reports approximately 40,000 new cancer cases annually and an incidence rate of about 137.3

per 100,000 inhabitants (MNDRHRL,2025). While these figures are national and not stratified by region, regional registries suggest that urban/metropolitan areas such as Casablanca may exhibit incidence rates above the national average. Nonetheless (IARC.,2022), caution is required because:

- Some regions lack full population-based registration or have delays in data reporting.
- Coverage is mainly urban and may under-represent rural or remote areas.
- Differences in registry years, case-ascertainment, and diagnostic access may bias comparisons.

In conclusion, while regional data confirm upward trends in incidence and illustrate geographic heterogeneity, the absence of comprehensive, up-to-date registry data across all Moroccan regions in 2025 makes it difficult to provide a detailed regional landscape for that year. Strengthening national coverage of registries and more frequent data dissemination remain essential for regional monitoring and targeted cancer control efforts.

Table 1. Comprehensive table with selected key data on cancer in Morocco—covering major tumour types (top 5), incidence/mortality figures for both sexes (2022), and historical trend context. (Note: Regional data are limited and varied; only broader national-level data are included where available.) (IARC.,2024)

Sexe	Year	Top 5 cancer sites by incidence (with % of new cases)	New cases	Age-standardized incidence rate (ASR) per 100,000	Death	Age-standardized mortality rate (ASR) per 100,000
Both Sexes	2022	– Breast (20.1 %) – Lung (13.9 %) – Colorectum (8.3 %) – Prostate (7.8 %) – Thyroid (4.5 %)	63 609	49.8	36 947	85.9
Males	2022	– Lung (25.6 %) – Prostate (16.1 %) – Colorectum (9.0 %) – Bladder (6.2 %) – Stomach (4.6 %)	30 737	150.8	21 155	105.0
Females	2022	– Breast (38.8 %) – Cervix uteri (8.0 %) – Colorectum (7.8 %) – Thyroid (7.5 %) – Ovary (4.2 %)	32 872	150.3	15 792	70.5

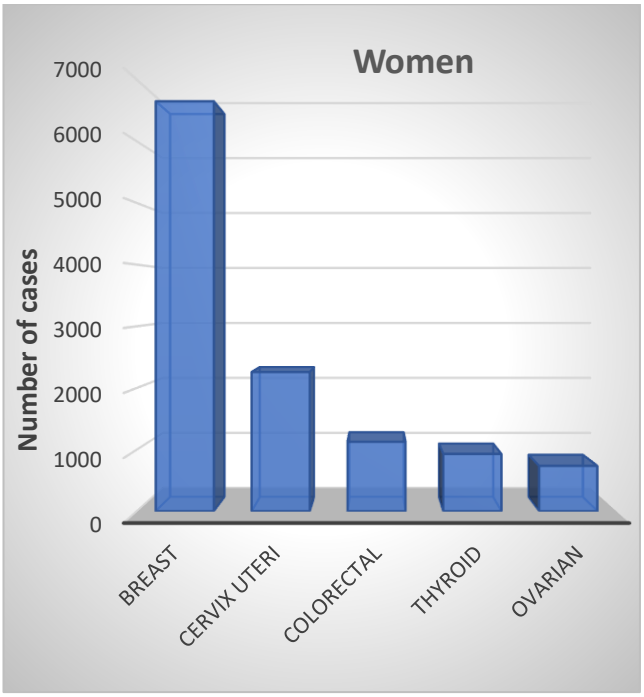


Figure 1. Incidence rate of the most common cancers in females in Morocco (OMS. 2014-Morocco)

