

# Diagnose better. Treat smarter. Support men for life.

## A Global Action Plan to deliver a new era of prostate cancer care.

The Prostate Cancer Council is organised and wholly funded by AstraZeneca. The Prostate Cancer Council retained editorial control over the content, findings and recommendations presented. MHP Group provided editorial support funded by AstraZeneca.

Job bag: Z4-91038

Date of preparation: November 2026

# Contents

**Foreword by the Prostate Cancer Council** 3

**Our call-to-action** 5

**Introduction** 6

**Diagnose better and sooner** 8

- The opportunity 8
- The reality 10
- The way forward 12

**Treat smarter** 13

- The opportunity 13
- The reality 15
- The way forward 17

**Support men for life** 18

- The opportunity 18
- The reality 20
- The way forward 22

**Conclusion** 23

**Key terms used in this action plan** 24

**References** 25

# Foreword by the Prostate Cancer Council

## We are entering a new era of prostate cancer care.

The science is changing what is possible. Now we must change what is delivered.

For too long, prostate cancer has been accepted as a disease that too many men inevitably die from, suffer through or experience lifelong consequences from. That should no longer be the expectation.

Today, better tests can identify cancers earlier and more precisely. Treatments can be matched to the biology of each man's cancer. New approaches may help men live longer and better. We can increasingly distinguish cancers that threaten life from those that may cause less harm, helping men receive care that is right for them.

Yet, too many men may still be receiving yesterday's care even though better options already exist. Too many are diagnosed too late. Too many men still lack access to the tests, expertise and information needed to make the right decisions for their care. And too many are left to cope alone, without the support needed to live well beyond diagnosis and treatment.

But a new era of care will not arrive on its own. It must be built by health systems willing to modernise care, and by policymakers willing to prioritise and fund it. We already have the science, the knowledge and the evidence. What is needed now is action to ensure every man can benefit from them.

## This is the gap we must close by:

| Diagnosing better and sooner | Treating smarter | Supporting men for life |
|---|---|---|

**We need policymakers, and those with the power to act, to deliver a new era of prostate cancer care for every man, wherever he lives.**



## About the Prostate Cancer Council

The Prostate Cancer Council is a multi-disciplinary group of leading experts and advocates united by a shared ambition to drive meaningful change in prostate cancer. Bringing together diverse perspectives from across the prostate cancer community, the Council works to identify unmet needs, address gaps in care and build the case for greater prioritisation of prostate cancer worldwide. The Prostate Cancer Council is organised and wholly funded by AstraZeneca. The Prostate Cancer Council retained editorial control over the content, findings and recommendations presented. MHP Group provided editorial support funded by AstraZeneca.

We would like to thank the members of the Prostate Cancer Council for their expertise, commitment and contributions to the development of the Global Prostate Cancer Action Plan:

**Peter Baker,** Global Action on Men's Health (GAMH)

**Erik Briers,** Europa Uomo, The European Prostate Cancer Coalition

**Wanqing Chen,** National Office for Cancer Prevention and Control, China

**Adam Cole,** PathNet, United States

**Andrea Feigl,** Health Finance Institute, United States

**David James,** Prostate Cancer Research, United Kingdom

**Laurence Klotz,** Sunnybrook Research Institute, Canada

**Phillip J Koo,** Prostate Cancer Foundation, United States

**Michael Morris,** Memorial Sloan Kettering Cancer Center, United States

**Jeremy Patch,** ZERO Prostate Cancer, United States

**Richard Price,** European Cancer Organisation

**Andre Sasse,** Brazilian Society of Clinical Oncology, Brazil

**Christian Schwentner,** Diakonieklinikum Stuttgart, Germany

**Tim Shand,** Global Action on Men's Health (GAMH)

**Corinne Tillier,** European Association of Urology Nurses

**Hein Van Poppel,** European Association of Urology

**Nianzeng Xing,** Cancer Hospital of Chinese Academy of Medical Sciences, China

Affiliations are provided for identification purposes only and do not imply endorsement of the Global Prostate Cancer Action Plan by the individuals' affiliated organisations.

**The Global Prostate Cancer Action Plan is endorsed by:**

# Our call-to-action

## Better prostate cancer outcomes are achievable. The evidence is clear, but progress requires urgent and coordinated action.

We call for global and national action to transform prostate cancer care. At the global level, we call on the World Health Organization, Member States and other global stakeholders to drive coordinated international action. For example, including through the establishment of a Global Prostate Cancer Initiative to set shared targets, standards and frameworks that can accelerate progress across countries. At the national level, we call on governments to act now to put in place the policies, systems and investment needed to implement the actions set out in this roadmap to improve outcomes for patients, strengthen health systems and support healthier societies and economies.

The Global Prostate Cancer Initiative could provide a common framework for coordinated international action, with measurable targets and standards to support countries in improving prevention, diagnosis, treatment and support. The Initiative should sit alongside WHO's existing initiatives on cervical, breast and childhood cancer,[1–3] build on the Assembly's 2017 resolution on cancer prevention and control,[4] and help countries deliver the cancer commitments in the 2025 United Nations political declaration on noncommunicable diseases.[5]

### WHO's existing cancer initiatives[1–3]

| Cervical Cancer | Breast Cancer | Childhood Cancer | Prostate Cancer |
|---|---|---|---|
| Reduce incidence below **4 cases per 100,000** women globally. | Reduce global breast cancer mortality by **2.5%** per year, saving **2.5 million** lives over 20 years. | Reach at least a **60% global survival rate** for children with cancer by 2030. | |

# Introduction



## Prostate cancer kills a man† somewhere in the world every 75 seconds.[6‡]

- Every loss leaves an empty chair at a dinner table, a voice that can no longer be heard and loved ones forced to carry on without him.

- **And the death toll is rising.** According to WHO projections and a 2024 analysis by the Lancet Commission on prostate cancer, the number of new cases of prostate cancer each year is projected to rise from 1.4 million in 2020 to around 2.9 million by 2040. Annual deaths are projected to rise by 85%, from about 375,000 in 2020 to around 700,000. That would mean a man dying from prostate cancer every 45 seconds worldwide.[7§] The Commission found that most of the rise in cases will occur in low- and middle-income countries, where mortality is already rising, the disease is most often found late and access to diagnostic and treatment services remains most limited.[7]

- **The cost of inaction is rising with it.** The global macroeconomic cost of prostate cancer is substantial.[8**] A 2026 systematic review of 95 studies found direct medical costs for non-metastatic prostate cancer ranged from around US$1,200 to US$280,000 per patient per year, rising sharply with disease stage and treatment intensity, and found prostate cancer to have one of the highest total national healthcare costs among cancers. Indirect costs, such as lost productivity, accounted for a significant proportion of total prostate cancer costs in some national analyses.[9]

- **As the number of men affected grows, so does the impact on families.** According to a multinational survey of men with metastatic castration-resistant prostate cancer and their caregivers, published in 2025, caregivers take on significant unpaid work, averaging around 11 hours a week.[10] Women carry most of this. A 2026 systematic review of global inequities in unpaid cancer caregiving found that women made up the majority of caregivers in every study that reported carer gender, an average of 78% in high sociodemographic index countries, while spouses were the most commonly reported carers.[11]

- **Too many men are left to manage the lasting consequences of prostate cancer without the support they need.** Evidence from Europe, North America and Australia shows significant unmet needs following treatment. The Europa Uomo Patient Reported Outcome Study, a survey of nearly 3,000 men in 24 European countries, found that treatment mainly affects men in many different ways,[12] while studies in Australia and the US have found men living with unmet supportive care needs, in Australia up to 15 years after diagnosis.[13,14] Even among high-income countries with comparable resources, Movember's TrueNTH Global Registry found that a third of the variation between providers in men's sexual function one year after surgery was explained by country alone.[15]

**$624bn**

Global economic cost of prostate cancer, 2020–2050[8]

**30%**

Indirect costs accounted for as much as 30%[9]

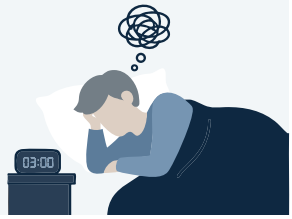
**What men live with after treatment:**[12]



Sexual dysfunction



Fatigue




Poor sleep

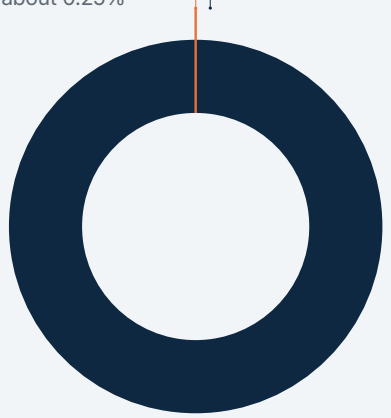
† Most people affected by prostate cancer are men, and this report refers to men throughout. Prostate cancer can affect anyone with a prostate, and these recommendations apply equally to trans women, non-binary people and intersex people assigned male at birth. ‡ This statement is a calculation based on the number of seconds in a year divided by the number of deaths in 2024. § This statement is a calculation based on the number of seconds in a year divided by the number of deaths expected in 2040. 700,000 men are projected to die each year. **Calculated in international dollars (INT $)

- **Science has already changed what is possible.** A 2026 global review of prostate cancer survival found that age-standardised five-year survival reached 98.5% in the United States in 2007–2010. Survival is far lower across many low- and middle-income countries. However, some large survival gains have been made in places building up from a low base, such as Qidong in China and Harare in Zimbabwe, not only in the wealthiest health systems.[16]

- **The tools to transform prostate cancer care already exist.** Biomarker tests can now provide information about the biology of each man's cancer, sparing some men an unnecessary biopsy,[17] and, crucially, identifying those whose cancer may never become life-threatening.[18,19] Many of these men can avoid or defer radical treatment, and the incontinence and sexual dysfunction that may follow it, especially with adequately resourced active surveillance.[20,21] Biomarker tests can also match others to highly targeted treatments that may extend life even after the cancer has spread.[22–25] But, according to a 2025 international survey of physicians in the US, Europe, Japan and China, testing remains highly variable, even in high-income countries.[26]

- **But prostate cancer is still overlooked.** Prostate cancer is mentioned in the national cancer plans of most, but not all, EU countries, and does not always receive the same prominence as comparable cancers.[27] Few countries have national men's health policies that could raise its profile, according to a 2025 report by Global Action on Men's Health.[28] While we welcome European Union investment in the PRAISE-U prostate cancer screening pilot, investment could be greater.[29††] This level of investment is far less than the disease's growing toll demands. And of the five most common cancers worldwide, prostate cancer is the only one without a dedicated World Health Organization information page.[28]

**EU Beating Cancer Plan budget spending**[29]




- **That is starting to change.** Nine countries now have national men's health policies.[30] The UK Government became the first in the G7 to publish one when it launched England's Men's Health Strategy in November 2025,[30,31] and Canada will soon join them.[32] The WHO has published a men's health strategy for its European region,[33] and a small but growing number of US states have established men's health programmes.[34] Prostate cancer is the most common cancer in men in over half the world's countries,[6] and no men's health strategy can succeed without acting on it.

- **We must now harness this momentum.** The rise in cases is unavoidable, but the rise in deaths is not,[7] and nor is the poor quality of life many men experience. This is true everywhere, but the gap between what is possible and what is delivered is widest in low- and middle-income countries. This action plan sets out the measures and commitments decision-makers can make to improve prostate cancer outcomes by:

**Diagnosing better and sooner**

**Treating smarter**

**Supporting men for life**

†† The €12.3 million budget allocated to the PRAISE-U prostate cancer screening initiative is equivalent to approximately 0.3% of the €4 billion earmarked for actions under Europe's Beating Cancer Plan.

