

The burden of Prostate Cancer in Africa: Insights from GLOBOCAN 2024 and Projections through 2050

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Abstract

Background

Prostate cancer is a leading cause of cancer incidence and mortality among men in Africa. This study aimed to describe the current incidence and mortality of prostate cancer across 54 African countries using GLOBOCAN 2024 estimates and to project the anticipated burden through the year 2050.

Methods

A descriptive epidemiological study was conducted using country-level data extracted from the Global Cancer Observatory (GLOBOCAN) 2024 and projected estimates for 2050 from the Cancer Tomorrow platform. The study evaluated the absolute incidence, mortality, age-standardized rates (ASR), and cumulative risks for all 54 African Union member states, which were further grouped into the five United Nations subregions.

Results

In 2024, Africa recorded an estimated 111,450 new prostate cancer cases and 61,755 deaths, making it the most commonly diagnosed cancer (21.5%) and the leading cause of cancer death (18.4%) among African men. Southern Africa reported the highest incidence ASR (59.9 per 100,000), while Western Africa experienced the highest mortality ASR (24.6 per 100,000). At the national level, Zimbabwe recorded the highest ASR for both incidence (113.5 per 100,000) and mortality (71.4 per 100,000). Africa's mortality-to-incidence ratio stood at a disproportionate 55.4%, roughly twice the global proportion of 27.2%. By 2050, the continental burden is projected to rise sharply, with Eastern Africa expected to record the highest relative increases in both incidence (183.1%) and mortality (184.1%).

Conclusion

The burden of prostate cancer in Africa is substantial, with a high mortality-to-incidence ratio reflecting widespread limitations in diagnostic and treatment capacity. Driven by a growing and aging population, the disease burden is projected to more than double by 2050. Addressing this impending public health challenge requires urgent prioritization of oncology training, expanded radiotherapy access, and the implementation of robust screening programs across the continent.

INTRODUCTION

Prostate cancer is one of the major health concerns in men. According to the recent GLOBOCAN estimates, 1,546,112 new cases and 419,849 deaths were reported in 2024, making it the 4th most common cancer overall and the 2nd most common in men, immediately after lung cancer (Sung et al.,

2026). Its burden is heterogeneously distributed; incidence is markedly higher in high-income countries, largely because of wider access to prostate specific antigen (PSA) testing and diagnostic services that pick up more cases while mortality does not follow the income narrative, hitting hardest in parts of sub-Saharan Africa, the Pacific Islands, and the Caribbean (Sung et al., 2026).

In Africa, 103,050 new prostate cancer cases were recorded in 2022, representing 8.7% of the global total, while 58,890 deaths were recorded while in 2020 GLOBOCAN data across 174 countries found that Zimbabwe recorded the highest age-standardized prostate cancer mortality rate in the world, at 41.7 per 100,000, despite a comparatively low crude mortality rate of 12.2 per 100,000 (Fatuga et al., 2026a; Wang et al., 2022). The data published in 2020 can be explained by Zimbabwe's young population structure, for which age-standardization corrects. This supports the postulation that the disparities seen at the global level also play out within Africa, in ways unpredictable by incidence figures alone. An earlier trend analysis found that prostate cancer incidence rose in 11 countries and mortality rose in 9 countries over the most recent five-year window with available data, many of them African or other low-and middle-income countries (Schafer et al., 2025).

The burden of prostate cancer in Africa looks different from other regions due to several factors. Much of the variation seen in prostate cancer presentation could be attributed to differences in diagnostic practices at the national level. The mismatch between higher mortality and lower incidence rates may be explained by limited access to PSA testing and curative treatment, even after diagnosis of the disease (Makau-Barasa et al., 2022). The high mortality observed in regions such as sub-Saharan Africa may reflect multiple healthcare-system and socioeconomic barriers. These include limited cancer awareness, delayed presentation and diagnosis, inadequate access to diagnostic and treatment services, and socioeconomic constraints that can impede timely and appropriate cancer care (Seraphin et al., 2021). Infrastructure gaps compound these challenges. Many African countries face shortages of pathologists and other specialised oncology personnel, while diagnostic and radiotherapy services are often concentrated in urban centres. These geographic and workforce constraints can delay diagnosis and limit timely access to curative-intent treatment, particularly for patients living in rural or underserved areas (Ngwa et al., 2022).

Understanding this burden accurately requires reliable, comparable data across the whole continent. GLOBOCAN is produced by IARC, a part of the WHO, and is the internationally recognized standard for cancer surveillance data. The 2024 GLOBOCAN update covers 34 cancer types across 186 countries, providing new case and death estimates for the year 2024 (Sung et al., 2026). GLOBOCAN provides standardized, comparable estimates across all African countries, bridging the gap caused by incomplete cancer registries found in many African countries. However, these figures are modeled estimates rather than exact head-counts and combine actual registry data, where available, with statistical modeling to fill gaps where registry coverage is incomplete, meaning the reliability of the estimate varies from country to country depending on the quality of the underlying registry data (Ayubi et al., 2024).

Much of the existing literature on prostate cancer in Africa has focused on individual countries with well-established cancer registries, such as South Africa, rather than the continent as a whole. This study, therefore, aims to describe the incidence and mortality of prostate cancer across all African countries using the most recent GLOBOCAN 2024 estimates, and to project the anticipated burden through 2050 using corresponding Cancer Tomorrow projections.

METHODS

This was a descriptive epidemiological study of prostate cancer (International Classification of Diseases, 10th Revision [ICD-10] C61) across the African continent. Country-level burden (incidence and mortality) estimates for the year 2024 were obtained from the Global Cancer Observatory (GLOBOCAN) accessed via the Cancer Today platform (<https://gco.iarc.who.int/today>). Estimates for the projected burden the year 2050 were obtained from the corresponding Cancer Tomorrow platform (<https://gco.iarc.who.int/tomorrow>), which derives future estimates by applying demographic projections (population growth and ageing, under a constant-risk scenario) to the 2022 baseline estimates.

The study population comprised all 54 African Union member states recognized as UN member states. Prostate cancer was defined for each country using ICD-10 topography code C61 (malignant neoplasm of the prostate), consistent with GLOBOCAN case-definition conventions. Countries were retained in the dataset regardless of case count, including those with very low or zero reported incidence, to preserve a complete continental denominator; a small number of city/dependent territories not classified as UN member states were excluded a priori. The countries were further grouped into five UN subregions (Northern, Western, Middle, Eastern, and Southern Africa) following the United Nations M49 geographic classification used natively by GLOBOCAN.

Data extraction was performed manually by two independent authors into a purpose-built Excel workbook with discrepancies resolved via consensus. For each country, the following figures were recorded for cancer site prostate (C61), year 2024: number of new cases and deaths; age-standardized rates (ASR) per 100,000 person-years, calculated against the world standard population, for incidence and mortality; crude incidence and mortality rates; and cumulative risk (%) of diagnosis and death between birth and age 84 years. Corresponding projected incident cases and deaths for 2050 were extracted from Cancer Tomorrow. Male-specific data only were extracted, as sex-disaggregated female estimates were not available in GLOBOCAN for prostate cancer.