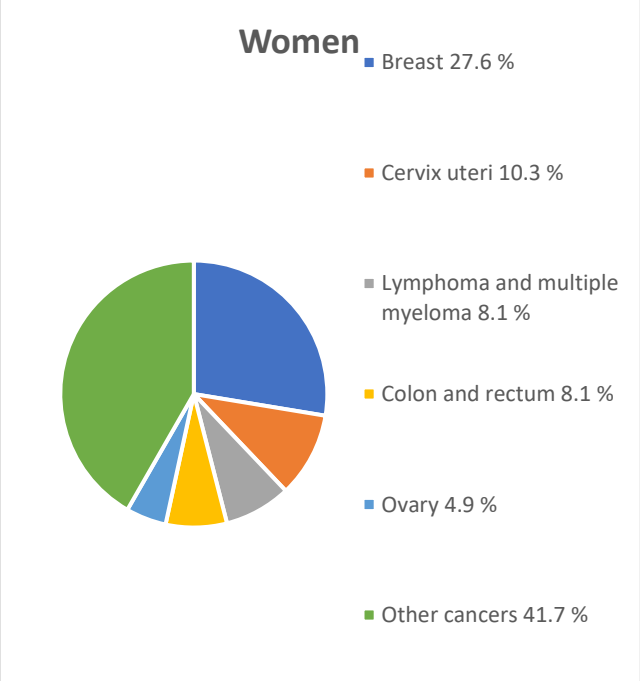


Figure 2. Mortality rate of female cancers in Morocco (OMS.2014-Morocco)

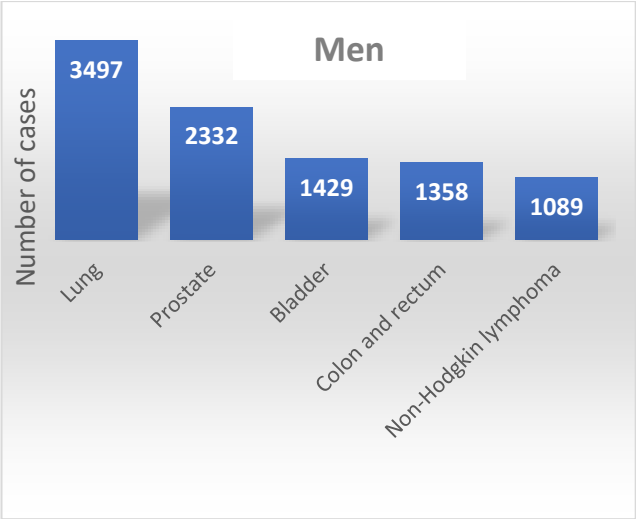


Figure 3. Incidence rate of the most common cancers in males in Morocco (OMS. 2014-Morocco)

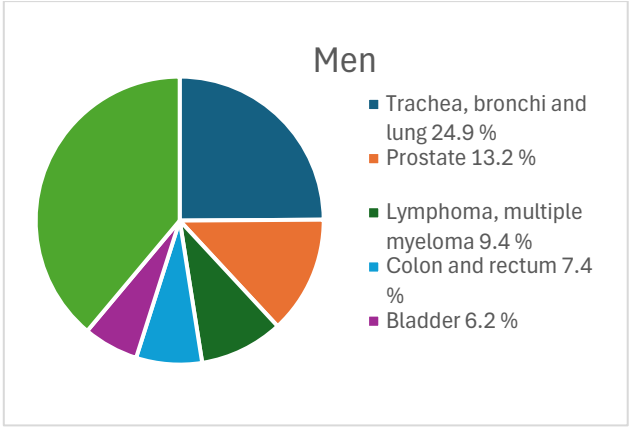


Figure 4. Mortality rate of male cancers in Morocco (OMS.2014-Morocco)

Table 3. Cancer incidence and mortality rates by location and sex in Morocco for 2008; ASR (W): Standardized for age (IARC. 2010)

Cancer	Incidence		Mortality	
	Number	ASR (W)	Number	ASR (W)
Lip, ENT (Ear, Nose, Throat)	427	1.6	186	0.7
Nasopharynx	671	2.3	414	1.5
Pharynx	126	0.5	105	0.4
Esophagus	284	1.1	270	1.0
Stomach	927	3.6	864	3.4
Colorectum	1912	7.3	1456	5.6
Liver	199	0.8	191	0.8
Gallbladder	245	1.0	236	0.9
Pancreas	429	1.7	415	1.6
Larynx	802	3.1	462	1.8
Lung	3391	13.3	3157	12.5
Melanoma	60	0.3	34	0.1
Breast	5396	36.5	2804	19.7
Cervix uteri	422	03	133	01
Ovary	776	5.5	569	4.1
Prostate	1099	9.8	849	7.5
Testis	87	05	48	0.3
Kidney	223	0.8	176	0.6
Bladder	809	3.1	531	2.1
Brain and nervous system	654	2.3	491	1.7
Thyroïd	949	3.1	500	1.8
Hodgkin Lymphoma	529	1.6	424	1.3
Non-Hodgkin Lymphoma	1411	5.3	1153	4.4
Multiple Myeloma	654	2.5	595	2.3
Leukemia	560	1.9	524	1.8
All types of cancer except non-melanoma skin cancer	27597	101.9	19734	74.8

