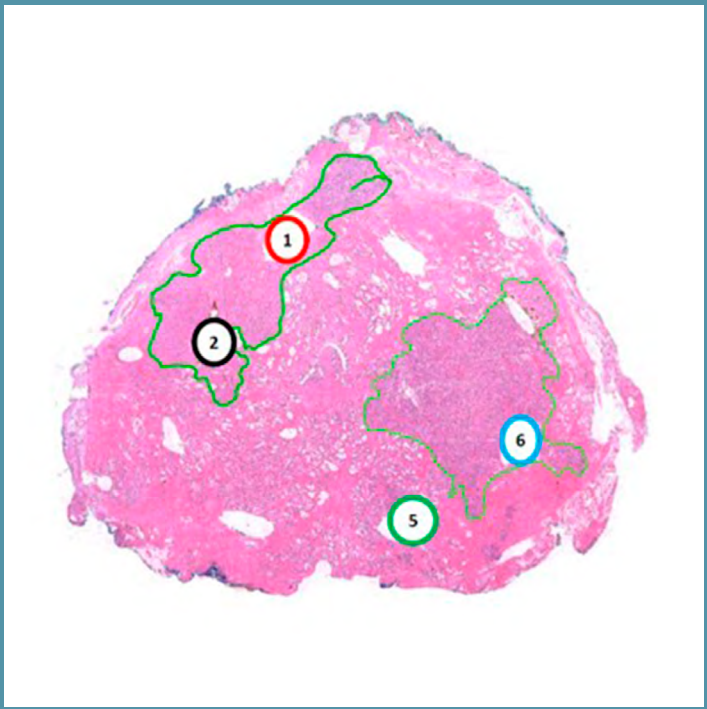
NPCA
National Prostate Cancer Audit

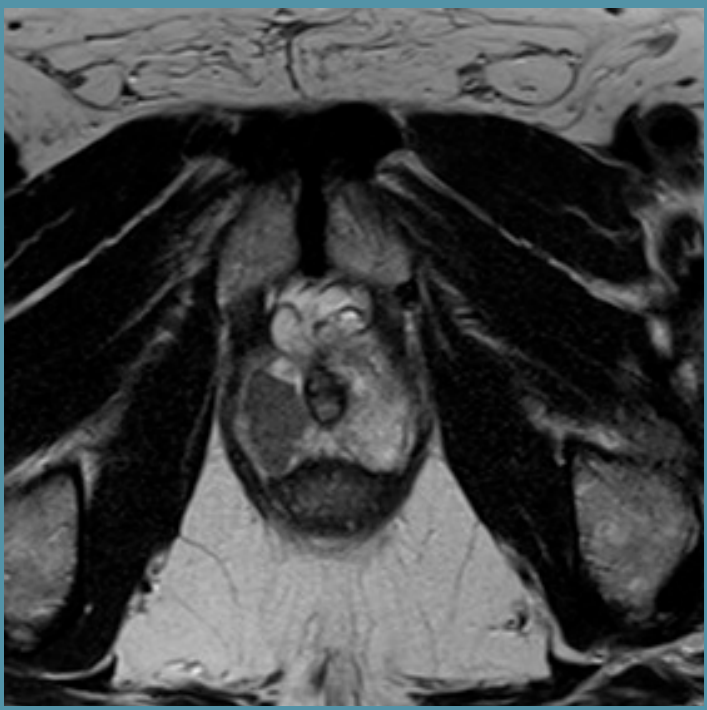
NATCAN
National Cancer Audit Collaborating Centre

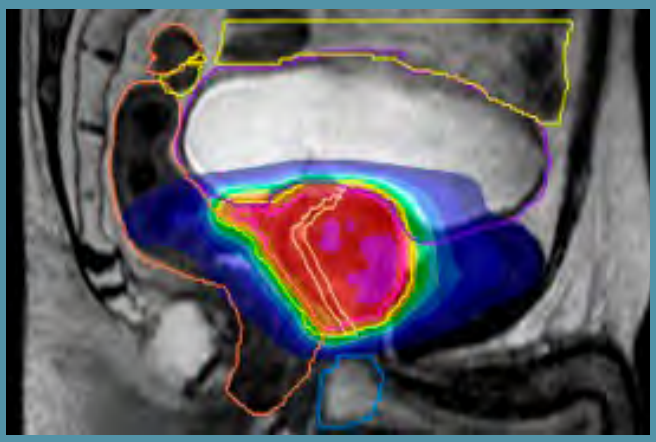
National Prostate Cancer Audit State of the Nation Report