For each country, the GLOBOCAN data source classification (Registry, Modelled, or Extrapolated) was recorded to document the underlying estimate quality. Cells were left blank where a figure was not available or not reported by GLOBOCAN for a given country, rather than being coded as zero, to avoid conflating true zero counts with missing data.

RESULTS

Overall Burden of Prostate Cancer in Africa

In 2024, prostate cancer accounted for an estimated 111,450 new cases and 61,755 deaths across the 54 African Union countries, representing 21.5% of all incident cancers and 18.4% of all cancer deaths among men on the continent. The geographic distribution of both incidence and mortality was markedly heterogeneous.

In absolute terms, Western Africa carried the largest burden, with 38,354 incident cases and 23,849 deaths, followed by Eastern Africa (26,127 cases; 15,776 deaths), Middle Africa (16,171 cases; 9,928 deaths) and Southern Africa (16,055 cases; 5,803 deaths). Northern Africa recorded the fewest incident cases (14,826) but not the fewest deaths, registering more deaths (6,440) than Southern Africa.

When expressed as age-standardised rates, the regional ranking shifted markedly. Southern Africa recorded by far the highest incidence ASR (59.9 per 100,000), followed by Western Africa (39.5), Middle Africa (38.5) and Eastern Africa (27.4), while Northern Africa recorded the lowest (14.4 per 100,000). A broadly similar pattern was observed for mortality, with Western Africa recording the highest age-standardised mortality rate (24.6 per 100,000), followed closely by Middle Africa (23.8) and Southern Africa (22.7), then Eastern Africa (16.7), while Northern Africa again recorded the lowest rate (6.3 per 100,000).

Crude rates, which reflect the underlying age structure of each subregion, followed a pattern consistent with the age-standardised rates: Southern Africa had the highest crude incidence (45.1 per 100,000) and crude mortality (16.3 per 100,000), followed by Western Africa (16.7 and 10.4, respectively) and Middle Africa (15.3 and 9.4). Northern Africa recorded the lowest crude mortality rate (4.7 per 100,000), while Eastern Africa recorded the lowest crude incidence rate (10.5 per 100,000).

The cumulative risk of developing prostate cancer by age 84 years was highest in Southern Africa (7.6%), followed by Middle Africa (4.8%), Western Africa (4.6%) and Eastern Africa (3.2%), and lowest in Northern Africa (1.8%). The cumulative risk of dying from prostate cancer was highest in Middle Africa (3.0%), followed closely by Western Africa (2.9%) and Southern Africa (2.3%), with Eastern Africa (2.0%) and Northern Africa (0.79%) recording the lowest risk. Overall, Southern and Western Africa bore a disproportionate share of the rate-based burden of prostate cancer, while Northern Africa consistently recorded the lowest incidence and mortality across all measures.

There was marked variation in the country-level burden of prostate cancer. Among the ten countries with the highest number of incident cases, Nigeria recorded the largest burden, with 24,396 cases, followed by South Africa (15,060), the Democratic Republic of the Congo (7,779), Zimbabwe (3,635), Algeria (3,615), Kenya (3,601), Morocco (3,533), Ethiopia (3,494), Sudan (3,357) and Chad (3,340). The mean number of cases among these ten countries was 7,181.

Within this group, Zimbabwe had by far the highest incidence ASR (113.5 per 100,000), followed by Chad (97.9), South Africa (61.1) and Nigeria (47.8), while Ethiopia recorded the lowest ASR among these ten

countries (12.3 per 100,000). The cumulative risk of diagnosis was highest in Chad (12.4%) and lowest in Ethiopia (1.4%) within this group (Fig. 1).

For mortality, Nigeria again recorded the highest number of deaths (15,176), followed by South Africa (5,281), the Democratic Republic of the Congo (4,766), Zimbabwe (2,298), Kenya (2,199), Ethiopia (2,134), Sudan (2,077), Chad (2,046), Ghana (1,784) and Tanzania (1,768). The mean across these ten countries was 3,952.9 deaths.

At the country level, the incidence burden ranged widely, from 24,396 cases in Nigeria to 14 cases in São Tomé and Príncipe among the countries in the highest- and lowest-incidence groups, while the incidence ASR ranged from 113.5 per 100,000 in Zimbabwe to 17.5 per 100,000 in the Republic of the Gambia across these reported groups.

The lowest-incidence group comprised Eritrea (184 cases), Gabon (169), Equatorial Guinea (131), Eswatini (107), the Republic of the Gambia (100), Cape Verde (96), Guinea-Bissau (96), Djibouti (73), Comoros (58) and São Tomé and Príncipe (14), with a mean of 102.8 cases. The corresponding lowest-mortality group, comprising a partly overlapping set of small-population countries led by France, La Réunion (101 deaths) and Equatorial Guinea (83), recorded a mean of 57.8 deaths (Fig. 2).

Comparison of prostate cancer burden with other cancers

Among men in Africa, prostate cancer was the leading cause of cancer incidence in 2024, accounting for 111,450 of the 517,599 new cancer cases recorded (21.5%). It was followed by liver cancer (46,683 cases; 9.0%), colorectal cancer (39,911; 7.7%), lung cancer (32,770; 6.3%), non-Hodgkin lymphoma (26,590; 5.1%) and bladder cancer (23,733; 4.6%), with all other cancers combined accounting for the remaining 236,462 cases (45.7%) (Fig. 3).

Prostate cancer was likewise the leading cause of cancer death among men, accounting for 61,755 of 334,743 male cancer deaths (18.4%). Liver cancer was the second leading cause of death (41,827; 12.5%), followed by lung cancer (28,709; 8.6%), colorectal cancer (20,315; 6.1%) and oesophageal cancer (16,789; 5.0%), while stomach cancer accounted for a further 14,557 deaths (4.3%) and all other cancers combined for 150,791 deaths (45.0%) (Fig. 4).

Projection to 2050

By Countries

At country level, Zambia is projected to record the largest relative increase in incidence, from 1,341 cases in 2024 to 5,940 in 2050 (343.0%), followed by Libya (268.2%), Uganda (254.1%) and Malawi (228.9%). A closely comparable pattern is projected for mortality, with Zambia again recording the

largest relative increase (826 to 3,671 deaths; 344.4%), followed by Libya (272.6%), Uganda (257.1%) and Malawi (232.9%).

In terms of absolute burden, Nigeria is projected to remain the country with the largest number of incident cases, increasing from 24,396 in 2024 to 55,635 in 2050 (128.0%), followed by South Africa (15,060 to 30,474; 102.4%) and the Democratic Republic of the Congo (7,779 to 18,117; 132.9%). Nigeria is also projected to record the highest number of deaths, increasing from 15,176 in 2024 to 34,492 in 2050 (127.3%) (Table 1).

Table 1
Projected incidence and mortality of prostate cancer by country in Africa, 2024–2050.