# Diagnose better and sooner

## The opportunity

- **Stage at diagnosis is one of the strongest predictors of survival.** Caught while the tumour is still confined to the prostate, five-year relative survival is generally high, approaching 100% in countries such as the United States and South Korea. Once it has spread to distant parts of the body, that figure collapses and unlike survival for regional disease, it has barely improved over time.[16]

**Changing survival rates by disease stage**[16]

80–90%
Caught early

~30%
Once spread

**Treating stage 4 prostate cancer costs nearly**

**10x**

per patient in the UK[35]




- **Late-stage disease also costs far more to treat.** A 2024 analysis conducted by Deloitte for Prostate Cancer Research found that treating stage 4 prostate cancer can be considerably more expensive than treating stage 1.[35] Similarly, in the United States, a 2022 study of Medicare patients found that first-year costs of care for stage 4 prostate cancer were almost eight times those for stage 1.[36]

- **Some men are at far higher risk of prostate cancer than others.** Age is among the strongest risk factors, with risk rising sharply from about 50,[37] although a 2025 analysis of 44 countries found incidence in men under 50 rose in many of them between 2000 and 2017, partly reflecting increased detection.[38] Black men face a significantly higher risk, tend to develop the disease younger, and are more likely to die from it. According to a 2015 study using 2008–2010 data, in England, around 1 in 4 Black men will be diagnosed in their lifetime, against about 1 in 8 White men.[39] Risk also runs in families. A strong family history, a first-degree relative diagnosed under 60, or more than one affected close relative, is associated with substantially elevated risk.[37] A family history of breast or ovarian cancer can point to an inherited *BRCA1* or *BRCA2* fault; studies from 2013 and 2020 found that *BRCA2* faults in particular raise risk and predict more aggressive disease, with weaker evidence for *BRCA1*.[40,41]



- **Testing is cheap, simple and saves lives.** A prostate-specific antigen (PSA) test is a simple blood test that measures a protein produced by the prostate gland. It needs no specialist equipment beyond a standard blood draw and can be delivered through existing primary care.[42] Its main purpose is to catch prostate cancer early, with an elevated PSA level triggering further investigation. The largest screening trial, the European Randomised Study of Screening for Prostate Cancer, found that PSA testing reduced prostate cancer deaths significantly.[43] Modelling of a targeted programme in the UK found it could be delivered for a small fraction of one percent of the annual NHS budget and comparable in cost to existing breast and bowel cancer screening.[44]

**The cost effectiveness of PSA Testing**

PSA testing reduced prostate cancer deaths by

**13%**

over 23 years of follow-up[43]

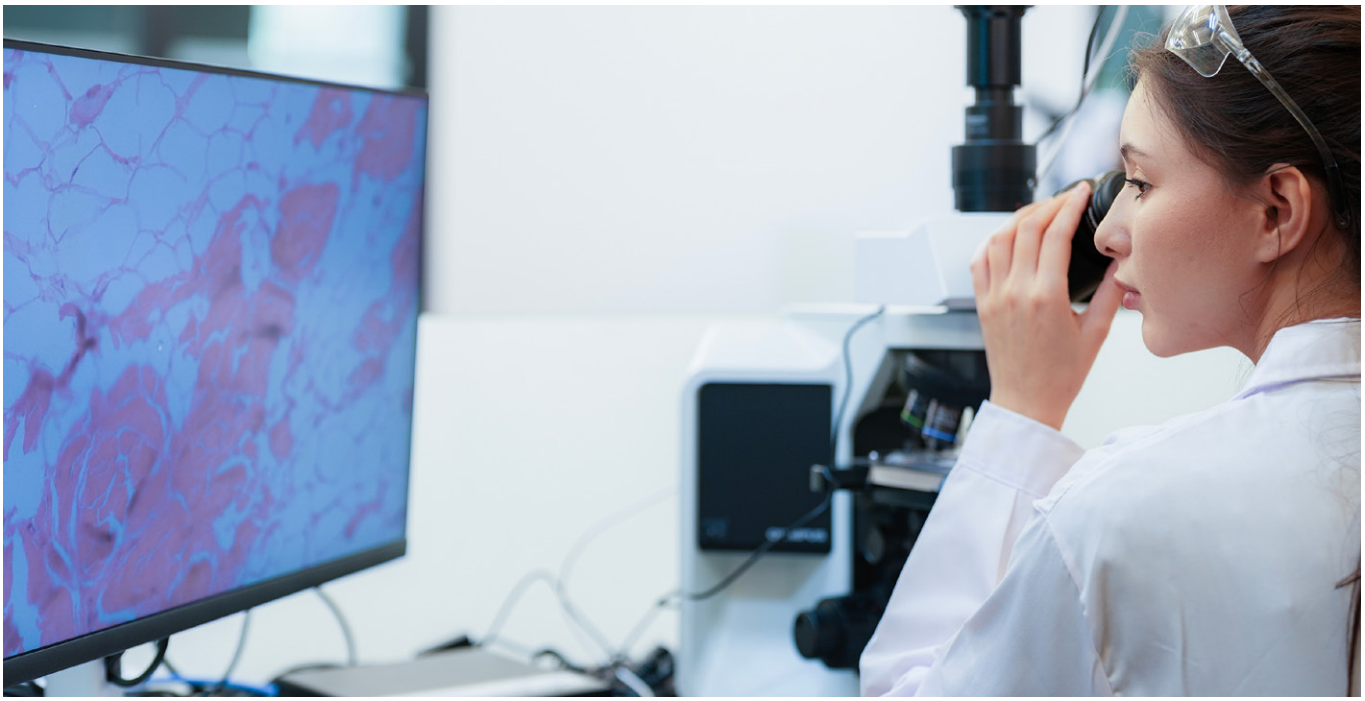
Delivered for around

**£18**

per eligible man[44]



- **Biomarker tests in a subset of men with a raised PSA may help identify who is most likely to benefit from further investigation.** Only around 30% of men with an elevated PSA result actually have cancer on biopsy, and many of the cancers it does catch are small, slow-growing tumours that may never threaten a man's life.[45] PSA's limited specificity means many men may undergo unnecessary imaging and biopsy. A 2024 analysis within GÖTEBORG-2, a large Swedish trial, found that adding the 4Kscore blood test would have avoided an MRI for 41% of men with a raised PSA.[46] By enabling more precise diagnosis, biomarkers also create the foundation for innovative precision medicines, ensuring patients are more likely to receive treatments matched to the biology of their disease.



- **New diagnostic technology is adding capacity while improving accuracy.** Digital pathology lets specialists scan, share and review slides from anywhere. A 2024 review found that their expertise reaches further, and quality checks improve.[47] A 2020 Swedish study found that artificial intelligence can now grade prostate biopsies with high levels of accuracy.[48] AI is also speeding up MRI itself. A 2024 systematic review found it can cut scan times without reducing image quality, although evidence on other benefits is still inconsistent.[49]

# The reality

- **How to prevent prostate cancer is still poorly understood.**[50] Observational studies associate a higher intake of red and processed meat, animal fat and dairy with increased risk, and fish, vegetables, soy and green tea with possibly lower risk, while evidence for vitamin D is inconsistent. However, conclusive evidence for any of these links is limited.[51] Research into a link between Human Papillomavirus (HPV) and prostate cancer is also ongoing. Males have a high prevalence of HPV infection, which could be prevented through vaccination. A 2025 report suggests addressing this risk could reduce their risk of prostate cancer as well as the risk of penile, anal and head and neck cancers.[28]

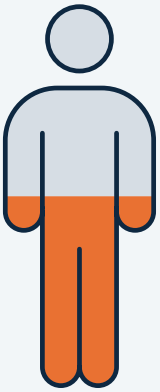
- **Too many men are still diagnosed too late.** In the United States, around 9% of men are diagnosed after their prostate cancer has already spread to distant sites, according to CDC's US Cancer Statistics for 2019-2023.[52] Many lower- and middle-income countries have limited capacity to detect and diagnose prostate cancer, with shortages of pathology services,[53] diagnostic imaging[54] and urologists.[7] More than half of men in these countries already have advanced disease when they are diagnosed, and deaths from prostate cancer are rising there while falling in high-income countries.[7] Socioeconomic disadvantage, particularly among men with lower income and educational attainment, is also associated with poorer access to healthcare, later presentation, and more advanced stage at diagnosis for prostate cancer.[55] Men of African ancestry also have roughly double the incidence of men of European ancestry, yet they are badly under-represented in the research that sets screening thresholds and treatment pathways.[7]

**Late diagnosis**

More than

**50%**

of men in LMICs already have advanced disease when their prostate cancer is diagnosed[7]

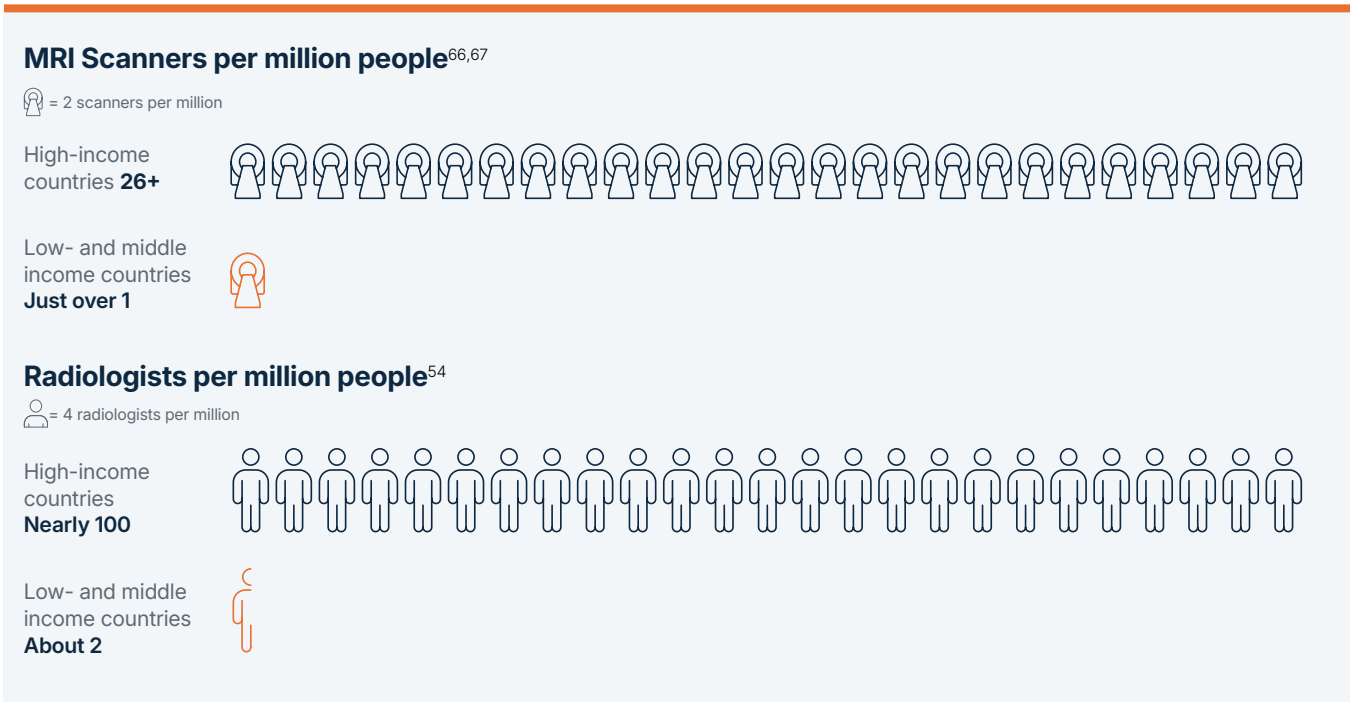


- **Some countries have started to act.** PSA testing saves lives, but it also overdiagnoses many men with low-risk cancers that would never have caused harm. In the ERSPC trial, prostate cancer incidence in the screened group was 30% higher than in the unscreened group, and the trial's own investigators estimate that around half of this excess reflects overdiagnosis.[43] The EU-funded PRAISE-U project is piloting a risk-stratified pathway at five sites in Ireland, Poland, Lithuania and Spain. Men aged 50 to 69 are invited for a PSA test, and those with a PSA above 3 ng/ml are assessed with a risk calculator and MRI to decide who is referred for biopsy.[56] The UK National Screening Committee has recommended screening limited to men aged 45 to 61 who carry a *BRCA2* gene variant and have a family history of prostate, breast, pancreatic or ovarian cancer, a small, high-risk group, and England plans to start in 2027.[57]



- **Biomarker tests could further improve risk stratification, if men could access them.** When PSA alone decides who gets an MRI, 61% of MRIs came back negative in a 2021 Swedish screening trial.[58] Clinical guidelines include biomarkers and risk calculators as options to help decide which men need further investigation,[59,60] but coverage has not caught up. In the US, a 2023 study of insurance policies in force in January 2022 found that 80% of Medicare plans covered at least one biomarker test, compared with just 17% of commercial plans.[61]