An audit of the care received by men diagnosed with prostate cancer in England and Wales from 01/01/2019 to 31/12/2023

Published January 2025







NPCA

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HQIP
Healthcare Quality Improvement Partnership

The National Cancer Audit Collaborating Centre (NATCAN) is commissioned by the **Healthcare Quality Improvement Partnership (HQIP)** as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). NATCAN delivers national cancer audits in non-Hodgkin lymphoma, bowel, breast (primary and metastatic), oesophago-gastric, ovarian, kidney, lung, pancreatic and prostate cancers. HQIP is led by a consortium of the Academy of Medical Royal Colleges and the Royal College of Nursing. Its aim is to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP holds the contract to commission, manage and develop the National Clinical Audit and Patient Outcomes Programme (NCAPOP), comprising around 40 projects covering care provided to people with a wide range of medical, surgical, and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some individual projects, other devolved administrations and crown dependencies.
https://www.hqip.org.uk/national-programmes

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BUG

The British Uro-oncology Group (BUG) was formed in 2004 to meet the needs of clinical and medical oncologists specialising in the field of urology. As the only dedicated professional association for uro-oncologists, its overriding aim is to provide a networking and support forum for discussion and exchange of research and policy ideas. Registered Charity no: 1116828

NDRS
NATIONAL DISEASE REGISTRATION SERVICE

This work uses data that has been provided by patients and collected by the NHS as part of their care and support. For patients diagnosed in England, the data is collated, maintained and quality assured by the National Disease Registration Service (NDRS), which is part of NHS England. Access to the data was facilitated by the NHS England Data Access Request Service.

GIG CYMRU NHS WALES
Rhwydwaith Canser Cymru
Wales Cancer Network

NHS Wales is implementing a new cancer informatics system. As a result, the quality and completeness of data from Wales is likely to have been impacted due to implementation of this new system across multiple NHS organisations (Health Boards), which has resulted in data being supplied by both old and new systems. Additionally, and reflecting the uncertainty of data quality, the data submitted to the audit may not have undergone routine clinical validation prior to submission to the Wales Cancer Network (WCN), Public Health Wales.

Contents

1. Introduction

The National Prostate Cancer Audit (NPCA) evaluates patterns of diagnosis, treatment, and outcomes for prostate cancer patients in England and Wales to assess and improve the quality of care. The NPCA utilises national guidance and quality standards, including those from the National Institute for Health and Care Excellence (NICE).

In 2023, the NPCA joined the National Cancer Audit Collaborating Centre (NATCAN) a new organisation which leads 10 cancer audits in England and Wales. As part of NATCAN, the NPCA has introduced quarterly reports providing more timely data feedback, continued to develop quality improvement initiatives as exemplified by the annual Quality Improvement (QI) event, and is continuing with its outlier process. The approach of the NPCA and NATCAN to improving prostate cancer services is summarised in its new Quality Improvement Plan.

The audit uses information that is routinely collected by the NHS as part of the service that the NHS provides[1]. For men treated in England, the data are collated, maintained and quality assured by NHS England's National Disease Registration Service (NDRS). For men treated in Wales, data are provided by Wales Cancer Network (WCN)[2], using the Cancer Network Information System Cymru (CaNISC) electronic patient record system. For full details of the data and methods used within this report, please see the NPCA Methodology document.

The State of the Nation report uses National Cancer Registration Data (NCRD) for England, the 'gold standard' registration dataset that draws on a range of data sources and relies on enhanced processing by cancer registration officers and follow-up with NHS trusts. 'Gold-standard' cancer registration data is currently available for men diagnosed up to the end of 2021. The Rapid Cancer Registration Dataset (RCRD) includes proxy tumour registrations with associated data. It provides a quicker source of data on cancer registrations but is of lower quality than the NCRD.

This report highlights variation in prostate cancer services across providers in England and Wales. Supplementary materials are available on the NPCA website (www.npca.org.uk). These include individual NHS provider results (data completeness and performance indicator results), a description of the audit methods, and resources to support local quality improvement initiatives, such as an action plan template. In this report we present results from six of our seven performance indicators for both England and Wales using the most recent data available (Table 1). The seventh indicator is undergoing methodological development and will be reported at a later stage.