Country	Population		Incidence			Mortality		
	2024	2050	2024	2050	% Change	2024	2050	% Change
Northern Africa								
Algeria	23 874 387	30 214 911	3 615	10 406	187.90%	1 373	3 971	189.20%
Morocco	19 202 025	21 801 811	3 533	7 785	120.40%	1 348	2 981	121.10%
Sudan	25 012 754	42 034 287	3 357	7 503	123.50%	2 077	4 638	123.30%
Egypt	58 840 151	81 272 703	3 114	8 520	173.60%	1 181	3 246	174.90%
Tunisia	6 068 428	6 462 667	777	1 784	129.60%	298	683	129.20%
Libya	3 752 973	4 663 134	390	1 436	268.20%	146	544	272.60%
Western Africa								
Nigeria	117 673 775	182 456 685	24 396	55 635	128.00%	15 176	34 492	127.30%
Ghana	17 194 246	25 075 940	2 817	7 732	174.50%	1 784	4 868	172.90%
Côte d'Ivoire	16 246 686	27 905 696	2 632	7 304	177.50%	1 605	4 483	179.30%
Benin	7 252 569	12 257 158	1 850	4 789	158.90%	1 151	2 973	158.30%
Guinea	7 301 272	11 686 495	1 104	2 539	130.00%	706	1 622	129.70%
Senegal	9 405 157	15 163 340	1 073	2 669	148.70%	656	1 637	149.50%
Burkina Faso	11 730 089	18 571 377	1 014	3 002	196.10%	631	1 868	196.00%
Niger	13 725 333	26 570 077	623	1 674	168.70%	385	1 034	168.60%
Sierra Leone	4 309 976	6 450 478	622	1 571	152.60%	378	965	155.30%

Country	Population		Incidence			Mortality		
	2024	2050	2024	2050	% Change	2024	2050	% Change
Northern Africa								
Mali	12 350 778	23 136 516	582	1 564	168.70%	355	955	169.00%
Togo	4 789 207	7 854 702	548	1 438	162.40%	333	881	164.60%
Mauritania	2 535 730	4 664 493	404	958	137.10%	258	611	136.80%
Liberia	2 801 896	4 456 722	393	909	131.30%	245	565	130.60%
The Republic of the Gambia	1 374 339	2 140 663	100	277	177.00%	60	166	176.70%
Cape Verde	266 951	285 616	96	280	191.70%	58	171	194.80%
Guinea-Bissau	1 088 016	1 707 621	96	284	195.80%	67	193	188.10%
Middle Africa								
Congo, Democratic Republic of	54 216 835	108 145 297	7 779	18 117	132.90%	4 766	11 101	132.90%
Chad	10 181 362	19 451 763	3 340	9 401	181.50%	2 046	5 743	180.70%
Angola	18 747 472	36 823 409	2 217	5 994	170.40%	1 355	3 673	171.10%
Cameroon	14 514 345	25 370 261	1 829	5 331	191.50%	1 124	3 291	192.80%
Congo, Republic of	3 166 100	5 485 084	461	1 371	197.40%	292	864	195.90%
Central African Republic	2 557 968	5 236 586	231	409	77.10%	148	263	77.70%
Gabon	1 288 749	2 037 805	169	445	163.30%	104	276	165.40%
Equatorial Guinea	997 754	1 629 908	131	354	170.20%	83	221	166.30%
Sao Tome and Principe	117 082	179 858	14	31	121.40%	10	22	120.00%

Country	Population		Incidence			Mortality		
	2024	2050	2024	2050	% Change	2024	2050	% Change
Northern Africa								
Eastern Africa								
Zimbabwe	7 929 092	12 566 375	3 635	7 022	93.20%	2 298	4 433	92.90%
Kenya	28 056 077	41 196 961	3 601	10 120	181.00%	2 199	6 226	183.10%
Ethiopia	66 167 295	112 608 251	3 494	9 680	177.00%	2 134	5 934	178.10%
Tanzania, United Republic of	33 983 252	64 468 262	2 915	8 383	187.60%	1 768	5 115	189.30%
Uganda	24 805 131	42 552 089	2 537	8 984	254.10%	1 544	5 513	257.10%
Rwanda	6 954 763	11 183 672	1 856	4 838	160.70%	1 179	3 065	160.00%
Madagascar	16 032 532	26 610 969	1 675	4 323	158.10%	1 008	2 627	160.60%
Zambia	10 550 245	18 814 793	1 341	5 940	343.00%	826	3 671	344.40%
Mozambique	16 802 087	31 116 943	1 051	2 979	183.40%	633	1 799	184.20%
Burundi	6 978 597	11 956 635	912	2 835	210.90%	556	1 741	213.10%
Somalia	9 522 795	18 534 767	734	1 983	170.20%	445	1 205	170.80%
South Sudan	5 874 368	8 989 808	629	1 711	172.00%	401	1 059	164.10%
Malawi	10 567 050	18 264 852	582	1 914	228.90%	350	1 165	232.90%
France, La Réunion	417 362	445 699	557	810	45.40%	101	274	171.30%
Mauritius	634 517	540 832	254	441	73.60%	114	239	109.60%
Eritrea	1 745 359	2 829 267	184	418	127.20%	116	261	125.00%

Country	Population		Incidence			Mortality		
	2024	2050	2024	2050	% Change	2024	2050	% Change
Northern Africa								
Djibouti	579 318	753 977	73	184	152.10%	46	116	152.20%
Comoros	435 818	654 004	58	121	108.60%	35	73	108.60%
Southern Africa								
South Africa	31 152 956	38 125 326	15 060	30 474	102.40%	5 281	11 935	126.00%
Namibia	1 479 811	2 189 553	440	1 269	188.40%	258	758	193.80%
Lesotho	1 138 897	1 467 860	238	555	133.20%	146	342	134.20%
Botswana	1 256 570	1 695 770	210	560	166.70%	54	145	168.50%
Eswatini	610 196	742 412	107	234	118.70%	64	142	121.90%

Across the five UN subregions, Western Africa is projected to record the largest number of incident cases, increasing from 38,354 in 2024 to 94,414 in 2050, a 146.2% increase. Eastern Africa is projected to increase from 26,127 to 73,965 cases (183.1%), the largest relative increase of any subregion, while Northern Africa is projected to increase from 14,826 to 38,499 cases (159.7%). Middle Africa is projected to increase from 16,171 to 40,804 cases (152.3%), and Southern Africa, from 16,055 to 33,365 cases, is projected to record the smallest relative increase (107.8%).

A similar pattern is projected for mortality. Western Africa is projected to record the largest number of deaths in 2050, increasing from 23,849 to 58,574 (145.6%). Eastern Africa is again projected to record the largest relative increase, from 15,776 to 44,824 deaths (184.1%), followed by Northern Africa (6,440 to 16,764; 160.3%) and Middle Africa (9,928 to 25,077; 152.6%), while Southern Africa is projected to record the smallest relative increase in mortality (5,803 to 13,219; 127.8%).

DISCUSSION

Prostate cancer was the leading cause of cancer among men in Africa in 2024 accounting for an estimated 111,450 cases (21.5%), a finding which was consistent with global statistics where prostate cancer was found to be the most commonly diagnosed cancer among men of all ages in 112 out of 185 countries, making it the most commonly diagnosed cancer among men in more than half of the world.