2.3. Extent of cancers in developing countries (African countries as an example)

Cancer in developing regions, and notably across Africa, constitutes a mounting and severe public-health challenge. In the African Region, more than 900,000 new cancer cases and over 580,000 cancer-related deaths were recorded in 2022 (WHO.,2025). Although 2025-specific continental figures are limited, projections underscore dramatic increases: globally, cancer incidence is expected to rise by around 77 % by 2050, and in low Human Development Index (HDI) countries, the increase could

exceed 140 % (WHO, 2025). In Africa, the calculated age-standardised incidence rate (ASIR) for all cancers combined in 2022 was approximately 132.3 per 100,000 inhabitants, the lowest among world regions but accompanied by a comparatively high age-standardised mortality rate (ASMR) (IARC.,2022). Leading cancers in the area include breast and cervical cancers among women and prostate cancer among men (Ferlay *et al*.,2024). Economically and systemically, many African countries are ill-equipped: while over 90 % of high-income countries report comprehensive cancer-treatment services, fewer than 15 % of low-income countries do so (WHO.,2024). In sum, developing countries, especially in Africa, are at risk of disproportionately bearing the growing global cancer burden, marked by increasing cases, higher mortality relative to incidence, and profound resource/health-system constraints that hamper prevention, early detection, and treatment (IARC.,2024).

Cancer has become a burden in recent decades for both developed and developing countries. According to the latest NRC data, more than half of new cancer cases worldwide are in Asia (48.4%) and Africa (5.8%) (IARC, 2018). Similarly, in Africa, cancer is a serious public health problem, so in 2002, 582,000 cases were recorded with an annual cancer mortality rate of 412,300 (Ly & Khayat.,2007). According to Globocan (2008), the number of new cases recorded in Africa in 2010 was 681,100, with a mortality rate of 512,400 deaths (IARC., 2010). The situation is further exacerbated, and the number of new cases in 2018 reached 1,055,000, or 5.8% of global cases (IARC, 2018). It has been noted that 25-30% of all recorded cancers in Africa are due to untreated or poorly treated chronic infections (Ly & Khayat., 2007), and that patients do not take serious strategies and adequate measures. According to public authorities in Africa, the number of new cases of cancer could reach 8,000 or 1 million cases of cancer and 500,000 deaths by 2020 (Ly & Khayat,2007) (Figure 6). The fight against this scourge, therefore, requires the political will and dynamism of civil society to implement a strategy adapted to the specificities of African countries and thus identify this cancer.

The most common cancers in African men are prostate cancer (13%), liver cancer (11.4%), and lung cancer (9.2%). The mortality rate follows the same pattern of cancer rates' impact. (Figure 5) (Globocan.,2008).

In other words, in Algeria, cancer causes, in 2014, 219,000 deaths, with a predominance of women, with 11,000 women against 10,900 men. Breast cancer is the most common among women, with 8,177 cases, followed by colorectal cancer with 1,690 cases, and then cervical cancer with 1,288 cases. While in men, lung cancer is found first with 2,201 cases, second colorectal cancer with 1,690 cases, and third bladder cancer with 1,391 cases (WHO-Algeria, 2014).