1 The audits in NATCAN do not 'collect' clinical data. The cancer audits utilise the nationally mandated flows of data from hospitals to the National Disease Registration Service (NDRS) in NHS England and the Wales Cancer Network in Public Health Wales, thereby minimising the burden of data collection on provider teams.

2 NHS Wales is part way through a cancer informatics implementation programme which is designed to improve the data capture and reporting capabilities of NHS Wales. This ongoing implementation is impacting the data quality within NHS Wales in the short term with multiple systems being used and different implementation dates across cancer sites and organisations resulting in a complex data landscape. NHS Wales has committed to continue to submit audit data annually until data submissions are sourced exclusively from the new cancer informatics solution. This will be from 2026 onwards that NHS Wales will be able to supply quarterly data using this new integrated, and more accessible digital platform.

Table 1. Cancer registration dataset and time period that define the population for each section		
	England	**Wales**
Performance indicator (PI)		
Disease presentation: • **PI1:** Diagnosed with metastatic disease Treatment allocation: • **PI2:** Low-risk[1] patients receiving radical treatment • **PI3:** High-risk[2] patients receiving radical treatment • **PI4:** Percentage of men with metastatic disease receiving systemic therapy^	NCRD* Patients diagnosed between: **01.01.21-31.12.21**	CaNISC** Patients diagnosed between: **01.04.22-31.03.23**
Outcomes of treatment: short-term: • **PI5:** Readmission within 90 days	RCRD*** Patients who underwent a radical prostatectomy between: **01.04.22-31.03.23**	CaNISC Patients who underwent a radical prostatectomy between: **01.04.22-31.03.23**
Outcomes of treatment: medium-term: • **PI6:** GU (genitourinary) complication • **PI7:** GI (gastrointestinal) complication	NCRD Patients who received radical treatment between: **01.09.20-31.08.21**	CaNISC Patients who received radical treatment between: **01.09.20-31.08.21**
National picture		
National picture	RCRD Patients diagnosed between: **01.01.19-31.12.23**	CaNISC Patients diagnosed between: **01.01.21-31.12.22**

*NCRD: National Cancer Registration Dataset; **Cancer Network Information System Cymru; ***RCRD: Rapid Cancer Registration Dataset, ^This is a new indicator subject to further methodological development prior to being reported

1 The definition of 'low-risk' is the same as CPG1 (Cambridge Prognostic Group)

2 Our definition of 'high-risk or locally advanced' differs from CPG4/5 due to the inclusion of N1 (node-positive) in the NPCA definition.

2. Key messages and recommendations

1. There was an increase in men newly diagnosed with prostate cancer in 2023 in England (9% more in 2023 compared with 2022 and 25% more compared with 2019) and in 2022 in Wales (26% more in 2022 compared with 2021).

2. There was an increase in the number of men who received a radical prostatectomy and the number who received radical radiotherapy in 2023 in England (17% and 23% increase respectively compared with 2022). In Wales, the increase in the number of men who received a radical prostatectomy and the number who received radical radiotherapy in 2022 was 11% and 25% respectively compared with 2021.

3. The proportion of men diagnosed with high-risk/locally advanced prostate cancer undergoing radical prostate cancer treatment remained stable at 68% in England in 2021 when comparing to 2020, and the variation between specialist Multi-Disciplinary Teams (sMDTs) was 49%-78%. In Wales, the proportion was 69% in the period between Apr 2022-Mar 2023, and similarly remained stable when compared with Apr 2021-Mar 2022 and the variation between sMDTs was 69%-82%.

4. The proportion of men diagnosed with low-risk localised prostate cancer undergoing radical treatment remained stable at 8% in England in 2021 when comparing to 2020, and similarly in Wales where the proportion between Apr 2022-Mar 2023 was 11%, when compared with Apr 2021-Mar 2022.

5. The proportion of men with a genitourinary (GU) complication within two years of treatment in Apr 2020-Mar 2021 remained stable in England (6% from 7%) and Wales (8%). The proportion of men with a gastrointestinal (GI) complication within two years of treatment in Apr 2020-Mar 2021 remained similar in England (10%) and Wales (8% versus 5% last reporting period).