According to the same study, prostate cancer was also found to be the leading cause of cancer-related deaths among men in approximately a quarter of the world (48 out of 185 countries), consistent with the mortality findings in Africa, where Prostate cancer likewise was the leading cause of cancer deaths, accounting for 61,755 deaths (18.4%) (Marais et al., 2024).

According to GLOBOCAN 2024 prostate cancer was the fourth most diagnosed cancer at 1.54 million new cases (7.5%) the first being lung cancer (12.8%), followed by breast cancer (11.8%) and colorectal cancer (9.9%). In terms of mortality, prostate cancer was the eighth leading cause of cancer related deaths at 419,849 deaths (4.3%) (Sung et al., 2026).

In 2022, however, prostate cancer was the second most frequently diagnosed cancer among men worldwide, following lung cancer and accounted for approximately 14.1% of all newly diagnosed cancers in men (Fatuga et al., 2026b).

Zimbabwe had the highest ASR incidence rate at 113.5 per 100,000 and mortality rate at 71.4 per 100,000. The same trend was observed with Chad and Namibia with incidence rates of 97.9 and mortality rate of 59.9, and 69.8 and 41.9 respectively. The findings indicate that high incidence rates in these countries are reflected in the higher mortality burden in the countries and the high incidence-mortality gaps. (Fig. 1 and Fig. 2).

Global mortality by continent according to GLOBOCAN 2024 showed that Africa had a mortality incidence ratio of 55%, roughly twice the global proportion of 27% and higher when compared with the other continents. The disproportion becomes even clearer when we look at Africa's contribution to the global burden, with an incidence of 7.2% and a mortality of 14.7% (Table 2 and Fig. 7).

The disproportionately high mortality rates in Africa may be driven largely by limited diagnostic capacity, late-stage presentation, and restricted access to timely and effective treatment services. Lower report rates in Africa compared to higher-income regions may reflect underdiagnosis, data limitations, and structural barriers across health systems, potentially leading to the disproportionate outcomes (Fatuga et al., 2026b).

These disparities also highlight structural inequities in screening practices, diagnostic capacity, and treatment availability. For example, the number of radiotherapy machines per million population is markedly lower in Africa compared to regions with much lower prostate cancer mortality (Ramashia et al., 2024).

Table 2
Global and continental prostate cancer incidence, mortality and mortality to incidence ratios, GLOBOCAN 2024.

Continent	Incidence	Mortality	Mortality to incidence ratio
Africa	111,450	61,755	55.4%
Asia	426,203	132,545	31.1%
Latin America & Caribbean	215,448	63,058	29.3%
Oceania	23,916	5,513	23.0%
Europe	462,099	115,491	25.0%
Northern America	306,913	41,446	13.5%
World	1,546,112	419,849	27.2%

Interpreting the 2050 projections through a health-systems lens

The GLOBOCAN database uses a constant-risk projection model to estimate prostate cancer cases by 2050, holding age-specific incidence and mortality constant and applying them to United Nations population projections that account for population growth and an ageing population (Bray et al., 2024; Soerjomataram & Bray, 2021; Sung et al., 2026). As such, the increase in projected cases of prostate cancer should not be interpreted as evidence of rising risk factors for the disease. Instead, it reflects the rapidly growing African population and the rising number of older individuals by 2050, assuming that risk factors remain unchanged. In low- and middle-income countries, the projected increase in cancer burden over the coming decades will be primarily driven by population growth and aging, rather than changes in age-specific risk factors (Soerjomataram & Bray, 2021).

When viewed through a demographic lens, the apparent paradox in regional projections becomes clearer. Eastern Africa is expected to see the largest relative increases in both incidence (183.1%) and mortality (184.1%) rates, despite currently having one of the lowest regional age-standardized rates in 2024 (27.4 and 14.4 per 100,000, respectively). This rise can be attributed to Eastern Africa's relatively young population structure, which is projected to result in a rapid increase in the ageing population. Northern Africa is projected to have a 159.7% increase in the incidence, the second largest among the five subregions, despite its already low incidence rate (14.4 per 100,000). This increase reflects a population that is further along in the demographic transition process, characterized by a shrinking proportion of children and a rapidly growing ageing population (Bray et al., 2024; Soerjomataram & Bray, 2021).

These projections have significant implications for health system planning. Over the next 25 years, the incidence of prostate cancer is expected to more than double, despite the severely limited diagnostic and treatment capacity across the continent. In sub-Saharan Africa, screening for prostate cancer is often limited, and prostate-specific antigen testing is neither consistently available nor affordable.

Additionally, there are limited structured national screening programs and trained personnel, leading to late diagnosis of prostate cancer (Jalloh et al., 2024). Radiotherapy plays a crucial role in both curative and palliative treatments for prostate cancer, yet its access in Africa remains limited; published literature highlights widespread geographic, financial, logistic, and systemic barriers to radiotherapy access throughout sub-Saharan Africa (Ramashia et al., 2024). A multi-country survey by the African Cancer Registry Network revealed that the cost of treatment was the most frequently reported obstacle hindering patients with prostate cancer from receiving radiotherapy (Kroeber et al., 2026). Due to the weakened healthcare systems in Africa and the shortage of healthcare personnel, the mortality rate from prostate cancer is expected to rise by 2050. To significantly reduce the number of cancer deaths, it is crucial to prioritize measures such as training more oncologists, establishing additional cancer treatment centers, and implementing robust screening programs.

LIMITATIONS

The accuracy of GLOBOCAN estimates is dependent on the quality and availability of local data. For some countries the number of cases in 2024 is estimated by modelling or extrapolation rather than taken from complete, high-quality population-based registries due to their limited capacity to provide these data. The actual incidence and mortality therefore varies between countries due to the different underlying data infrastructure. Further, the downward trend in reported cases in some areas could be due to underdiagnosis or data availability. The projections for 2050 based on the Cancer Tomorrow platform are based on a constant-risk model. This model assumes that the age-specific incidence and mortality rates are constant from the present time through the future, based on United Nations population projections, and only considers population ageing and growth. These projections, therefore, include the assumption that underlying risk factors will not change, and exclude any possible future changes in the diagnostic landscape (such as greater accessibility of prostate-specific antigen (PSA) testing) or treatment availability (such as better access to treatment that might affect the disease trajectory going forward).

CONCLUSION

Prostate cancer is the worst disease in a worsening public health crisis in Africa. Disparities in mortality to incidence are extremely high at 55.4% compared to the global average and are likely due to delayed diagnosis, structural barriers and extremely limited access to curative treatment such as radiotherapy. In addition, the burden is unevenly distributed with Southern and Western Africa presently carrying quite a significant proportion of the rate-based burden; and individual countries such as Zimbabwe have age-standardised incidence and mortality rates that are exceptionally high. In the future, the annual number of prostate cancer cases and deaths in Africa are expected to more than double by 2050 due to demographic changes, which include population growth and population aging, with the greatest relative increases projected to occur in Eastern Africa. African health systems need to make investments in building capacity in oncology a major priority to prevent a future wave of unnecessary prostate cancer

deaths. This demands specific investments in development of oncology staff, increase in radiotherapy and treatment capacities, as well as implementation of readily available and context-relevant screening programmes at national level.