- **Diagnostic capacity falls far short of what is needed to detect prostate cancer accurately and equitably.** Cheaper alternatives could ease this bottleneck. In a 2025 international trial, micro-ultrasound-guided biopsy detected prostate cancer as well as MRI-guided biopsy,[62] and biparametric MRI, which skips the contrast sequence, is also being tested as a cheaper option. The gap widens further in low-income countries, which have roughly two radiologists per million people against nearly a hundred in high-income countries, according to a 2021 analysis.[54] Pathology and laboratory services in these countries often also lack the staff, training and quality systems needed to run biomarker tests reliably,[53] mirroring similar problems in wealthier countries, including the UK and US.[63,64] Digital pathology and AI could ease the strain, but adoption is slow: in a 2023 survey of 127 laboratories in Europe and Asia, only 29 used digital pathology for diagnosis.[65]




- **Early diagnosis depends on men knowing their risk and coming forward for care.** Early prostate cancer is frequently asymptomatic, so diagnosis depends on informed access. Yet most men know little about prostate cancer or their risk. A 2024 survey of 4,431 men aged 40 and over across 14 Middle Eastern countries found only 31% could identify prostate cancer as the most common cancer in men, and just 19% knew what a PSA test is for.[68] Opportunistic screening, where men self-refer, also reaches populations unevenly.[69] Many men at risk are never screened and present late, when curative treatment may no longer be possible: in northern Tanzania, fewer than one in ten men aged 40 and over had ever been screened.[70,71] A 2025 systematic review found men can also delay seeking help when symptoms emerge, with ideas about masculinity contributing.[72]

# The way forward

**Accelerate adoption of biomarker-led precision diagnostics and risk-adapted pathways to identify aggressive disease earlier, guide personalised treatment decisions and reduce metastatic presentation.**

### Supporting actions:

Globally, efforts should accelerate access to biomarker testing and embed it within risk-based diagnostic pathways, with clear targets for availability, reimbursement and implementation. They should identify the men most likely to benefit from earlier and more precise assessment, while supporting awareness of prostate cancer risk and the importance of seeking medical advice based on risk. Particularly among underserved groups, international guidance should be aligned to reduce variation between countries, with approaches adapted for different health systems. Research into the causes and prevention of prostate cancer, including potential links with HPV, should also continue.

### Within countries, governments and health systems should:



- **Accelerate access to biomarker testing as a foundation for more precise diagnosis.** Ensure biomarker tests recommended by clinical guidelines are reimbursed and integrated into routine care, so evidence-based recommendations become standard practice. Invest alongside this in the imaging, pathology and workforce capacity needed to interpret results and act on them, using digital and AI-supported radiology and pathology where appropriate to extend specialist expertise.



- **Develop risk-adapted diagnostic pathways that combine biomarkers, PSA testing and imaging.** Establish organised approaches supported by routine data collection and monitoring, prioritising men at highest risk while ensuring services are accessible through primary care and community settings to reach rural, underserved and disadvantaged populations.



- **Invest in awareness, education and engagement to ensure men enter the diagnostic pathway.** Improve understanding of prostate cancer risk, symptoms and the value of seeking medical advice, particularly among high-risk groups. Address stigma and embarrassment that can delay presentation, while equipping primary care professionals to initiate conversations and guide men through testing decisions.



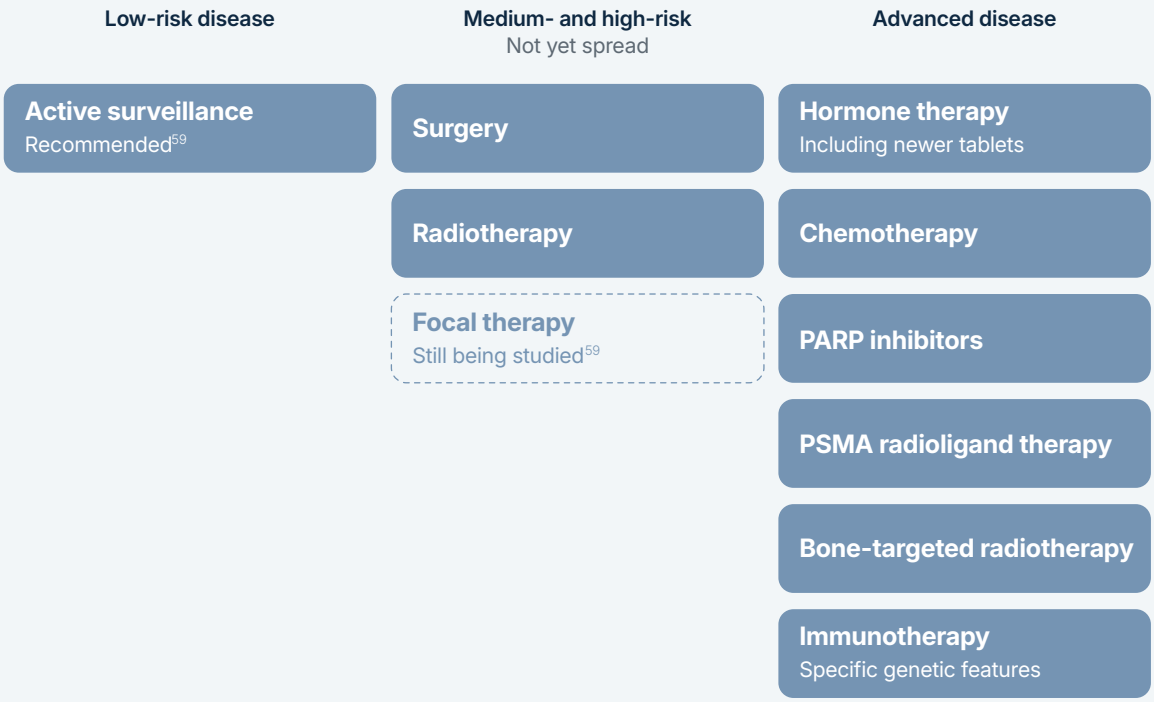
- **In lower- and middle-income settings, build the foundations for earlier diagnosis.** Establish risk-adapted pathways for the highest-risk groups where none exist, while strengthening the underlying diagnostic infrastructure, including imaging, pathology and trained staff needed to investigate and diagnose men identified through these approaches before expanding further.

# Treat smarter

## The opportunity

- **More prostate cancer treatments are available than ever.** Different treatment approaches are available depending on the stage and risk of prostate cancer. Men with low-risk disease may be managed through monitoring, while those with medium- or high-risk disease confined to the prostate may be offered treatments intended to cure the cancer. For advanced disease, a broad range of treatment options is available, reflecting major progress in prostate cancer care over recent years.[73]

**Treatment options by stage of disease**[73]




- **Men are living longer as a result.** Real-world data from Germany's national cancer registry show median survival for men diagnosed with metastatic disease rose by 19.4% between 1999 and 2019, from 31 to 37 months, as newer therapies reached routine practice.[74] Matching treatment to a man's actual risk is what gives more men the chance to avoid harms they did not need to face. The UK's ProtecT trial found each treatment pathway carries a distinct long-term impact on sexual, urinary and bowel function.[20]

- **Biomarker testing can help men personalise their treatment according to disease characteristics.** Germline testing looks for inherited changes, including in homologous recombination repair (HRR) genes such as *BRCA1* and *BRCA2*, while somatic testing looks for changes in the tumour itself, including HRR gene mutations.[75] Tumour testing can also identify MSI-H and other clinically relevant biomarkers.[76] Men who carry these changes respond differently to treatment, which is why testing for them makes such a difference to outcomes. Men with metastatic castration-resistant disease and HRR gene alterations, particularly in *BRCA1* or *BRCA2*, may benefit from targeted therapy.[24] Meanwhile, MSI-H tumours can respond dramatically to immunotherapy, even after other treatments have failed.[76,77]

- **As treatment options multiply, multidisciplinary team (MDT)-driven care is essential to delivering high-quality prostate cancer care.** This matters because specialists often disagree: in one US study, urologists and radiation oncologists agreed on treatment for only 31% of the men they both saw.[78]

**Specialists that make up a prostate cancer MDT**[79*]



urologists pathologists specialist nurses radiologists oncologists

**Median survival of men with advanced metastatic castration-resistant disease**

The difference in survival between MDT/non-MDT was more than

**12 months**[80]

*Other specialists may be involved in a prostate cancer MDT. This is not an exhaustive list.

- **Different treatments involve different trade-offs, making shared decision-making essential to understanding what matters most to each man and helping him choose the treatment that best reflects his preferences.** Some treatments extend life at the cost of side effects, while others prioritise quality of life. It is linked to better outcomes too. In a 2023 US study of 101 men with metastatic prostate cancer, those whose doctor made the treatment decision had worse physical function four months later than those who shared the decision.[81] But preferences vary widely. A discrete choice experiment among 300 men with metastatic prostate cancer in Hong Kong found the opposite pattern, with patients placing more weight on avoiding treatment side effects than on extending survival.[82]



# The reality

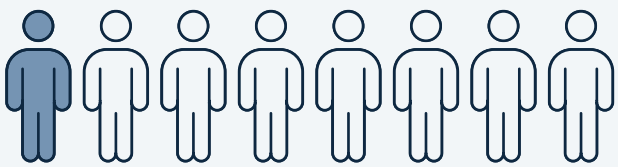


- **Access to biomarker tests is limited.** In a 2022 study at one US cancer centre, only 39% of eligible men were referred for genetic testing.[83] Testing rates for HRR genes in advanced disease vary widely too, from about 3% in Japan to 38% in the United States, according to 2020 survey data.[84] Cost is part of the problem. Worries about cost and the effect on insurance are among men's concerns about genetic testing, a 2025 survey of Hispanic men in the US found.[85] Even where testing happens, results are often poorly recorded; among men with advanced disease who had germline testing, fewer than one in five US veterans with mCRPC had results available in usable form.[86] In many low- and middle-income countries the problem is more basic still. Laboratory capacity and trained specialists for genomic testing are scarce and concentrated in a few urban centres, and cost puts testing out of reach for most patients.[87] The research base reflects the same imbalance, with people of African ancestry making up only about 2 to 3% of participants in genome-wide association studies, according to 2019 figures.[88]
- **Multidisciplinary team review is hard to come by.** In a 2015 international survey of oncologists outside the US, most took part in multidisciplinary team meetings, but where none was held, the most common reason was a shortage of specialist staff.[89] The gap is particularly pronounced in low- and middle-income countries, where cancer care is held back by limited resources and infrastructure and a shortage of specialists.[90] However it arises, whether inconsistent use in well-resourced systems or the absence of any review in under-resourced ones, the men who fall through are less likely to receive the treatments that extend their lives.
- **Decisions are not always shared.** The absence of shared decision making is hard to fix without addressing a more basic problem first. Many men simply do not have enough information to make a real decision. Information ranks among the most important unmet needs for men with prostate cancer.[91] Resourcing is a big part of the problem too, and especially so in low- and lower-middle-income countries, where oncologists see far more patients than their counterparts in high-income countries, leaving far less time per patient for the kind of conversation shared decision-making requires.[92]

### Shared decision making

A US study of men with metastatic prostate cancer found

**1 in 8**



men had little or no say in their treatment[81]

### Oncologist consultant disparity

New consultations a year:[92]