6. In England, between 2021-2023, 9 out of 10 diagnoses were in white men. Across all age groups over 50 years, black populations had more diagnoses per 1000 men than other ethnicities. White men aged 85 years and over were more often diagnosed with stage 4 cancer than younger groups. Men living in more deprived areas and black men were less likely to receive radical treatment for high-risk/locally advanced disease.

2. Recommendations

Recommendation	Audience	Audit findings	Quality Improvement Goal	National Guidance
1. Aim to achieve high completeness of key data items at the point of collection by NHS organisations in England, particularly tumour, node and metastasis (TNM) staging, PSA and Gleason score variables by: • appointing a clinical data lead with protected time for reviewing and checking the team's data returns and for championing improvements in data completeness • integrating routine documentation of staging, PSA and Gleason information into MDT meetings • using the NPCA quarterly report feedback to evaluate quality improvement relating to data completeness	England: Integrated Care Boards (ICBs) working with trusts Wales: Health Boards	Data completeness in NCRD: TNM: England (73%) Wales (67%) Gleason: England (79%) Wales (87%)	Applies to all QI goals as will facilitate the identification of the correct cohort for each performance indicator, as well as aiding interpretation of wider results	The Cancer Outcome and Services Data set (COSD) has been the national standard for reporting cancer in the NHS in England since January 2013. Feedback reports for the data submitted are available through the National Disease Registration Service (NDRS) CancerStats2 website. COSD is the main source for the Rapid Cancer Registration Dataset. The Cancer Network Information System Cymru (CaNISC) collects, analyses and releases information about cancer in Wales.
2. Continue to advocate active surveillance for men with low-risk prostate cancer by: • documenting whether patients eligible for active surveillance are offered it and reasons for not allocating, if appropriate • performing a detailed case-note review to determine why low-risk patients are not undergoing active surveillance in specialist Multi-Disciplinary Teams (sMDTs) with a higher-than-expected proportion of men receiving radical treatment for low-risk disease • using the findings of the case-note review, centres should design behavioural change interventions which will decrease over-treatment rates	England: Cancer Alliances working with trusts Wales: Health Boards	8% of men diagnosed with low-risk localised cancer in England and 11% in Wales underwent radical prostate cancer therapy within 12 months of diagnosis	QI goal 2: To reduce potential over-treatment	NICE Quality Standard [QS91], 2015 QS2: men with low-risk prostate cancer for whom radical treatment is suitable are also offered the option of active surveillance.
3. Investigate why men with high-risk/locally advanced disease are not considered for radical treatment and aim to reduce that proportion by: • documenting whether patients eligible for radical treatment are offered it and reasons for not treating, if appropriate • performing a detailed case-note review to determine why high-risk patients are not receiving radical treatment in sMDTs with a lower-than-expected proportion of men receiving radical treatment for high-risk disease • assessing fitness for treatment regardless of chronological age and considering referral to oncogeriatric services, if appropriate • using the findings of the case-note review, centres should design behavioural change interventions which will increase treatment rates	England: Cancer Alliances working with trusts Wales: Health Boards	68% of men diagnosed with high-risk/locally-advanced prostate cancer in England and 69% of men in Wales underwent radical treatment within 12 months of diagnosis	QI goal 3: To reduce potential under-treatment	NICE Guideline [NG131], 2019 1.3.11 Do not offer active surveillance to people with high-risk localised prostate cancer. NICE Guideline [NG131], 2019 1.3.12, 1.3.21. Offer radical prostatectomy or radical radiotherapy in combination with androgen deprivation therapy (ADT) to men with high-risk localised prostate cancer. Ongoing collaboration with NHS Cancer Programme and Cancer Alliance Treatment Variation Working Group to achieve the recommended level of 75%.