Abbreviations

ASR: Age-Standardized Rate

GLOBOCAN: Global Cancer Observatory

IARC: International Agency for Research on Cancer

ICD-10: International Classification of Diseases, 10th Revision

NHL: Non-Hodgkin Lymphoma

PSA: Prostate-Specific Antigen

UN: United Nations

WHO: World Health Organization

Declarations

Author Contribution

RK conceived and designed the study. MJ, RK and HC independently extracted and cross-checked the data. LM, RO and RK conducted the data analysis and drafted the manuscript. RO, HC, and LM contributed to the interpretation of the findings and critically revised the manuscript. All authors contributed to the intellectual content of the manuscript, read and approved the final version, and agreed to be accountable for all aspects of the work.

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Data Availability

The data used in this study is publicly available in the global cancer observatory:
<https://gco.iarc.who.int/en>

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Figures

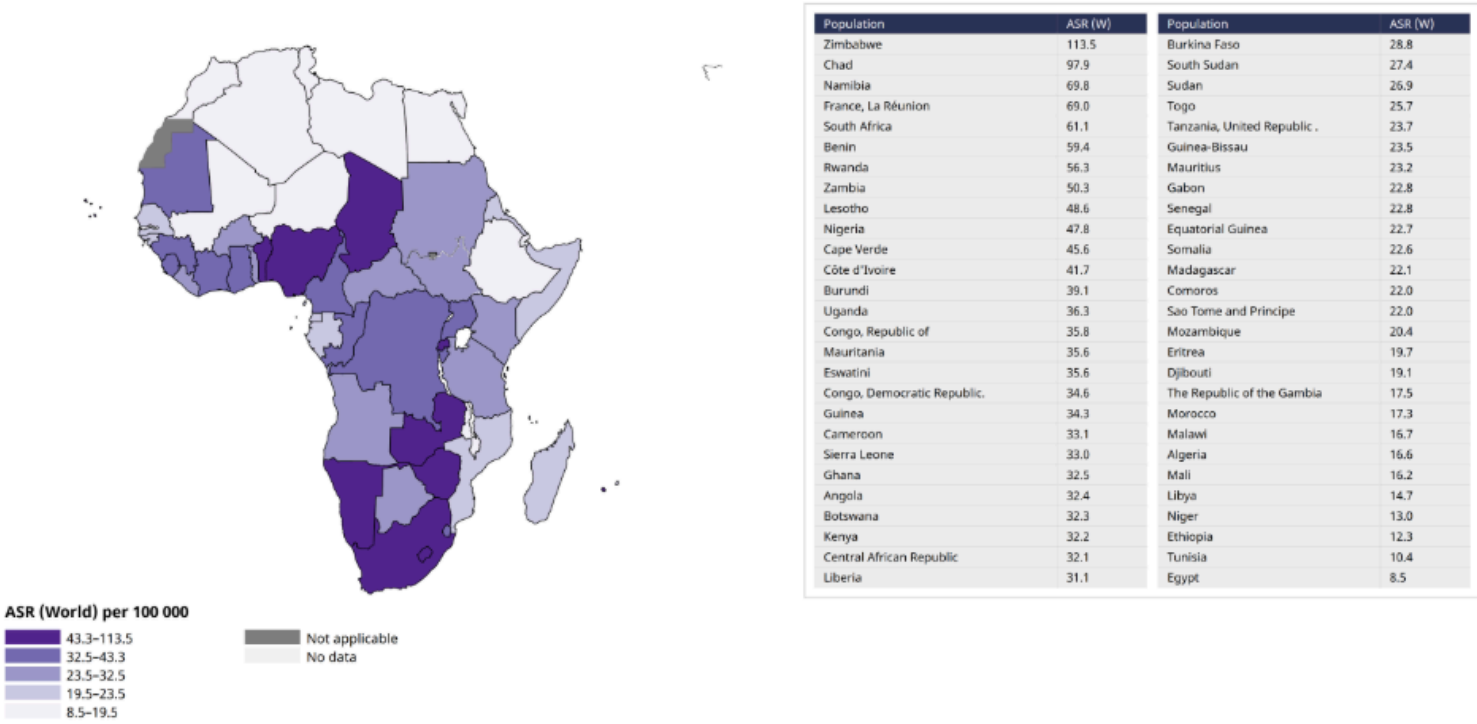


Figure 1

Age-Standardized Incidence Rate of prostate cancer per 100,000 across African populations in 2024. Data source: GLOBOCAN 2024, International Agency for Research on Cancer (WHO).