**425**

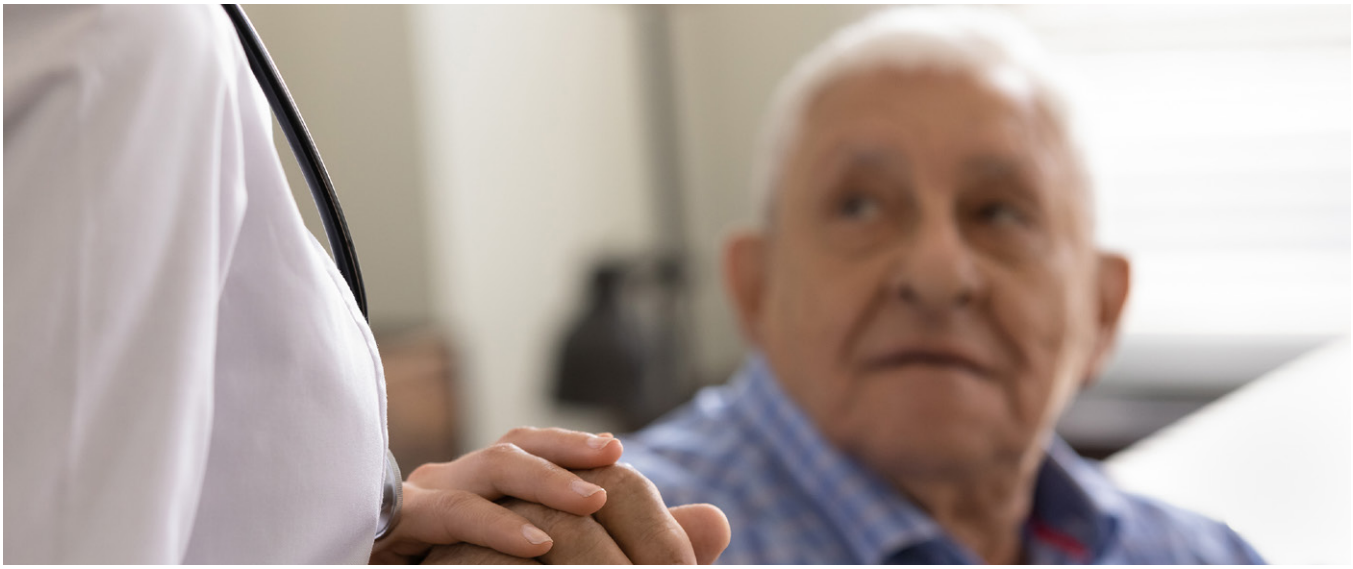


Low- and lower-middle-income countries

**175**



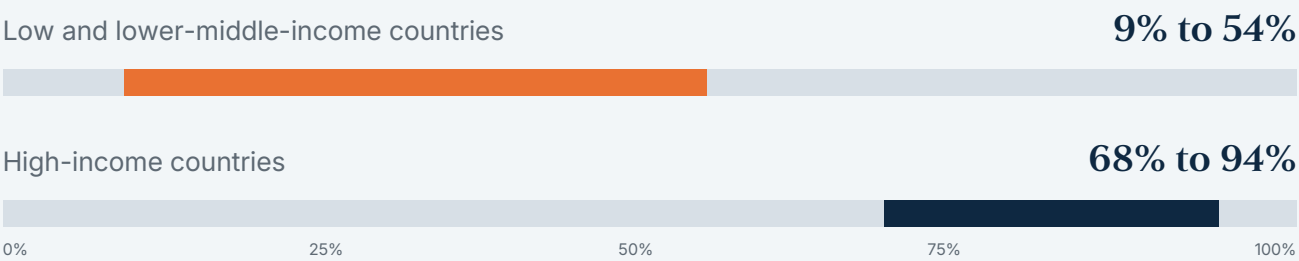
High-income countries



- **Too few men receive guideline-concordant care.** In England, a 2025 analysis found only 39% of men diagnosed with hormone-sensitive metastatic disease between 2018 and 2022 had their treatment intensified in line with guidelines,[93] and a similar variation, tracked in 2020 data, runs across the US, Europe and Japan.[94] The same pattern appears at the other end of the risk spectrum. For men with low-risk disease, the use of active surveillance ranged from 4% to 78% between US urology practices in 2014–2021.[95] In many low- and middle-income countries the gap is more fundamental still. Access to treatment remains highly uneven across countries and healthcare systems. As a result, the treatment recommended by clinical guidelines may not always be available in practice, limiting the choices that patients and their healthcare teams can make.

### Access to medicines

Oncologists reporting universal availability of the 20 most important cancer medicines across 82 countries[96]




- **Even wealthy countries cannot guarantee access.** In a 2023 review of 23 European countries, only three (Greece, Germany and Sweden) had full access to every advanced prostate cancer treatment the review covered.[97] A 2025 analysis found uptake was lower still in central and eastern Europe.[98] The wait is also long. Across Europe, a newly approved medicine takes 578 days on average to reach patients after approval, and the wait is more than seven times longer in the slowest countries than in the fastest, according to a 2024 survey.[99] For men, these delays decide outcomes.

- **Access to novel therapies for metastatic prostate cancer varies widely between countries,[100] and within countries the gaps fall hardest on those already disadvantaged, especially Black men.** In England and Wales, Black men in their 60s who are diagnosed late are 14% less likely than white men of the same age to receive potentially curative NICE-approved treatments on the NHS, according to National Prostate Cancer Audit data.[101]

# The way forward

**Ensure every man receives the right treatment for his disease through multidisciplinary expertise, precision medicine and shared decision-making, delivering high-quality, guideline-concordant care.**

## Supporting actions:

Globally, efforts should establish clear standards for guideline-concordant, personalised prostate cancer care, while also ensuring access to multidisciplinary team-driven care, precision medicine, biomarker testing and shared decision-making. They should define a tiered package of essential care that health systems can progressively adopt as resources allow, from risk-based case-finding, core pathology and essential treatment through to diagnostic imaging, curative surgery and radiotherapy, multidisciplinary review, advanced biomarker testing and precision therapies. International guidance should be aligned to reduce variation between countries, with standards adapted to different health systems and incorporated into national universal health coverage packages to support sustainable funding and implementation.

## Within countries, governments and health systems should:



- **Make germline and somatic biomarker testing a funded, routine part of care for men with advanced disease,** closing the gap between the eligible men currently referred and universal access. Fund and reimburse testing so cost does not decide who is tested, and make sure results are recorded and accessible in usable form, not just performed.



- **Make multidisciplinary team review and shared decision-making a funded, routine part of care.** Offer the clinical time and staffing to deliver both effectively, so that treatment is matched to each man's disease, informed by his biomarker results, and decided together with him.



- **Close the gap between guidelines and practice.** Recognise well-resourced active surveillance as successful care for men with low-risk disease, and fund the regular monitoring and specialist follow-up it depends on. Track how reliably men receive the treatment guidelines recommend, from treatment intensification for metastatic disease to appropriate use of active surveillance, and use audit to reduce unwarranted variation between providers and countries.



- **Reduce unfairness in access to treatment, whatever a man's country, income, insurance, race or health system.** Set measurable targets for reducing disparities in access and treatment times, and monitor them regularly, including the time between a treatment being approved and becoming available to patients.



- **Fund and reimburse the biomarker testing, medicines and specialist time and infrastructure,** including the nuclear-medicine capacity radioligand therapy depends on, that personalised care requires.



- **In lower- and middle-income settings,** secure a reliable, affordable supply of the essential prostate cancer medicines and diagnostics, prioritise the tests and treatments that deliver the greatest benefit for the resources available, and establish at least a basic, networked form of multidisciplinary review where specialist staff are scarce. Build in support, such as trained nurses or decision aids, so men still have a real say in their treatment even where specialist time per patient is limited.

# Support men for life

## The opportunity

- **More can be done to help men live well with prostate cancer.** Men require support beyond treatment to address the psychological, physical and practical challenges associated with prostate cancer. Multidisciplinary team-driven care can provide a gateway to this support, ensuring men are routinely signposted to psychological services, diet and nutrition advice, exercise and rehabilitation, as well as patient advocacy groups and peer-support networks. Many of these resources already exist, but men are not always connected to them. Better coordination and signposting could help men manage the impact of prostate cancer on their health, relationships, work and daily lives. Unmet supportive-care needs include those relating to psychological health, information, sexuality and health-system support.[102]

**Unmet supportive-care need**

A European study found



**81%**

of men with prostate cancer had at least one unmet supportive-care need.[102]

- **Life after prostate cancer treatment needs as much attention as treatment itself.** Structured survivorship care offers an essential opportunity to restore function, reduce distress and help men live well after treatment.[103] Many carry urinary and sexual effects of surgery or radiotherapy for a decade or more. In a 2013 US long-term study, 15 years after diagnosis, erectile dysfunction was nearly universal, reported by 87% of men after surgery and 94% after radiotherapy, and 18% and 9% respectively reported urinary incontinence.[104] Pelvic floor muscle training, started before surgery and continued afterwards, can speed recovery of continence: one randomised trial found 74% of men in an intensive programme were continent by 12 weeks, compared with 43% receiving standard care.[105] Evidence for erectile function is more limited, though a 2019 meta-analysis found pelvic floor training with biofeedback significantly improved erectile function at 12 months.[106]

- **Good follow-up decides whether a recurrence is caught in time.** Every man diagnosed with prostate cancer should be able to discuss with his care team a clear, managed and achievable plan for his survivorship and rehabilitation. This is a right recognised in the European Code of Cancer Practice.[107] Up to 40% of men will experience a recurrence of their prostate cancer.[108] When caught early, a recurrence can often still be treated with salvage radiotherapy given with the aim of cure.[109] In two large trials of salvage radiotherapy in men whose PSA had risen above 0.1–0.2 ng/mL after surgery, 88% were free of biochemical recurrence five years later.[109]

- **Where these programmes exist, they work.** Programmes such as ThriverCare in Scotland and the Prostate Cancer Patient Empowerment Programme in Canada show what is possible.[111] In a pilot trial, ThriverCare reduced unmet supportive care needs in men with metastatic disease.[110] Clinical nurse specialists are often central to delivering this kind of coordinated follow-up. Evidence from cancer more broadly has found that nurse-led mobile health interventions significantly reduced depression in adults with cancer.[112]

**Programme success**

In a randomised trial of 128 men, the Canadian programme cut health costs by about

**$410 per man**



over six months while also reducing distress.[111]

- **Palliative care is misunderstood and overlooked.** It means managing symptoms and protecting quality of life for anyone with a serious illness, including men on ongoing, non-curative treatment for disease that is stable but incurable, which for many men with metastatic prostate cancer can cover a long period of their care, not just its final phase.[113] In a matched cohort of more than 47,000 people with metastatic cancer, receiving specialist palliative care was linked to 41% less chemotherapy use in the final two weeks of life, 14% less ICU use in the final month, and markedly higher hospice enrolment (78% versus 62%), according to a 2024 US study.[114] A 2025 scoping review of 24 studies found early palliative and hospice care associated multiple benefits.[115] These benefits are not confined to the final weeks of life. A 2022 meta-analysis pooling 12 randomised trials and almost 3,000 patients found early palliative care significantly improved quality of life compared with usual care, with benefits seen both within three months and beyond.[116]

- **Prostate cancer happens to families, not just to men.** Female partners of men with prostate cancer report anxiety in around a quarter of cases and depression in roughly one in ten,[117] and many carry substantial unmet needs of their own.[118] The disease also reshapes intimate relationships. Sexual dysfunction and changes in body image can affect intimacy between partners, and urinary incontinence can lead some men to withdraw socially.[119]



**Early palliative care links to**



Better quality of life



Fewer hospital admissions



Fewer aggressive interventions near end of life[115]

# The reality

- **Several countries have national survivorship frameworks, including the US,[120] Canada[121] and England.[122] But most cover cancer in general, not prostate cancer.** Many are not fully put into practice,[123] and prostate cancer survivorship care is often fragmented.[124] The survivorship care plans men do get are often incomplete. In a 2021 review of 119 care plans from two US cancer centres, post-treatment symptoms were recorded in just 71%, and only 1% of men on androgen-deprivation therapy were advised about the bone-density scan that guidelines recommend.[126] In low- and middle-income countries, the gap is often more fundamental and many survivors receive no structured follow-up at all.[127]

**Follow-up care**

In a 2022 US trial of survivors of breast, colorectal and prostate cancer who had all been given a survivorship care plan



**fewer than half**

**43% to 51%**

received all the follow-up care it recommended.[125]

- **The support that does exist often goes unused.** In a German study published in 2020, 63% of men did not use the mental-health support available to them, and among centres the share who used it ranged from 0% to 100%.[128] Stigma and ideas about masculinity can stop men asking for help.[129] But the barrier is not only individual. A scoping review of 13 studies on supportive care implementation for advanced prostate cancer survivors found the main barriers were limited resources, insufficient knowledge of whether supportive care works, and lack of confidence in the available materials.[130] In a 2016 survey of Australian prostate cancer survivors with sexual difficulties, only 30% had sought help in the previous six months.[131]

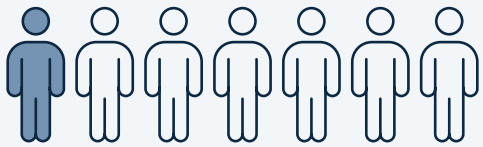
- **Nor is follow-up consistent.** There is no international consensus on the PSA level at which to act after surgery, or on how best to treat a rising PSA, and guidelines differ on which men should be offered early salvage treatment.[132] So, the same recurrence can be handled differently from one set of guidelines to the next.[132] A survey of 170 Spanish specialists, for example, found that treatment of recurrence differed by specialty, and that recommended PSMA PET scans were rarely used.[133]

- **Palliative care is scarcer still.** Only about 14% of people who need palliative care receive it, and most of those in need live in low- and middle-income countries, according to a 2020 WHO fact sheet.[134] The opioid medicines that palliative care depends on are scarce in poorer countries: of the roughly 298 tonnes of morphine-equivalent opioids distributed worldwide each year, only 0.1 tonne reaches low-income countries, according to a 2018 Lancet Commission.[135]

**Unmet need in palliative care**

Roughly

**1 in 7**



of people who need palliative care receive it[134]

- **Support for partners and families is patchy at best.** A 2024 systematic review of 21 studies found that partners of men with prostate cancer carry substantial unmet needs, psychological, practical and around intimacy, that go largely unaddressed despite routine clinical contact, rather than support being offered as standard.[118] In a 2017 qualitative study of men with metastatic prostate cancer in Scotland and their partners, both described unmet physical, psychological and informational support needs.[136] Much of the burden of managing a diagnosis therefore falls on partners with little structured help to carry it.