Recommendation	Audience	Audit findings	Quality Improvement Goal	National Guidance
4. Review variation between providers in rates of GU/GI complications and 90-day readmission rates by: • ensuring proactive onward referral to specialist services for the management of side effects • using the NPCA quarterly report feedback to evaluate quality improvement relating to readmissions	England: Cancer Alliances working with trusts Wales: Health Boards	Variation between providers for GU complications post radical prostatectomy is: 0%-16% (England) and 8%-11% (Wales); for GI complications post radical radiotherapy is 2%-23% (England) and 8%-10% (Wales); for emergency readmission within 90 days of surgery is: 2%-35% (England) and 10%-28% (Wales)	QI goal 4: To reduce short-term complications after radical prostate cancer surgery QI goal 5: To reduce medium-term complications after radical prostate cancer surgery and radiotherapy	Royal College of Radiologists Guidance: "Radiotherapy target volume definition and peer review". EAU - EANM - ESTRO - ESUR - ISUP - SIOG Guideline [2024] 6.2.2.4 Acute and chronic complications of radical prostatectomy.
5. Decisions regarding treatment should consider life expectancy and co-morbidity, balancing the treatment benefits and risks, to ensure equitable care by: • using individualised assessment, such as comprehensive geriatric assessment (CGA) tools, to accurately measure patients' health status and not deny a patient treatment based on chronological age alone • involving patients and their families in shared decision-making, clearly explaining potential outcomes and aligning treatment decisions with the patient's preferences, values and quality of life goals • checking that standardised clinical pathways for prostate cancer treatment are shared across the MDT, ensuring that every patient receives evidence-based care regardless of their socio-demographic characteristics	England: Cancer Alliances working with trusts Wales: Health Boards	In England[1], white men aged 85 and older were more often diagnosed with stage 4 cancer than younger groups. Men living in more deprived areas and black men were less likely to receive radical treatment for high-risk/locally advanced disease.	QI goal 1: To improve timely diagnosis and treatment of high-risk prostate cancer QI goal 3: To reduce potential under-treatment	EAU - EANM - ESTRO - ESUR - ISUP - SIOG Guideline [2024] 6.1.3 Heterogeneity in performance increases with advancing age, so it is important to use measures other than just age or performance status when considering treatment options. NICE Guideline [NG131], 2019 1.5.1 Offer people with metastatic prostate cancer tailored information and access to specialist urology and palliative care teams to address their specific needs.

1 Data for Wales for the studied period were not available.

3. Infographic

NPCA
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Diagnosis & staging

2023 in England
55,241
men were **diagnosed** with prostate cancer
9%
increase compared with 50,592 men in 2022

2022 in Wales
2,521
26%
increase compared with 1,996 men in 2021

Disease presentation

For men diagnosed between January - December 2021 in England and between April 2022 - March 2023 in Wales

17% E
19% W
of men presented with **metastatic** disease in England (E) and Wales (W)

Treatment allocation

For men diagnosed between January - December 2021 in England and between April 2022 - March 2023 in Wales

Low-risk*, localised disease
8% E
11% W

High-risk/locally advanced disease
68% E
69% W

of men had radical treatments in England (E) and Wales (W)

*Low-risk: T stage 1/2, Gleason ≤6, M/N 0 or missing = CPG1

Treatment outcomes

For men undergoing surgery between April 2022 - March 2023 in England and Wales

12% E
17% W
of men were **readmitted** within 3 months **following surgery**

For men undergoing radical treatment between September 2020 - August 2021 in England and Wales

6% E
8% W
of men experienced at least one **genitourinary** complication requiring a procedural/surgical intervention within two years after **radical prostatectomy** in England (E) and Wales (W)

10% E
8% W
of men experienced at least one **gastrointestinal** complication requiring a procedural/surgical intervention within two years after **radical radiotherapy** in England (E) and Wales (W)

Diagnosis and treatment by age-ethnicity-deprivation

For men diagnosed between January 2021 - December 2023 in England

Across all age groups **over 50 years**, **black populations** had **more diagnoses** per 1000 men **than other ethnicities**

9 out of 10 diagnoses were in **white men**

White men ≥**85 years** were more often diagnosed with **stage 4 cancer** than younger groups

Men living in **more deprived areas** and **black men** were **less likely to receive radical treatment** for high-risk/locally advanced disease

The NPCA makes use of the most recently available data for each performance indicator. For disease presentation and treatment allocation, this corresponds to different time periods in England and Wales.

4. National picture

In England between 1st January and 31st December 2023, the number of men newly diagnosed with prostate cancer increased by 9% compared to the previous year (55,241 versus 50,592, Table S1). When comparing to 2019, there is an approximately 25% increase in diagnoses (55,241 versus 44,286, Table S1).

In Wales, between 1st January and 31st December 2022, the corresponding increase was 26% compared to 2021 (2,521 versus 1,996, Table S2).

Mirroring the increase in diagnoses, there were 17% more people who received a radical prostatectomy in 2023 in England compared to 2022 (8,760 versus 7,477, Table S3), and there were 23% more people who received radical prostate radiotherapy (19,749 versus 16,085, Table S4) in the same period.