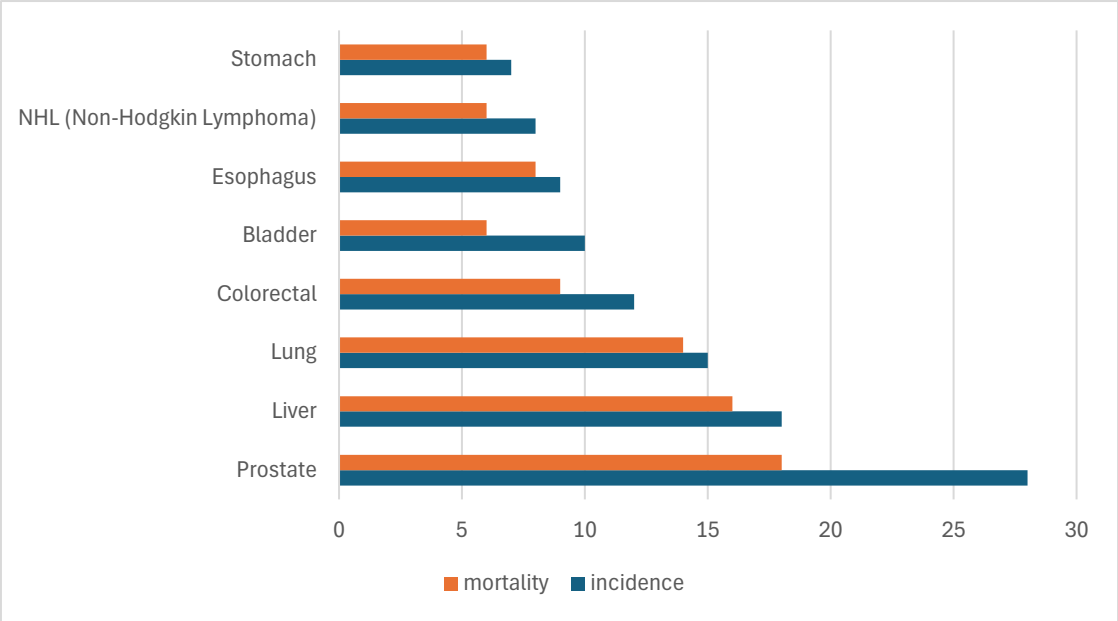
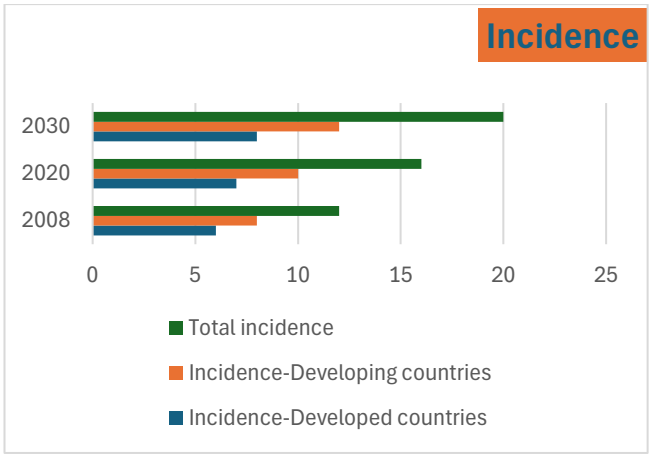


Figure 5. Incidence and mortality rates of different cancers (100,000) in males in Africa (Globocan. 2008)

Tunisia, in 2014, experienced a mortality rate of 60,000 deaths from cancer, with a male predominance of 4500 men and 2800 women deaths from cancer, lung cancer is the most deadly among Tunisians with a mortality rate of 32.3%, followed by colorectal cancer with a rate of 8.4% and bladder cancer with 7.9%, among Tunisians the most deadly cancer is breast cancer with a rate of 22.0%, the second is that of colon and rectum with a rate of 12.1%, the third are lymphomas, multiple myeloma with a rate of 8.9% (WHO-Tunisia, 2014). According to the IARC (2010), the most common cancer in humans is lung cancer (27.5%), followed by bladder cancer (8.4%) and prostate cancer (7.8%). While breast cancer is found in women in the first order (22.3%), second-order colorectal cancer (10.7%), and third-order cervical cancer (4.5%) (IARC.,2010).