- **And the nurses who hold this together are too few.** In England, most men with prostate cancer (88%) report being given the name of a clinical nurse specialist, and those who are report better care coordination and experience of care, but provision varies between NHS trusts.[137,138] Workforce pressures further threaten access: in a national survey in Australia, cancer nurses reported high workloads and many intended to leave.[139] Community organisations help fill these gaps, but their reach and funding are uneven, meaning support still depends heavily on where a man lives.

LMICs account for around

**89%**

of the global nursing shortfall[140]





# The way forward

**Drive universal access to survivorship care, ensuring every man receives structured assessment, personalised care planning and ongoing support for his physical, mental, sexual and social wellbeing.**

### Supporting actions:

Globally, survivorship and supportive care should be recognised as a core, benchmarked part of prostate cancer care, with structured follow-up and support addressing physical, mental, sexual and social health. Care should extend beyond the individual man to include partners and families, ensuring the wider impact of prostate cancer is recognised and supported.

### Within countries, governments and health systems should:



- **Integrate structured survivorship and other supportive care pathways into national cancer control plans,** with a clear handover from active treatment to long-term follow-up and support.[123] These plans should cover physical, mental, sexual and social health, and support partners and families alongside the man.



- **Embed patient-reported outcome measures and survivorship indicators in routine follow-up,** so that the effects that matter most to men are tracked and acted on.[123] Include indicators of the social and economic support, financial, return-to-work and caregiving, that good survivorship requires.



- **Value and fund survivorship and other supportive care as part of cancer control,** including specialist prostate cancer nurses, patient and community organisations, and community-based services, which are trusted, effective and chronically underfunded.



- **Formally engage patient advocacy groups, survivor networks and civil society organisations in designing national survivorship pathways and standards.** These groups hold lived experience and community trust that health systems cannot replicate, and their involvement should extend from policy design through to monitoring whether survivorship care is actually reaching men.



- **In lower- and middle-income settings,** guarantee access to essential pain relief and palliative care, including opioids, and use specialist nurses, community and patient organisations to deliver low-cost, high-value survivorship support, from information and peer support to help with the most common effects, where formal services are thin.

# Conclusion



- **Every 75 seconds, prostate cancer is estimated to take another man's life. Many more live for years with what it leaves behind, and their families live with it too.**

On current trends, the world will face around 2.9 million new cases each year by 2040 and around 700,000 deaths annually by 2040.[7] Much of the rise in incidence is unavoidable, driven by ageing populations and demographic change, while prevention options remain limited.[7,50] The rise in deaths is different. It is not inevitable. It reflects choices that governments, health systems and global leaders can make today.

- **This action plan is built on a simple belief: together, we can transform global prostate cancer outcomes.** A man's chances should not be determined by who he is, where he lives or when his cancer is found. Diagnosing better and sooner, treating smarter and offering men lifelong support can change the course of this disease.

| Diagnosing better and sooner | Treating smarter | Supporting men for life |
|---|---|---|

- **The biggest gains available today do not depend on new science.** What is missing is the commitment, investment and accountability needed to make them accessible to every man, in every country. Five-year survival has risen substantially in some countries, including China and Korea, and some large gains have come in places building from a lower starting point.[16,141]

- **That is why we are calling for a change,** with clear global targets for better diagnosis, equitable access to high-quality care and survivorship. This ambition must be matched by national commitments, measurable action and transparent reporting. Other cancers already have clear global goals and accountability frameworks.[1–3] Prostate cancer now needs the same.

**With the choices we make today, we can change what a prostate cancer diagnosis costs a man, and the people who love him.**

# Key terms used in this action plan

**Active surveillance**
Closely monitoring a low-risk cancer with regular tests instead of treating it straight away, so that treatment and its side effects are avoided unless the cancer shows signs of growing.[95]

**Biochemical recurrence (BCR)**
A rise in PSA after treatment that signals the cancer may be returning, usually before any symptoms or scans show it.[132]

**Biomarker**
A biological signal, usually measured in blood or tissue, that gives information about a man's cancer and can help guide diagnosis or the choice of treatment.[17,75]

**Castration-resistant prostate cancer**
Prostate cancer that keeps growing even after hormone therapy has lowered testosterone. It is a more advanced stage of the disease and is harder to treat. In newer terminology, it is called androgen pathway modulator-resistant disease.[142,143]

**Chemo-hormonal therapy**
Hormone therapy given together with chemotherapy, a standard option for some men with advanced disease.[144]

**Digital pathology**
Scanning tissue samples into digital images so they can be shared, reviewed remotely and analysed with computer-assisted tools.[47]

**Genome-wide association study (GWAS)**
A type of research study that scans the genetic code of many people to find gene variants linked to a disease, such as prostate cancer risk.[88]

**Germline and somatic testing**
Two kinds of genetic test. Germline testing looks for inherited gene faults a man is born with, such as in the DNA-repair genes *BRCA1* and *BRCA2*. Somatic testing looks for gene changes found only in the tumour itself.[75]

**Hormone-sensitive prostate cancer**
Prostate cancer that still responds to treatments which lower or block testosterone. Also called castration-sensitive disease, or, in newer terminology, androgen pathway modulator-sensitive disease.[142,143]

**Hormone therapy (androgen-deprivation therapy, ADT)**
Treatment that lowers testosterone, the hormone that fuels most prostate cancers, in order to slow the disease.[144]

**Microsatellite instability (MSI-H)**
A pattern of DNA-repair faults found in a small number of prostate cancers that can make them more likely to respond to immunotherapy.[76]

**Multidisciplinary team (MDT)**
A group of specialists, such as a urologist, oncologist, radiologist and specialist nurse, who review a patient together and agree the best plan of care.[79]

**PARP inhibitors**
Targeted therapies that work against cancers with DNA-repair faults, such as *BRCA* changes, by blocking a repair pathway the cancer cells depend on.[145]

**PSA (prostate-specific antigen) test**
A simple blood test that measures a protein made by the prostate. A raised level can be an early sign of cancer.[59,60]

**Radioligand therapy (RLT)**
A treatment that attaches a small radioactive particle to a molecule which seeks out prostate cancer cells, delivering radiation directly to the cancer wherever it has spread in the body.[23]

**Salvage radiotherapy**
Radiotherapy given after an earlier treatment, usually radical prostatectomy (prostate removal), when there are signs the cancer has returned.[109]

**Shared decision-making**
A conversation in which a man and his care team weigh up the benefits and harms of the options together, so the plan they agree reflects what matters most to him. It matters most where there is no single best treatment.[146]

# References


1. World Health Organization. Global Breast Cancer Initiative [Internet]. Geneva: World Health Organization; 2021 [cited 2026 May]. Available from: https://www.who.int/initiatives/global-breast-cancer-initiative
2. World Health Organization. Global strategy to accelerate the elimination of cervical cancer as a public health problem [Internet]. Geneva: World Health Organization; 2020 [cited 2026 Sep 16]. Available from: https://www.who.int/publications/i/item/9789240014107
3. World Health Organization. CureAll framework: WHO Global Initiative for Childhood Cancer. Increasing access, advancing quality, saving lives [Internet]. Geneva: World Health Organization; 2021 [cited 2026 Sep 16]. Available from: https://www.who.int/publications/i/item/9789240025271
4. World Health Assembly. Cancer prevention and control in the context of an integrated approach. Resolution WHA70.12 [Internet]. Geneva: World Health Organization; 2017 [cited 2026 Sep 16]. Available from: https://www.who.int/publications/i/item/cancer-prevention-and-control-in-the-context-of-an-integrated-approach
5. United Nations General Assembly. Political declaration of the fourth high-level meeting of the General Assembly on the prevention and control of noncommunicable diseases and the promotion of mental health and well-being. Resolution A/RES/80/117 [Internet]. New York: United Nations; 2025 [cited 2026 Sep 16]. Available from: https://digitallibrary.un.org/record/4097012/files/A_RES_80_117-EN.pdf
6. Sung H, Filho AM, Laversanne M, Ferlay J, Siegel RL, Soerjomataram I, et al. Global cancer statistics 2024: GLOBOCAN estimates of incidence and mortality worldwide for 34 cancers in 186 countries. CA Cancer J Clin. 2026;76(4):e70090. doi:10.3322/caac.70090
7. 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. 2024 Apr 27;403(10437):1683–722. doi:10.1016/S0140-6736(24)00651-2
8. Chen S, Cao Z, Prettner K, Kuhn M, Yang J, Jiao L, et al. Estimates and projections of the global economic cost of 29 cancers in 204 countries and territories from 2020 to 2050. JAMA Oncol. 2023;9(4):465–72. doi:10.1001/jamaoncol.2022.7826
9. Darbà J, Ascanio M, Rodríguez A. A systematic review of the economic burden of prostate cancer: direct and indirect cost perspectives. PharmacoEconomics. 2026;44(5):559–83. doi:10.1007/s40273-026-01594-4
10. Jain R, et al. Patient, caregiver experiences in metastatic castration-resistant prostate cancer: insights from a multi-national survey. Future Oncol. 2025;21:2053–66. doi:10.1080/14796694.2025.2510890
11. Gao L, Das N, Bohingamu Mudiyanselage S, Winter N, Cowdery S, White V, et al. Global inequities in unpaid cancer caregiving: a systematic review and exploratory meta-analysis of time and cost burden. Cancer Med. 2026;15(3):e71657. doi:10.1002/cam4.71657
12. Venderbos LDF, Deschamps A, Dowling J, Carl EG, Remmers S, van Poppel H, et al. Europa Uomo Patient Reported Outcome Study (EUPROMS): descriptive statistics of a prostate cancer survey from patients for patients. Eur Urol Focus. 2021;7(5):987–94. doi:10.1016/j.euf.2020.11.002
13. Mazariego CG, Juraskova I, Campbell R, Smith DP. Long-term unmet supportive care needs of prostate cancer survivors: 15-year follow-up from the NSW Prostate Cancer Care and Outcomes Study. Support Care Cancer. 2020 Nov;28(11):5511–20. doi:10.1007/s00520-020-05389-x
14. Calvo-Schimmel A, Newman SD, Sterba KR, Mueller M, Miaskowski C, Qanungo S. Unmet supportive care needs in prostate cancer survivors with advanced disease: a mixed-methods exploration. Can Oncol Nurs J. 2022;32(4):512–25. doi:10.5737/23688076324512
15. Sibert NT, Garin O, Ferrer M, Connor SE, Graham ID, Litwin MS, et al. International variations in surgical quality of care in men with prostate cancer: results from the TrueNTH Global Registry. JCO Glob Oncol. 2024;10:e2300420. doi:10.1200/GO.23.00420
16. Zhou Y, Zou Y, Shen Q, Li Z, Tan Y, Li H, et al. A global review and perspective on prostate cancer survival: findings from survival studies of cancer registration data. J Natl Cancer Cent. 2026;6(2):175–84. doi:10.1016/j.jncc.2026.01.005
17. Hendriks RJ, van der Leest MMG, Israël B, Hannink G, YantiSetiasti A, Cornel EB, et al. Clinical use of the SelectMDx urinary-biomarker test with or without mpMRI in prostate cancer diagnosis: a prospective, multicenter study in biopsy-naïve men. Prostate Cancer Prostatic Dis. 2021 Dec;24(4):1110–9. doi:10.1038/s41391-021-00367-8
18. Auvinen A, Tammela TLJ, Mirtti T, Lilja H, Tolonen T, Kenttämies A, et al. Prostate cancer screening with PSA, kallikrein panel, and MRI: the ProScreen randomized trial. JAMA. 2024;331(17):1452–9. doi:10.1001/jama.2024.3841
19. Fazekas T, Shim SR, Basile G, Baboudjian M, Kói T, Przydacz M, et al. Magnetic resonance imaging in prostate cancer screening: a systematic review and meta-analysis. JAMA Oncol. 2024;10(6):745–54. doi:10.1001/jamaoncol.2024.0734
20. Donovan JL, Hamdy FC, Lane JA, Mason M, Metcalfe C, Walsh E, et al. Patient-reported outcomes after monitoring, surgery, or radiotherapy for prostate cancer. N Engl J Med. 2016;375(15):1425–37. doi:10.1056/NEJMoa1606221
21. Hamdy FC, Donovan JL, Lane JA, Metcalfe C, Davis M, Turner EL, et al. Fifteen-year outcomes after monitoring, surgery, or radiotherapy for prostate cancer. N Engl J Med. 2023;388(17):1547–58. doi:10.1056/NEJMoa2214122
22. Naqvi SAA, Riaz IB, Bibi A, Khan MA, Imran M, Khakwani KZR, et al. Heterogeneity of the treatment effect with PARP inhibitors in metastatic castration-resistant prostate cancer: a living interactive systematic review and meta-analysis. Eur Urol. 2025;87(6):626–40. doi:10.1016/j.eururo.2024.12.007
23. Sartor O, de Bono J, Chi KN, Fizazi K, Herrmann K, Rahbar K, et al. Lutetium-177–PSMA-617 for metastatic castration-resistant prostate cancer. N Engl J Med. 2021 Sep 15;385(12):1091–103. doi:10.1056/NEJMoa2107322
24. Zhang F, Luo Z, Xiong Y, Xue Q, Guo X, Fu Q, et al. Exploring the efficacy of PARP inhibitors in metastatic castration-resistant prostate cancer with homologous recombination repair alteration: a meta-analysis based on subgroups and reconstructed individual patient data. Int J Surg. 2025;112(1):1787–99. doi:10.1097/JS9.0000000000003338
25. Roberto M, Di Civita MA, Marinelli D, Torchia A, Cara N, Maltese G, et al. PARP inhibitor-based treatment in metastatic, castration-resistant prostate cancer (mCRPC): a systematic review and meta-analysis. BJUI Compass. 2025;6(1):e455. doi:10.1002/bco2.455
26. Gratzke C, Aggarwal H, Kim J, Chaignaud H, Oskar S. A cross-sectional survey of physicians to understand biomarker testing and treatment patterns in patients with prostate cancer. Eur Urol Open Sci. 2025;71:148–55. doi:10.1016/j.euros.2024.07.113. Available from: https://www.eu-openscience.europeanurology.com/article/S2666-1683(24)00615-3/fulltext
27. Let's Talk Prostate Cancer. Policies: prostate cancer in Europe [Internet]. [cited 2026 Feb 6]. Available from: https://www.letstalkprostatecancer.com/about-ltpc/policies/
28. Baker P, Griffith DM, Olaluwoye O. Prostate cancer: time for a new global initiative. A policy report [Internet]. London: Global Action on Men's Health; 2025. Available from: https://gamh.org/wp-content/uploads/2025/06/prostate_cancer_2025_12pp-FINALwebpdf.pdf
29. PRAISE-U PCa [Internet]. [cited 2026 Feb 6]. Available from: https://health.ec.europa.eu/system/files/2023-08/fs_cancer_praise-u.pdf
30. Global Action on Men's Health. National men's health policies [Internet]. London: Global Action on Men's Health; [cited 2026 Aug 10]. Available from: https://gamh.org/national-policies/
31. Department of Health and Social Care. Men's health: a strategic vision for England. CP 1432 [Internet]. London: Department of Health and Social Care; 2025 Nov. Available from: https://www.gov.uk/government/publications/mens-health-strategy-for-england
32. Health Canada. As Men's Health Month begins, Canada advances work on first Men and Boys' Health Strategy [Internet]. Ottawa: Government of Canada; 2026 Jun 2. Available from: https://www.canada.ca/en/health-canada/news/2026/06/as-mens-health-month-begins-canada-advances-work-on-first-men-and-boys-health-strategy.html
33. WHO Regional Office for Europe. Strategy on the health and well-being of men in the WHO European Region [Internet]. Copenhagen: WHO Regional Office for Europe; 2018. Document no. WHO/EURO:2018-4209-43968-61973. Available from: https://www.who.int/europe/publications/i/item/WHO-EURO-2018-4209-43968-61973
34. Williams A, Knospe A. From awareness to action: boys and men in U.S. policy [Internet]. Washington (DC): American Institute for Boys and Men; 2026 Jul 23 [cited 2026 Aug 10]. Available from: https://