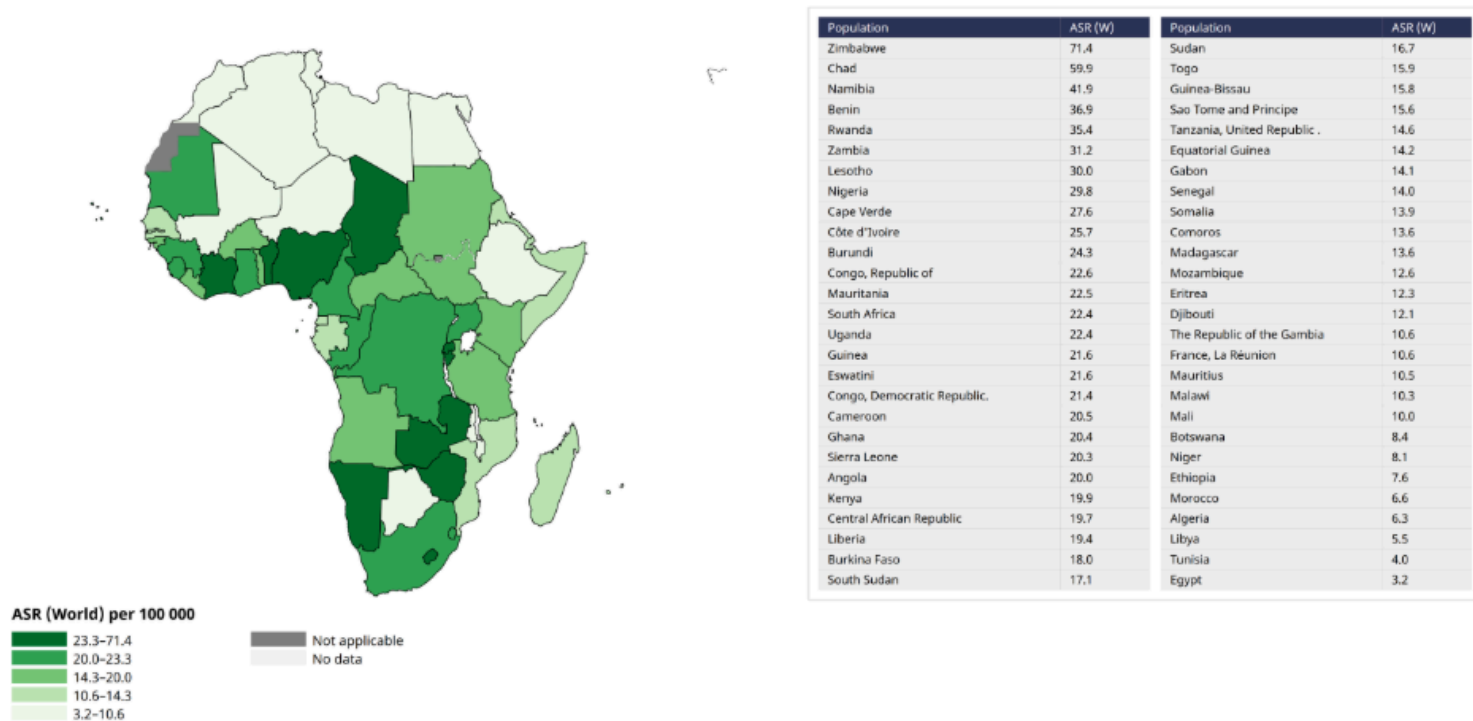


Figure 2

Age-Standardized Mortality Rate of prostate cancer per 100,000 across African populations in 2024. Data source: GLOBOCAN 2024, International Agency for Research on Cancer (WHO).

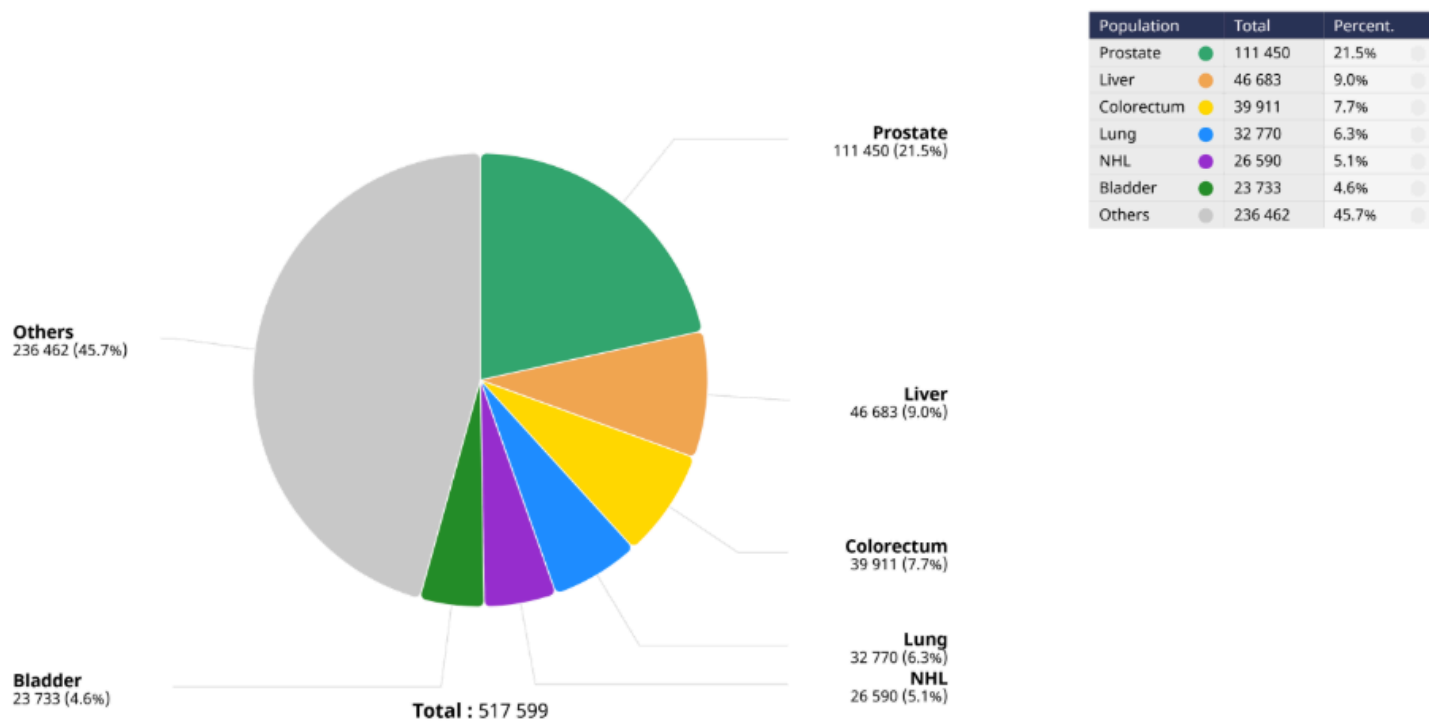


Figure 3

Distribution of cancer incidence in absolute numbers and percentage among men in Africa, 2024, by cancer type. Data source: GLOBOCAN 2024, International Agency for Research on Cancer (WHO); NHL- Non-Hodgkins Lymphoma.