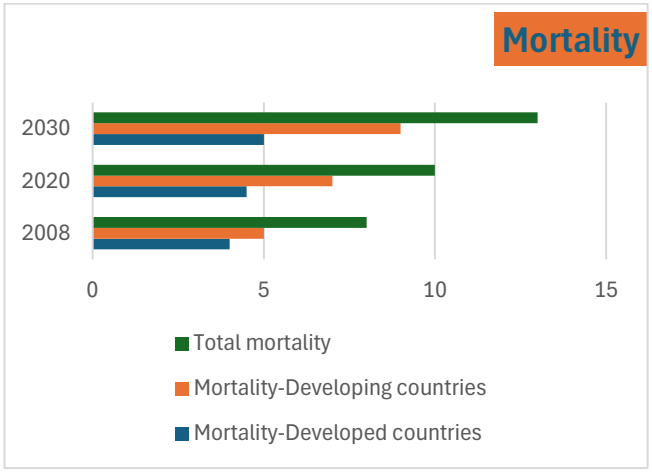


Figure 6. Cancer incidence and mortality worldwide (Globocan 2008)

Table 4. Recent cancer epidemiology statistics for Morocco, Tunisia, and Algeria, drawn chiefly from the International Agency for Research on Cancer (IARC) GLOBOCAN 2022 factsheets:

Country	Year	New cancer cases	Age-standardized incidence rate (ASIR) per 100 000	Cancer Deaths
Morocco	2022	63 609 (30 737 men/ 32 872 women)	~149.8 (men 150.8, women 150.3)	36 947 (21 155 men / 15 792 women)
Tunisia	2022	20 551 (11 441 men / 9 110 women)	~135.4 (men 159.4, women 115.3)	12 580 (7 761 men / 4 819 women)
Algeria	2022	64 713 (29 387 men / 35 326	~141.2 (men 130.6, women 152.2)	35 778 (18 809 men / 16 969 women)

In North Africa, the three countries exhibit comparable age-standardized incidence rates (ASIRs), ranging between approximately 130 and 150 per 100,000 population in 2022. Tunisia, while reporting the lowest total number of cancer cases, shows a relatively elevated ASIR among males and a comparatively lower ASIR among females relative to its regional counterparts. Across the region, cancer mortality remains disproportionately high compared to incidence, reflecting potential delays in diagnosis, restricted access to comprehensive oncological care, and structural limitations within healthcare systems. In Morocco, the most recent national estimates (2024–2025) indicate an annual cancer burden of approximately 40,000 new cases, corresponding to an incidence rate of 137.3 per 100,000, with cancer contributing to around 13.4% of all deaths nationwide.

2.4. Extent of cancers in developed countries

Recent global cancer statistics indicate that the burden of cancer is distributed unevenly across regions and development levels. In 2022, Europe accounted for approximately 22.4 % of new cancer cases**,** while North America represented around 21.0 %, reflecting the concentration of cases in high-income regions (Globocan.,2024). In contrast, Africa and Asia, despite lower incidence rates of approximately 5.9 % and 48.4 % of global cases, respectively, experience disproportionately higher mortality, contributing 7.8 % and 56.1 % of global cancer deaths, respectively (ACS.,2022). This disparity is largely attributable to limited access to early detection, diagnostic services, and timely treatment in low- and middle-income countries, as well as the higher prevalence of cancers with poor prognosis (ACS.,2024). For instance, in Europe, the leading causes of cancer mortality remain lung, colorectal, and breast cancers. In contrast, in developing regions, cancers such as liver, cervical, and esophageal cancers contribute significantly to overall mortality. These patterns underscore the urgent need for strengthened health systems, cancer prevention strategies, and equitable access to care in resource-limited settings (WCRFI.,2022).

In 2018, the global distribution of cancer incidence and mortality exhibited marked regional differences. Developed countries, particularly in Europe, accounted for 23.4% of all new cancer cases according to the WHO. The world's total cancer cases are concentrated in Europe with 20.3% of deaths followed by America, which accounts for 21.0% of all cases global incidence and 14.4% of global mortality, for Africa and Asia, the situation is accentuated with proportions of mortality (7.3% and 57.3% respectively) much higher than those of incidence 5.8% and 48.4% respectively. This increase in mortality rates in these two regions is due, on the one hand, to the high frequency of certain cancers with poor prognosis, and, on the other hand, to the timely treatment in many of the countries of the two regions, as well as the limited access to diagnostic services (CIARC.,2018). Thus, in 2016, Europe recorded1.8% million deaths annually, with a majority male, 56% of men against 44% of women: the majority is due to lung cancer (334,800 deaths), followed by colorectal cancer (207,400 deaths) and breast cancer (131,900 deaths) (Ferlay *et al*.,2007).