aibm.org/policy/from-awareness-to-action-boys-and-men-in-u-s-policy/
35. Prostate Cancer Research. Socio-economic impact of prostate cancer screening [Internet]. London: Prostate Cancer Research; 2024 Nov [cited 2025 May 19]. Available from: https://www.prostate-cancer-research.org.uk/wp-content/uploads/2024/11/PCR_Socioeconomic_Impact_Prostate_Cancer_Screening_Nov24-v1.0.pdf
36. Reddy SR, Broder MS, Chang E, Paydar C, Chung KC, Kansal AR. Cost of cancer management by stage at diagnosis among Medicare beneficiaries. Curr Med Res Opin. 2022 Aug;38(8):1285–94. doi:10.1080/03007995.2022.2047536
37. Prostate Cancer UK. Am I at risk of prostate cancer? [Internet]. London: Prostate Cancer UK; [cited 2026 Jul]. Available from: https://prostatecanceruk.org/prostate-information-and-support/risk-and-symptoms/do-i-have-a-higher-risk-of-prostate-cancer
38. Terashima M, Nakayama K, Shirai S, Ugai S, Lee HY, Matsui H, et al. Diverging global incidence trends of early-onset cancers: comparisons with incidence trends of later-onset cancers and mortality trends of early-onset cancers. Mil Med Res. 2025 Nov 14;12(1):79. doi:10.1186/s40779-025-00670-8
39. Lloyd T, Hounsome L, Mehay A, Mee S, Verne J, Cooper A. Lifetime risk of being diagnosed with, or dying from, prostate cancer by major ethnic group in England 2008-2010. BMC Med. 2015;13:171. doi:10.1186/s12916-015-0405-5
40. Nyberg T, Frost D, Barrowdale D, Evans DG, Bancroft E, Adlard J, et al. Prostate cancer risks for male BRCA1 and BRCA2 mutation carriers: a prospective cohort study. Eur Urol. 2020;77(1):24–35. doi:10.1016/j.eururo.2019.08.025
41. Castro E, Goh C, Olmos D, Saunders E, Leongamornlert D, Tymrakiewicz M, et al. Germline BRCA mutations are associated with higher risk of nodal involvement, distant metastasis, and poor survival outcomes in prostate cancer. J Clin Oncol. 2013;31(14):1748–57. doi:10.1200/JCO.2012.43.1882
42. Prostate Cancer UK. The PSA blood test [Internet]. London: Prostate Cancer UK; [cited 2026 Jun]. Available from: https://prostatecanceruk.org/prostate-information-and-support/prostate-tests/psa-blood-test
43. Roobol MJ, de Vos II, Månsson M, Godtman RA, Talala KM, den Hond E, et al. European study of prostate cancer screening: 23-year follow-up. N Engl J Med. 2025;393(17):1669–80. doi:10.1056/NEJMoa2503223
44. Prostate Cancer Research. Prostate cancer screening: the impact on the NHS [Internet]. London: Prostate Cancer Research; 2025 [cited 2026 Jul]. Available from: https://www.prostate-cancer-research.org.uk/screening-report/
45. Adhyam M, Gupta AK. A review on the clinical utility of PSA in cancer prostate. Indian J Surg Oncol. 2012;3(2):120–9. doi:10.1007/s13193-012-0142-6
46. Josefsson A, Månsson M, Kohestani K, Spyratou V, Wallström J, Hellström M, et al. Performance of 4Kscore as a reflex test to prostate-specific antigen in the GÖTEBORG-2 prostate cancer screening trial. Eur Urol. 2024;86(3):223–9. doi:10.1016/j.eururo.2024.04.037
47. Hijazi A, Bifulco C, Baldin P, Galon J. Digital pathology for better clinical practice. Cancers (Basel). 2024;16(9):1686. doi:10.3390/cancers16091686
48. Ström P, Kartasalo K, Olsson H, Solorzano L, Delahunt B, Berney DM, et al. Artificial intelligence for diagnosis and grading of prostate cancer in biopsies: a population-based, diagnostic study. Lancet Oncol. 2020 Feb;21(2):222–32. doi:10.1016/S1470-2045(19)30738-7
49. Reinhardt C, Briody H, MacMahon PJ. AI-accelerated prostate MRI: a systematic review. Br J Radiol. 2024 Jul;97(1159):1234–42. doi:10.1093/bjr/tqae093
50. Prostate Cancer UK. Can I reduce my risk of prostate cancer? Diet, physical activity and your risk [Internet]. London: Prostate Cancer UK; [cited 2026 Jul]. Available from: https://prostatecanceruk.org/prostate-information-and-support/risk-and-symptoms/can-i-reduce-my-risk
51. Babakhanlou R, Gowin K. The impact of diet and nutrition on prostate cancer – food for thought? Curr Oncol Rep. 2025;27(3):278–89. doi:10.1007/s11912-025-01641-x
52. Centers for Disease Control and Prevention. United States Cancer Statistics: prostate cancer stat bite [Internet]. Atlanta (GA): Centers for Disease Control and Prevention. Available from: https://www.cdc.gov/united-states-cancer-statistics/publications/prostate-cancer-stat-bite.html
53. Wilson ML, Fleming KA, Kuti MA, Looi LM, Lago N, Ru K. Access to pathology and laboratory medicine services: a crucial gap. Lancet. 2018 May 12;391(10133):1927–38. doi:10.1016/S0140-6736(18)30458-6
54. Frija G, Blazic I, Frush DP, Hierath M, Kawooya M, Donoso-Bach L, et al. How to improve access to medical imaging in low- and middle-income countries? eClinicalMedicine. 2021;38:101034. doi:10.1016/j.eclinm.2021.101034
55. Coughlin SS. A review of social determinants of prostate cancer risk, stage, and survival. Prostate Int. 2020;8(2):49–54. doi:10.1016/j.prnil.2019.08.001
56. Chandran A, van Harten M, Singh D, Vilaseca J, Patasius A, Tupikowski K, et al. Risk-stratified approach to implementing population-based prostate cancer screening in five pilot sites in the European Union: a protocol for the PRAISE-U project. Eur Urol Open Sci. 2024;70:8–17. doi:10.1016/j.euros.2024.09.003
57. Cancer Research UK. UK NSC recommends prostate cancer screening for men with a BRCA2 gene change and family history of cancer [Internet]. London: Cancer Research UK; 2026 May 28 [cited 2026 Jul]. Available from: https://news.cancerresearchuk.org/2026/05/28/uk-nsc-recommends-prostate-cancer-screening-for-men-with-a-brca2-gene-change-and-family-history-of-cancer/
58. Eklund M, Jäderling F, Discacciati A, et al. MRI-targeted or standard biopsy in prostate cancer screening. N Engl J Med. 2021;385(10):908–20. doi:10.1056/NEJMoa2100852
59. Cornford P, Tilki D, van den Bergh RCN, Eberli D, Fonteyne V, Gandaglia G, et al. EAU-EANM-ESTRO-ESUR-ISUP-SIOG guidelines on prostate cancer [Internet]. Edn. presented at the 41st EAU Annual Congress, London 2026. Arnhem: EAU Guidelines Office; 2026 [cited 2026 Jun 26]. Available from: https://uroweb.org/guidelines/prostate-cancer
60. Wei JT, et al. Early detection of prostate cancer: AUA/SUO guideline part I: prostate cancer screening. J Urol. 2023;210(1):46–53. doi:10.1097/JU.0000000000003491
61. Brant A, Weinstein IC, Lewicki P, Zhu A, Johnson JP, Sze C, et al. Insurer coverage of prostate cancer biomarkers. Urol Oncol. 2023;41(7):324.e9–324.e12. doi:10.1016/j.urolonc.2023.04.020
62. Kinnaird A, Luger F, Cash H, Ghai S, Urdaneta-Salegui LF, Pavlovich CP, et al. Microultrasonography-guided vs MRI-guided biopsy for prostate cancer diagnosis: the OPTIMUM randomized clinical trial. JAMA. 2025;333(19):1679–87. doi:10.1001/jama.2025.3579
63. Royal College of Pathologists. Meeting pathology demand: histopathology workforce census [Internet]. London: Royal College of Pathologists; 2018 [cited 2026 Jan 22]. Available from: https://www.rcpath.org/static/952a934d-2ec3-48c9-a8e6e00fcdca700f/Meeting-Pathology-Demand-Histopathology-Workforce-Census-2018.pdf
64. Metter DM, Colgan TJ, Leung ST, Timmons CF, Park JY. Trends in the US and Canadian pathologist workforces from 2007 to 2017. JAMA Netw Open. 2019 May 31;2(5):e194337. doi:10.1001/jamanetworkopen.2019.4337
65. Pinto DG, Bychkov A, Tsuyama N, Fukuoka J, Eloy C. Real-world implementation of digital pathology: results from an intercontinental survey. Lab Invest. 2023 Dec;103(12):100261. doi:10.1016/j.labinv.2023.100261
66. Murali S, et al. Bringing MRI to low- and middle-income countries: directions, challenges and potential solutions. NMR Biomed. 2024;37(7):e4992. doi:10.1002/nbm.4992
67. Organisation for Economic Co-operation and Development. Magnetic resonance imaging (MRI) units [Internet]. Paris: OECD; 2024 [cited 2026 Jul]. Available from: https://www.oecd.org/en/data/indicators/magnetic-resonance-imaging-mri-units.html
68. Sayan M, Eren AA, Tuac Y, Langoe A, Alali B, Aynaci O, et al. Prostate cancer awareness in the Middle East: a cross-sectional international study. JCO Glob Oncol. 2024;10:e2400171. doi:10.1200/GO.24.00171
69. Beyer K, Leenen RCA, Venderbos LDF, Helleman J, Denijs F, Bramer W, et al. Health policy for prostate cancer early detection in the European Union and the impact of opportunistic screening: PRAISE-U Consortium. J Pers Med. 2024;14(1):84. doi:10.3390/jpm14010084
70. Miller DB, Hamler TC, Qin W. Prostate cancer screening in Black men: screening intention, knowledge, attitudes, and reasons for participation. Soc Work Health Care. 2020;59(8):543–56. doi:10.1080/00981389.2020.1808149
71. Ngowi BN, Mremi A, Mbwambo OJ, Mitao MP, Nyindo M, Mteta KA, Mmbaga BT. Prostate cancer knowledge and barriers to screening among men at risk in northern Tanzania: a community-based study. Cancer Treat Res Commun. 2024;39:100811. doi:10.1016/j.ctarc.2024.100811
72. McIntosh S, Harries B, Perry M, Cropley M, Dibb B. Barriers and facilitators to help-seeking behaviour for abnormal lower urinary tract symptoms in men: systematic review. Cancer Med. 2025;14(18):e71214. doi:10.1002/cam4.71214
73. Rebello RJ, Oing C, Knudsen KE, Loeb S, Johnson DC, Reiter RE, et al. Prostate cancer. Nat Rev Dis Primers. 2021;7(1):9. doi:10.1038/s41572-020-00243-0
74. Sondermann M, Stehr A, Hirtsiefer C, Menzel V, Buttmann-Schweiger N, Flemming PW, et al. Survival trend in metastatic prostate cancer: two decades of real-world data on overall survival