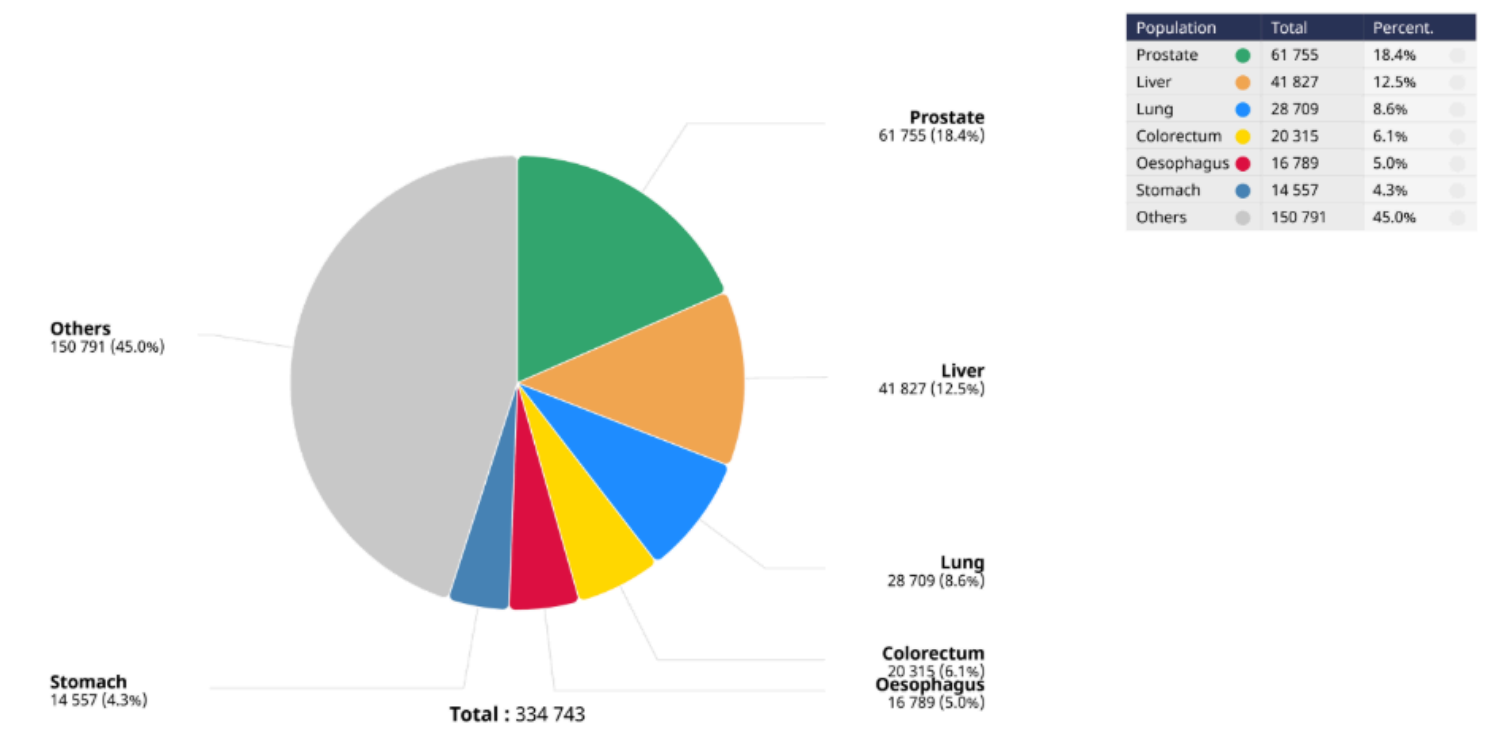


Figure 4

Distribution of cancer mortality in absolute numbers and percentage among men in Africa, 2024, by cancer type. Data source: GLOBOCAN 2024, International Agency for Research on Cancer (WHO).

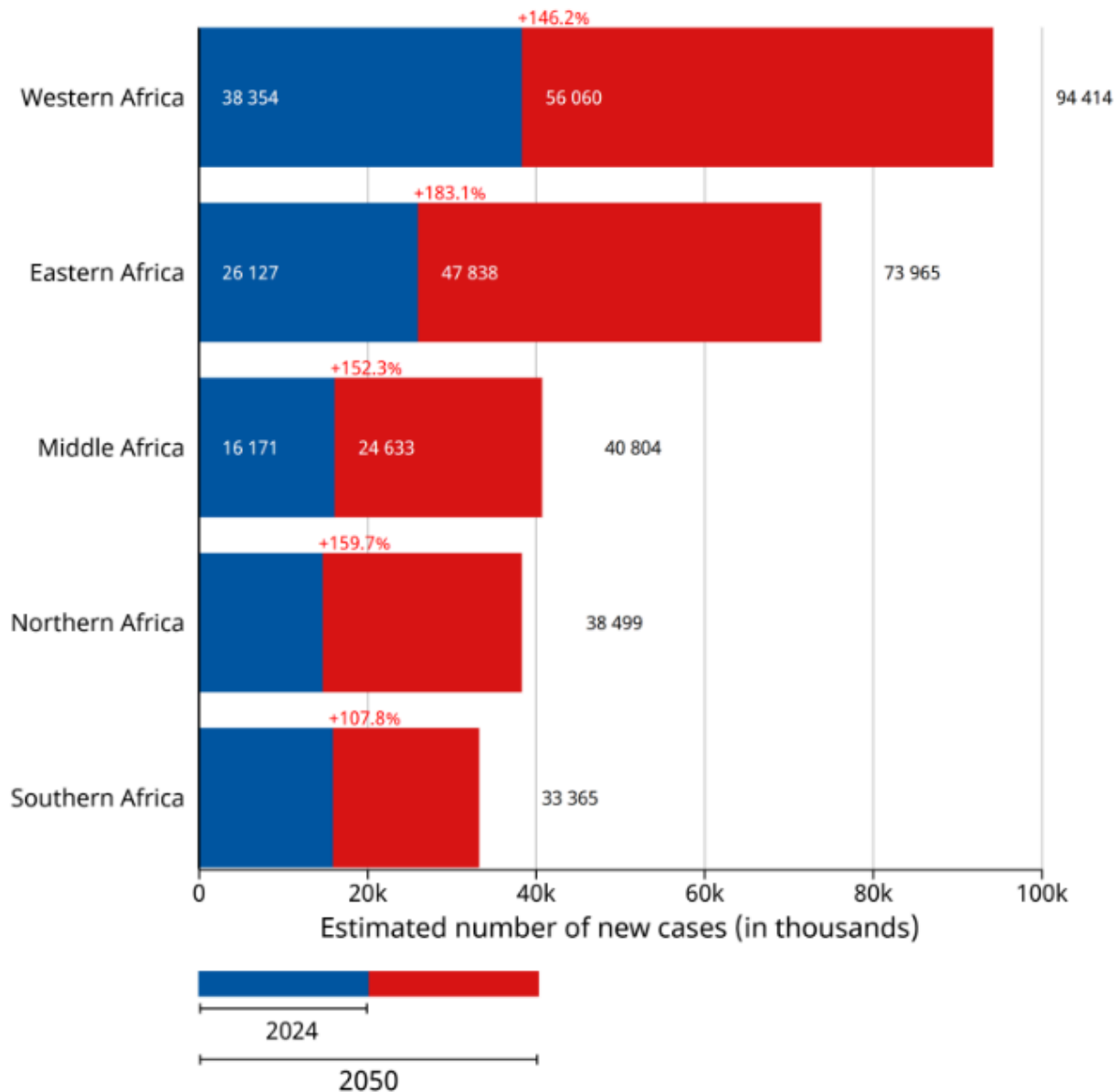


Figure 5

Projected increase in annual prostate cancer incidence across African subregions (2024 vs. 2050). Stacked horizontal bar chart demonstrating the baseline 2024 case counts (blue) and additional projected cases by 2050 (red) for both sexes (ages 0–85+). Percentages above each bar indicate the relative change per UN Region. Data source: Global Cancer Observatory (IARC/WHO).