In other text, in France, the total number of cancer deaths reached 554,000 in 2014 (97,800 men and 72,700 women), lung cancer being the most fatal in the male sex with a mortality rate of 24.9%, followed by Colorectal cancer with

a rate of 11.4% and that of the prostate with a rate of 10.8%, in the female found breast cancer with a mortality rate of 19.9%, then colorectal cancer with a rate of 13.7% and lung cancer with a rate of 12.5%. As for the incidence rate, prostate cancer is most prevalent among men with 73,602 new cases, lung cancer with 28,033 new cases, and 21,524 cancers; among women, the most dominant cancer is that of the breast, with 54,245 new cases, then colorectal cancer with 19,301 new cases, and lung cancer with 12,010 new cases (WHO-France, 2014). Guerin and Hill have published that in France, in 2007, there were 150.000 cancer deaths with a male predominance of 89.100 deaths compared to 60.600 female deaths (Guerin S, Hill C., 2010). In Canada, in 2017, 206,200 people died from cancer, with a mortality rate of 80,800 deaths during the same period. Half of the annual cancer incidence will be attributable to lung cancer, colorectal cancer, and prostate cancer (CSC.2018). Similarly, in Quebec, cancer is the leading cause of death for women, breast cancer is at the forefront with an incidence rate of 48.8%; in the male sex, prostate cancer accounts for most cases registered with an incidence rate of 34.4% (ISQ, 2010).

The epidemiological profile of cancer in Morocco and worldwide from 2005 to 2025 reveals significant shifts in incidence, mortality, and survival rates, reflecting both progress and ongoing challenges in cancer control. The rising incidence rates observed in many regions, including Morocco, can be attributed to demographic changes such as population ageing, urbanisation, and lifestyle transitions characterised by increased tobacco use, dietary shifts, and reduced physical activity. These risk factors are compounded by environmental exposures and genetic predispositions, emphasizing the multifactorial nature of cancer development. Mortality trends vary widely by cancer type and region, highlighting disparities in healthcare access, early detection, and treatment effectiveness. For example, while survival rates for some cancers have improved globally due to advances in medical technology and targeted therapies, low- and middle-income countries like Morocco still face high mortality largely because of delayed diagnosis and limited treatment infrastructure.

From a public health perspective, these epidemiological patterns call for intensified prevention strategies focusing on modifiable risk factors, such as comprehensive tobacco control, vaccination programs (e.g, HPV vaccine), and lifestyle interventions. Equally critical is strengthening cancer screening and early detection programs tailored to Morocco's healthcare context to improve timely diagnosis, which is directly linked to survival outcomes. Furthermore, the increasing cancer burden imposes considerable pressure on health systems, necessitating improved resource allocation, healthcare workforce training, and integration of cancer care into primary health services.

The policy relevance of these findings is profound. Effective cancer control requires coordinated national strategies informed by robust epidemiological data, which can guide resource prioritization and health policy decisions. Morocco's efforts to develop and expand population-based cancer registries are essential for monitoring trends and evaluating interventions. Policymakers must also address social determinants of health that contribute to disparities in cancer outcomes, including education, socioeconomic status, and geographic inequalities. International collaboration and alignment with global frameworks, such as the WHO's Global Action Plan for Cancer Control, can further enhance national efforts by sharing best practices and mobilizing funding. Finally, this study highlights that addressing the cancer burden in Morocco and globally demands a comprehensive approach that integrates prevention, early detection, effective treatment, and supportive policies. Only through such multifaceted efforts can we expect to reduce incidence and mortality rates and improve survival, ultimately alleviating the public health impact of cancer over the coming decades.

4. Conclusion

Cancer is a heavy burden for both developing and developed countries. It is one of the most common causes of death in the world, causing 13% of global mortality, three-quarters of which occur in developing countries. The fight against this scourge requires epidemiological and statistical data that will be used to put programs of fight and prevention against this global burden, where comes the idea of gathering the epidemiological data in the world, some countries and Morocco which will serve us to reduce morbidity, mortality and improve the quality of life of patients after the implementation of a program of screening and early diagnosis.

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Conflicts of Interest

The authors declare no conflicts of interest.

Data availability statement

Data will be available upon request from the corresponding author.

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