from Germany. Prostate Cancer Prostatic Dis. 2026 Feb 24 [Epub ahead of print]. doi:10.1038/s41391-026-01092-w
75. Prostate Cancer Foundation. What are somatic and germline testing? [Internet]. Santa Monica (CA): Prostate Cancer Foundation; [cited 2026 Jun]. Available from: https://www.pcf.org/somatic-and-germline-genetic-testing-guide/what-are-somatic-and-germline-genetic-testing/
76. Abida W, Cheng ML, Armenia J, Middha S, Autio KA, Vargas HA, et al. Analysis of the prevalence of microsatellite instability in prostate cancer and response to immune checkpoint blockade. JAMA Oncol. 2019;5(4):471–8. doi:10.1001/jamaoncol.2018.5801
77. Shimizu K, Sano T, Mizuno K, Sunada T, Makita N, Hagimoto H, et al. A case of microsatellite instability-high clinically advanced castration-resistant prostate cancer showing a remarkable response to pembrolizumab sustained over at least 18 months. Cold Spring Harb Mol Case Stud. 2022;8(4):a006194. doi:10.1101/mcs.a006194
78. Delaney RK, Sisco-Taylor BL, Wang X, Scherr K, Ubel PA, Haaland B, et al. Two specialists, two recommendations: discordance between urologists' and radiation oncologists' prostate cancer treatment recommendations. Urology. 2022;169:156–61. doi:10.1016/j.urology.2022.06.009
79. Cancer Research UK. Treatment options for prostate cancer [Internet]. London: Cancer Research UK; [cited 2026 Sep]. Available from: https://www.cancerresearchuk.org/about-cancer/prostate-cancer/treatment/decisions-about-your-treatment
80. Zhu S, Chen J, Ni Y, Zhang H, Liu Z, Shen P, et al. Dynamic multidisciplinary team discussions can improve the prognosis of metastatic castration-resistant prostate cancer patients. Prostate. 2021 Aug;81(11):721–7. doi:10.1002/pros.24167
81. Schumacher FA, Helenowski IB, Sun Z, Oswald LB, Gonzalez BD, Moses KA, et al. Treatment decision-making among patients with metastatic prostate cancer: impact of decision locus of control on functional outcomes and decision satisfaction. Prostate Cancer Prostatic Dis. 2023 Mar;26(1):201–6. doi:10.1038/s41391-023-00647-5
82. Hong YL, Ng CF, Wong KCW, Kong WY, Chiu PKF, Teoh JYC, et al. Patient preferences for metastatic prostate cancer treatment: a discrete choice experiment. Clin Genitourin Cancer. 2025;23(1):102254. doi:10.1016/j.clgc.2024.102254
83. Suri Y, Yasmeh JP, Basu A. Understanding the uptake and challenges of genetic testing guidelines for prostate cancer patients. Cancer Treat Res Commun. 2022 Jan 1;32:100588. doi:10.1016/j.ctarc.2022.100588
84. Leith A, Ribbands A, Kim J, Last M, Barlow S, Yang L, et al. Real-world homologous recombination repair mutation testing in metastatic castration-resistant prostate cancer in the USA, Europe and Japan. Future Oncol. 2022;18(8):937–51. doi:10.2217/fon-2021-1113
85. Saunders J, Giri VN, Vadaparampil ST, Rivera A, Sanchez Nolasco T, Rangel Camacho M, et al. Knowledge and attitudes toward prostate cancer germline genetic testing among Hispanic males. Prostate Cancer Prostatic Dis. 2025;29(2):330–7. doi:10.1038/s41391-025-01008-0
86. Candelieri-Surette D, Hung A, Agiri FY, Hu M, Hanchrow EE, Lee KM, et al. Incorporating structured and unstructured data sources to identify and characterize hereditary cancer testing among veterans with metastatic castration-resistant prostate cancer. JCO Clin Cancer Inform. 2025 Feb. doi:10.1200/CCI-24-00189
87. Chaudhry S, Ehtesham Z. Expanding access to molecular oncology testing in Africa and lower middle-income countries. Afr J Lab Med. 2026;15(1):a3401. doi:10.4102/ajlm.v15i1.3401
88. Sirugo G, Williams SM, Tishkoff SA. The missing diversity in human genetic studies. Cell. 2019;177(1):26–31. doi:10.1016/j.cell.2019.02.048
89. El Saghir NS, Charara RN, Kreidieh FY, et al. Global practice and efficiency of multidisciplinary tumor boards: results of an American Society of Clinical Oncology international survey. J Glob Oncol. 2015;1(2):57–64. doi:10.1200/JGO.2015.000158
90. Bamodu OA, Chung CC. Cancer care disparities: overcoming barriers to cancer control in low- and middle-income countries. JCO Glob Oncol. 2024;10:e2300439. doi:10.1200/GO.23.00439
91. Boberg EW, Gustafson DH, Hawkins RP, Offord KP, Koch C, Wen KY, et al. Assessing the unmet information, support and care delivery needs of men with prostate cancer. Patient Educ Couns. 2003;49(3):233–42. doi:10.1016/S0738-3991(02)00183-0
92. Fundytus A, Sullivan R, Vanderpuye V, et al. Delivery of global cancer care: an international study of medical oncology workload. J Glob Oncol. 2018;4:1–11. doi:10.1200/JGO.17.00126
93. Dodkins J, Cook A, Mayne E, Parry M, Parry MG, Boyle J, et al. Are evidence-based guidelines translating into clinical practice? A national population-based study of the use of treatment intensification in metastatic hormone-sensitive prostate cancer (mHSPC) in England. Eur J Cancer. 2025 May 2;220:115335. doi:10.1016/j.ejca.2025.115335
94. Leith A, Ribbands A, Kim J, Clayton E, Gillespie-Akar L, Yang L, et al. Impact of next-generation hormonal agents on treatment patterns among patients with metastatic hormone-sensitive prostate cancer: a real-world study from the United States, five European countries and Japan. BMC Urol. 2022;22:33. doi:10.1186/s12894-022-00979-9
95. Cooperberg MR, Meeks W, Fang R, Gaylis FD, Catalona WJ, Makarov DV. Time trends and variation in the use of active surveillance for management of low-risk prostate cancer in the US. JAMA Netw Open. 2023 Mar 2;6(3):e231439. doi:10.1001/jamanetworkopen.2023.1439
96. Fundytus A, Sengar M, Lombe D, Hopman W, Jalink M, Gyawali B, et al. Access to cancer medicines deemed essential by oncologists in 82 countries: an international, cross-sectional survey. Lancet Oncol. 2021;22(10):1367–77. doi:10.1016/S1470-2045(21)00463-0
97. Bencina G, Petrova E, Sönmez D, Matos Pereira S, Dimitriadis I, Salomonsson S. HTA and reimbursement status of metastatic hormone-sensitive prostate cancer, non-metastatic castration-resistant prostate cancer, and metastatic castration-resistant prostate cancer treatments in Europe: a patient access landscape review. J Health Econ Outcomes Res. 2023;10(1):102–10. doi:10.36469/001c.75208
98. Manzano A, Svedman C, Hofmarcher T, Wilking N. Comparator report on cancer in Europe 2025: disease burden, costs and access to medicines and molecular diagnostics. 2025.
99. European Federation of Pharmaceutical Industries and Associations. EFPIA Patients W.A.I.T. Indicator 2024 survey [Internet]. Brussels: EFPIA; 2025 [cited 2026 Jun]. Available from: https://www.efpia.eu/media/oeganukm/efpia-patients-wait-indicator-2024-final-110425.pdf
100. Anton A, Tran B. Global disparity in access to novel therapeutics for metastatic prostate cancer. JCO Oncol Pract. 2022 Jan. doi:10.1200/OP.21.00595
101. Prostate Cancer UK. 'The odds are stacked against you': Black men more likely to be diagnosed at later stage [Internet]. London: Prostate Cancer UK; 2025 Jan 9 [cited 2026 Aug 10]. Available from: https://prostatecanceruk.org/about-us/news-and-views/2025/01/black-men-more-likely-to-be-diagnosed-at-later-stage
102. Cockle-Hearne J, Charnay-Sonnek F, Denis L, Fairbanks HE, Kelly D, Kav S, et al. The impact of supportive nursing care on the needs of men with prostate cancer: a study across seven European countries. Br J Cancer. 2013;109(8):2121–30. doi:10.1038/bjc.2013.568
103. Galvez A, Puri D, Tran E, Ardines KZ, Santiago-Lastra Y. Navigating pathways in prostate cancer survivorship: a comprehensive review of challenges, interventions, and long-term outcomes. Uro. 2025 May 6;5(2). doi:10.3390/uro5020010
104. Resnick MJ, Koyama T, Fan KH, Albertsen PC, Goodman M, Hamilton AS, et al. Long-term functional outcomes after treatment for localized prostate cancer. N Engl J Med. 2013;368(5):436–45. doi:10.1056/NEJMoa1209978
105. Milios JE, Ackland TR, Green DJ. Pelvic floor muscle training in radical prostatectomy: a randomized controlled trial of the impacts on pelvic floor muscle function and urinary incontinence. BMC Urol. 2019;19(1):116. doi:10.1186/s12894-019-0546-5
106. Kannan P, Winser SJ, Choi Ho L, Hei LC, Kin LC, Agnieszka GE, et al. Effectiveness of physiotherapy interventions for improving erectile function and climacturia in men after prostatectomy: a systematic review and meta-analysis of randomized controlled trials. Clin Rehabil. 2019;33(8):1298–309. doi:10.1177/0269215519840392
107. Lawler M, Oliver K, Gijssels S, Aapro M, Abolina A, Albreht T, et al. The European Code of Cancer Practice. J Cancer Policy. 2021;28:100282. doi:10.1016/j.jcpo.2021.100282. See also: European Cancer Organisation. The European Code of Cancer Practice [Internet]. Brussels: European Cancer Organisation; 2020 [cited 2026 Aug 10]. Available from: https://www.europeancancer.org/content/european-code-of-cancer-practice.html
108. ZERO Prostate Cancer. Prostate cancer recurrence [Internet]. ZERO Prostate Cancer; [cited 2026 Jun]. Available from: https://zerocancer.org/stages-and-grades/recurrence
109. Tilki D, van den Bergh RCN, Briers E, Chiu P, Eberli D, Epure A, et al. EAU-EANM-ESTRO-ESUR-ISUP-SIOG guidelines on prostate cancer. Part II—2026 update: treatment of relapsing and metastatic prostate cancer. Eur Urol. 2026;90(3):270–90. doi:10.1016/j.eururo.2026.04.014
110. Paterson C, Primeau C, Nabi G. A pilot randomised controlled trial of a multimodal supportive care (ThriverCare) intervention for managing unmet supportive care needs in men with metastatic prostate cancer on hormonal treatment and their partner/caregivers. Eur J Oncol Nurs. 2018 Dec;37:65–73. doi:10.1016/j.ejon.2018.10.007
111. Nuyens A, Ilie G, Rendon RA, Mason RJ, Hajizadeh M, Koto PS, et al. Evaluating the cost-effectiveness of the Prostate Cancer Patient Empowerment Program: a comprehensive health economic analysis from a randomized controlled trial. Can Urol Assoc J. 2025 Dec;19(12):410–9. doi:10.5489/cuaj.9222