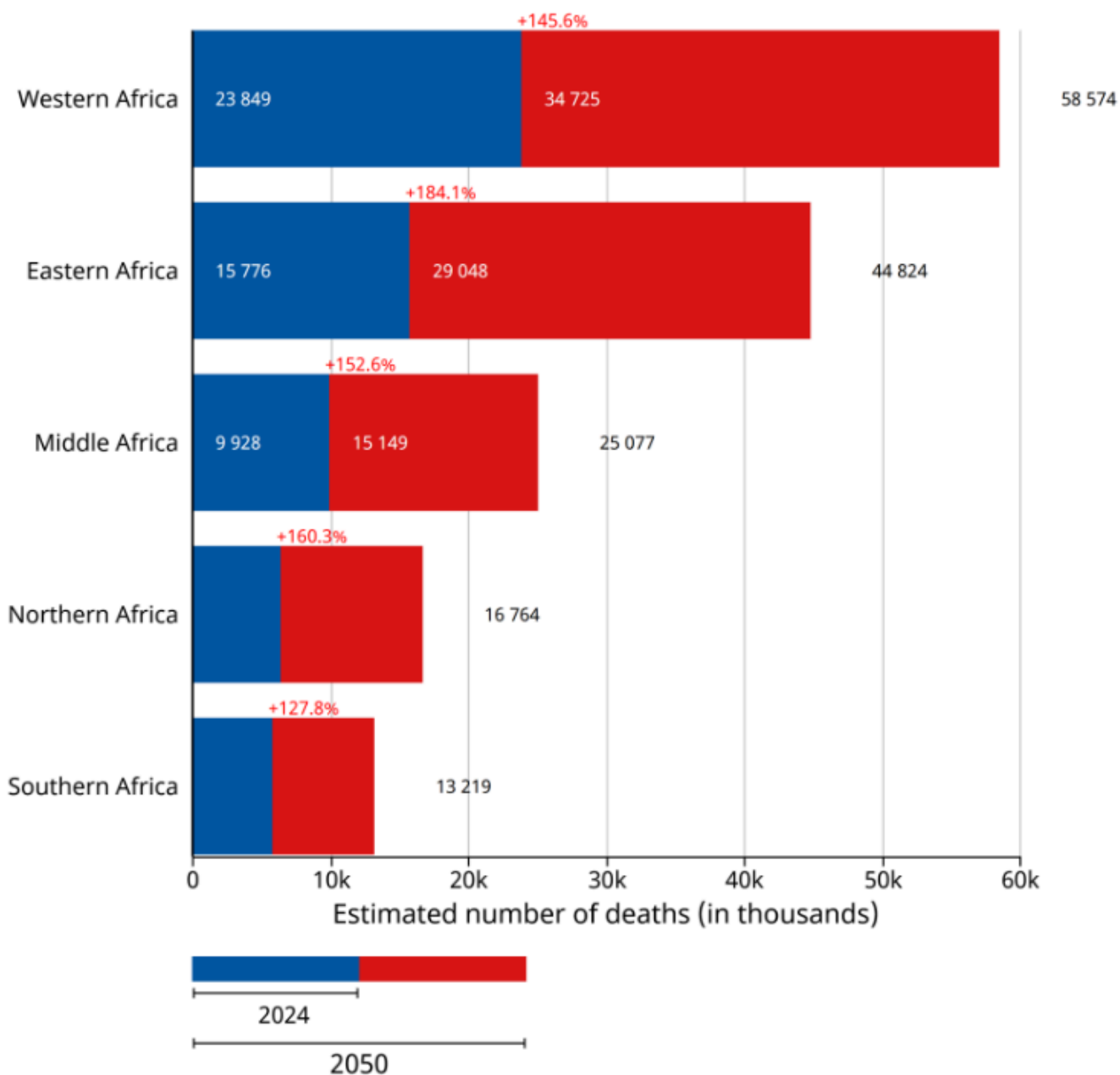


Figure 6

Projected increase in annual prostate cancer mortality across African subregions (2024 vs. 2050). Stacked horizontal bar chart demonstrating the baseline 2024 case counts (blue) and additional projected cases by 2050 (red) for both sexes (ages 0–85+). Percentages above each bar indicate the relative change per UN Region. Data source: Global Cancer Observatory (IARC/WHO).

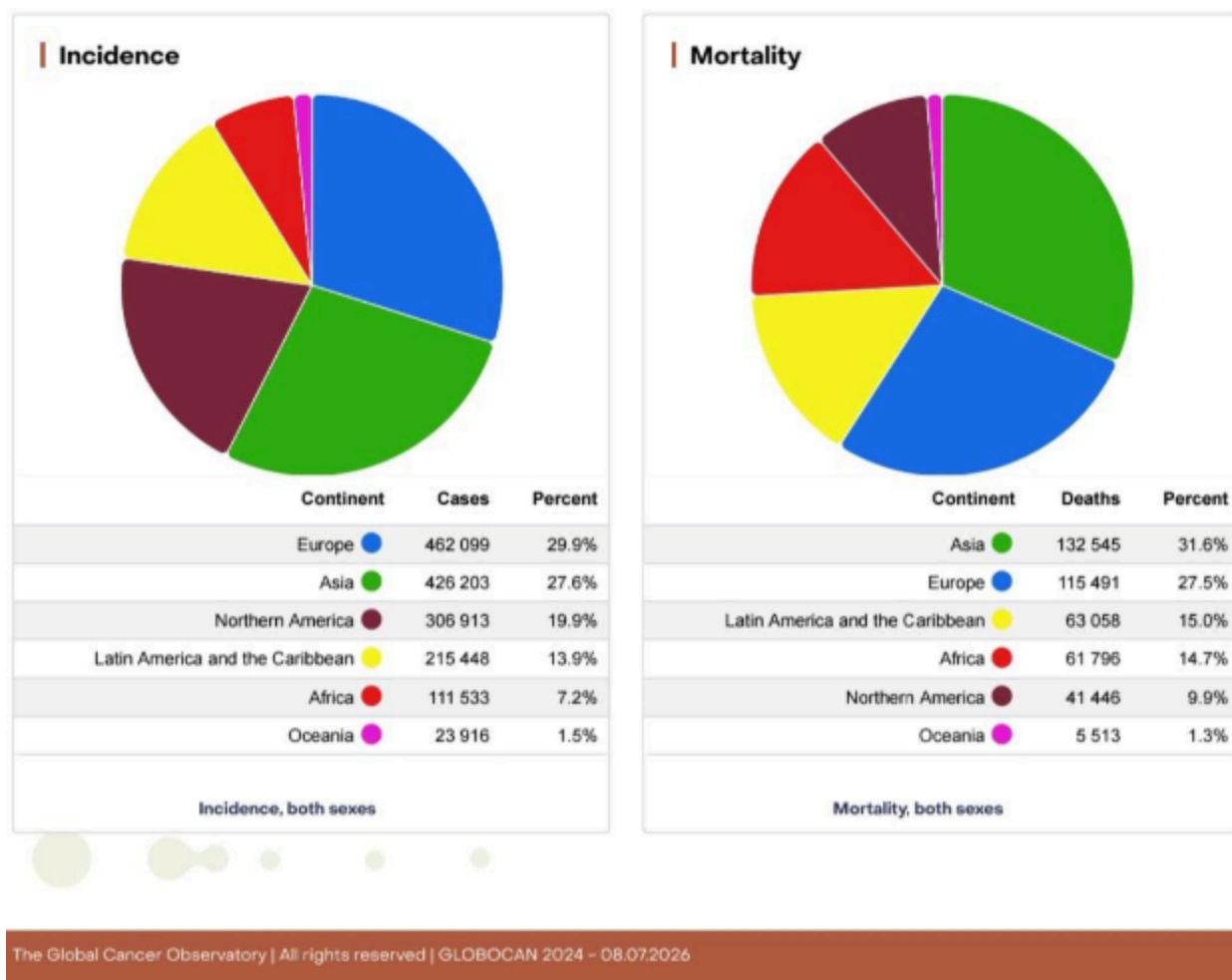


Figure 7

Global distribution of prostate cancer incidence and mortality by continent among men in 2024. Data source GLOBOCAN 2024, International Agency for Research on Cancer (WHO).