112. Zhang C, Hong Y, Chen Y, Arbing R, Chen WT, Huang F. Effectiveness of nurse-led mHealth interventions on symptom outcomes in adult patients with cancer: a systematic review and meta-analysis. BMC Nurs. 2025;24(1):1356. doi:10.1186/s12912-025-03981-2
113. Hugar LA, Wulff-Burchfield EM, Winzelberg GS, Jacobs BL, Davies BJ. Incorporating palliative care principles to improve patient care and quality of life in urologic oncology. Nat Rev Urol. 2021;18(10):623–35. doi:10.1038/s41585-021-00491-z
114. Hua M, Guo L, Ing C, Lackraj D, Wang S, Morrison RS. Specialist palliative care use and end-of-life care in patients with metastatic cancer. J Pain Symptom Manage. 2024;67(5):357–65.e15. doi:10.1016/j.jpainsymman.2024.01.029
115. Glaza A, Kennedy A, Jabeer M, Ramanathan S, Obeng A, Zwaans B, et al. Palliative and hospice care in prostate cancer: a scoping review. Urol Oncol. 2026;44(1):38–48. doi:10.1016/j.urolonc.2025.09.018
116. Shih HH, Chang HJ, Huang TW. Effects of early palliative care in advanced cancer patients: a meta-analysis. Am J Hosp Palliat Care. 2022;39(11):1350–7. doi:10.1177/10499091221075570
117. Hyde MK, Legg M, Occhipinti S, Lepore SJ, Ugalde A, Zajdlewicz L, et al. Predictors of long-term distress in female partners of men diagnosed with prostate cancer. Psychooncology. 2018;27(3):946–54. doi:10.1002/pon.4617
118. Roberts C, Toohey K, Paterson C. The experiences and unmet supportive care needs of partners of men diagnosed with prostate cancer: a meta-aggregation systematic review. Cancer Nurs. 2024;47(2):E71–83. doi:10.1097/NCC.0000000000001172
119. Mainwaring JM, Walker LM, Robinson JW, Wassersug RJ, Wibowo E. The psychosocial consequences of prostate cancer treatments on body image, sexuality, and relationships. Front Psychol. 2021;12:765315. doi:10.3389/fpsyg.2021.765315
120. National Cancer Institute. National standards for cancer survivorship care [Internet]. Bethesda (MD): National Cancer Institute; 2024 [cited 2026 Sep 16]. Available from: https://cancercontrol.cancer.gov/ocs/special-focus-areas/national-standards-cancer-survivorship-care
121. Howell D, Hack TF, Oliver TK, Chulak T, Mayo S, Aubin M, et al. Survivorship services for adult cancer populations: a pan-Canadian guideline. Curr Oncol. 2011;18(6):e265–81. doi:10.3747/co.v18i6.956. Available from: https://www.mdpi.com/1718-7729/18/6/956
122. Department of Health, Macmillan Cancer Support, NHS Improvement. Living with and beyond cancer: taking action to improve outcomes [Internet]. London: Department of Health; 2013. Available from: https://www.gov.uk/government/publications/living-with-and-beyond-cancer-taking-action-to-improve-outcomes
123. Nguyen DD, Wallis CJD, Fleshner NE, Trinh QD, Klaassen Z, Sayyid RK. Urologic oncology survivorship guidelines: an overview of the evidence and the current implementation gap. Eur Urol Focus. 2023 May 1;9(3):431–4. doi:10.1016/j.euf.2023.02.006
124. Heneka N, Crowe H, Chambers SK, Costello A, Crowe J, Dundee P, et al. Translating the prostate cancer survivorship essentials framework into clinical practice: a participatory research process analysis. Cancer Surviv Res Care. 2023 Jan 1;1(1):2283015. doi:10.1080/28352610.2023.2283015
125. Snyder C, Choi Y, Blackford AL, DeSanto J, Mayonado N, Rall S, et al. Simplifying survivorship care planning: a randomized controlled trial comparing 3 care plan delivery approaches. J Natl Cancer Inst. 2022 Jan 11;114(1):139–48. doi:10.1093/jnci/djab148
126. Choi Y, Smith KC, Shukla A, Blackford AL, Tran PT, Peairs KS, et al. What are survivorship care plans failing to tell men after prostate cancer treatment? Prostate. 2021;81(7):398–406. doi:10.1002/pros.24116
127. dos Anjos GR, Machado GF, de Barros CP, de Andrade VP, Maciel RMB, Cunha LL. Cancer survivorship in low- and middle-income countries: challenges, needs, and emerging support strategies. Front Public Health. 2025;13:1601483. doi:10.3389/fpubh.2025.1601483
128. Breidenbach C, Roth R, Ansmann L, Wesselmann S, Dieng S, Carl E, et al. Use of psycho-oncological services by prostate cancer patients: a multilevel analysis. Cancer Med. 2020 Jun;9(11):3680–90. doi:10.1002/cam4.2999
129. Xiang J, Dai L, Tan L, Lv D, Chen Y, Tang L, et al. Psychosocial experiences of prostate cancer survivors after treatment: a systematic review of qualitative studies. Front Public Health. 2025 Jul 24;13. doi:10.3389/fpubh.2025.1625611
130. Calvo-Schimmel A, Newman SD, Sterba KR, Miaskowski C, Qanungo S. Barriers and facilitators to supportive care implementation in advanced disease prostate cancer survivors: a theory-informed scoping review. Cancer Nurs. 2022;45(5):E782–800. doi:10.1097/NCC.0000000000001051
131. Hyde MK, Zajdlewicz L, Wootten AC, Nelson CJ, Lowe A, Dunn J, et al. Medical help-seeking for sexual concerns in prostate cancer survivors. Sex Med. 2016 Mar 1;4(1):e7–17. doi:10.1016/j.esxm.2015.12.004
132. Shore ND, Moul JW, Pienta KJ, Czernin J, King MT, Freedland SJ. Biochemical recurrence in patients with prostate cancer after primary definitive therapy: treatment based on risk stratification. Prostate Cancer Prostatic Dis. 2024;27(2):192–201. doi:10.1038/s41391-023-00712-z
133. Correa R, Vidal N, Quesada-García A, Marcos R, Muñoz del Toro J, Muñoz-Rodríguez J. Management of patients with localized prostate cancer and biochemical recurrence in Spain: a medical survey. Actas Urol Esp (Engl Ed). 2024 Apr;48(3):218–27. doi:10.1016/j.acuroe.2023.08.002
134. World Health Organization. Palliative care [Internet]. Geneva: World Health Organization; 2020 [cited 2026 Jul]. Available from: https://www.who.int/news-room/fact-sheets/detail/palliative-care
135. Knaul FM, Farmer PE, Krakauer EL, De Lima L, Bhadelia A, Jiang Kwete X, et al. Alleviating the access abyss in palliative care and pain relief – an imperative of universal health coverage: the Lancet Commission report. Lancet. 2018;391(10128):1391–454. doi:10.1016/S0140-6736(17)32513-8
136. Primeau C, Paterson C, Nabi G. A qualitative study exploring models of supportive care in men and their partners/caregivers affected by metastatic prostate cancer. Oncol Nurs Forum. 2017;44(6):E241–9. doi:10.1188/17.ONF.E241-E249
137. Prostate Cancer UK. Gap in provision of cancer nurse specialists across NHS trusts in England is simply not good enough [Internet]. London: Prostate Cancer UK; 2017 Jul 18 [cited 2026 Sep 16]. Available from: https://prostatecanceruk.org/about-us/news-and-views/2017/7/gap-in-provision-of-cancer-nurse-specialists-across-nhs-trusts-in-england-is-simply-not-good-enough
138. Alessy SA, Lüchtenborg M, Rawlinson J, Baker M, Davies EA. Being assigned a clinical nurse specialist is associated with better experiences of cancer care: English population-based study using the linked National Cancer Patient Experience Survey and Cancer Registration Dataset. Eur J Cancer Care (Engl). 2021;30(6):e13490. doi:10.1111/ecc.13490
139. Bradford N, Moore E, Taylor K, et al. The cancer nursing workforce in Australia: a national survey exploring determinants of job satisfaction. BMC Nurs. 2023;22(1):461. doi:10.1186/s12912-023-01629-7
140. World Health Organization. State of the world's nursing 2020: investing in education, jobs and leadership [Internet]. Geneva: World Health Organization; 2020 [cited 2026 Jul]. Available from: https://www.who.int/publications/i/item/9789240003279
141. Allemani C, Matsuda T, Di Carlo V, Harewood R, Matz M, Nikšić M, et al. Global surveillance of trends in cancer survival: analysis of individual records for 37,513,025 patients diagnosed with one of 18 cancers during 2000–2014 from 322 population-based registries in 71 countries (CONCORD-3). Lancet. 2018 Mar 17;391(10125):1023–75. doi:10.1016/S0140-6736(17)33326-3
142. Oh WK, Agarwal N, Bryce A, Barata P, Bugler C, Carlsson SV, et al. What's in a name? Why words matter in advanced prostate cancer. Eur Urol. 2025 Feb;87(2):101–3. doi:10.1016/j.eururo.2024.10.017
143. Armstrong AJ, et al. Trial design and objectives for patients with prostate cancer: recommendations from the Prostate Cancer Working Group 4. J Clin Oncol. 2026 May;44(13):1249–65. doi:10.1200/JCO-25-02834
144. Prostate Cancer UK. Hormone therapy [Internet]. London: Prostate Cancer UK; [cited 2026 Sep 16]. Available from: https://prostatecanceruk.org/prostate-information-and-support/treatments/hormone-therapy
145. Cancer Research UK. PARP inhibitors [Internet]. London: Cancer Research UK; [cited 2026 Sep 16]. Available from: https://www.cancerresearchuk.org/about-cancer/treatment/targeted-cancer-drugs-immunotherapy/parp-inhibitors
146. Pekala KR, Shill DK, Austria M, Langford AT, Loeb S, Carlsson SV. Shared decision-making before prostate cancer screening decisions. Nat Rev Urol. 2024;21(6):329–38. doi:10.1038/s41585-023-00840-0