There were 11% more people who received a radical prostatectomy in 2022 in Wales compared to 2021 (254 versus 228, Table S5), and there were 25% more people who received radical prostate radiotherapy (830 versus 664, Table S6).

Sub-analysis of the RT fractionation schedules delivered in England during 2019-2023 (Table S7) showed a continuation of the trend we observed in our previous report, with a decrease in conventional RT (typically 74Gy in 37 fractions, or similar) replaced by hypofractionated RT (typically 60Gy in 20 fractions), stereotactic body radiation therapy (SBRT, typically 36.25Gy in 5 fractions) and ultra-hypofractionated RT (typically 36Gy in 6 fractions).

In England between 1st January and 30th September 2023, the breakdown by types of systemic therapy shows a continued increase in apalutamide use (30% of total, Table S8) compared to 2022 (22%) and a concurrent decrease in docetaxel use (29% down from 36%). Use of abiraterone and enzalutamide as a proportion of the total remained stable at 3% and 38% respectively (Table S8).

Data completeness of key items such as Gleason Score and TNM staging remains a concern, with only 79% and 73% data available in England and 87% and 67% respectively in Wales (Table S9).

5. Performance indicator results and patient risk groups

In England and Wales, we report performance indicators across three and two separate time periods respectively, in order to report the most recent data available for each indicator. When analysing patients diagnosed in England and Wales (Table S9) we observed a consistent distribution of patients' characteristics such as age at diagnosis, socioeconomic deprivation (IMD), Charlson comorbidity score, and stage compared to last year's report.

Table 2. England and Wales performance indicators table

	England			Wales		
	No. of patients	No. of events	% (range%; provider n)	No. of patients	No. of events	% (range%; provider n)
Time period for patients diagnosed	**1 Jan 2021 – 31 December 2021**			**1 Apr 2022 – 31 March 2023**		
PI1: Proportion of men diagnosed with metastatic disease#	37,349	6,161	**17** (7-24%; n=47)	2,574	480	**19** (17-23%; n=4)
PI2: Proportion of men with low-risk[4] (CPG 1) localised cancer undergoing radical prostate cancer treatment#	4,235	327	**8** (0-24%; n=47)	450	49	**11** (12-18%; n=4)
PI3: Proportion of men with high-risk/locally advanced[5] disease undergoing radical prostate cancer treatment#	14,560	9,839	**68** (49-78%; n=47)	856	591	**69** (69-82%; n=4)
Time period: Patients who underwent a radical prostatectomy 1 Apr 2022 – 31 March 2023						
PI5: Proportion of patients who had an emergency readmission within 90 days of radical prostate cancer surgery^,*	7,920*	946	**12** (2-35%; n=49)	241	42	**17** (10-28%; n=4)
Time period: Patients who received radical prostate cancer therapy 1 Sep 2020 – 31 Aug 2021						
PI6: Proportion of patients experiencing at least one GU complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy^	5,105	330	**6** (0-16%; n=47)	172	14	**8** (8-11%; n=4)
PI7: Proportion of patients receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (GI complication) up to 2 years following radical prostate radiotherapy^	12,012	1,205	**10** (2-23%; n=50)	527	43	**8** (8-10%; n=3)

#Provider: sMDT; ^Provider: treatment centre, *For England, this PI used the Rapid Cancer Registration Dataset whereas the other PIs used the 'gold-standard' National Cancer Registration Dataset. Acronyms: PI = performance indicator; GU = genitourinary; GI = gastrointestinal. PI1 is unadjusted. PI2-3,5-7 are adjusted for age and comorbidity. PI5 is additionally adjusted for cancer stage and deprivation and PI6 and PI7 are additionally adjusted for risk group and deprivation.

In England, between 1st January 2021 and 31st December 2021, 17% of men with newly diagnosed prostate cancer had metastatic disease at first presentation (Table 2). In Wales, between 1st April 2022 and 31st March 2023, it was 19%. Using population data in men aged 50-90 years, annual incidence of metastatic prostate cancer was 5.3 cases per 10,000 men in England, and 7.4 cases per 10,000 men in Wales. Within England, metastatic incidence varied across Cancer Alliances from 3.3 to 7.2 cases per 10,000 men.

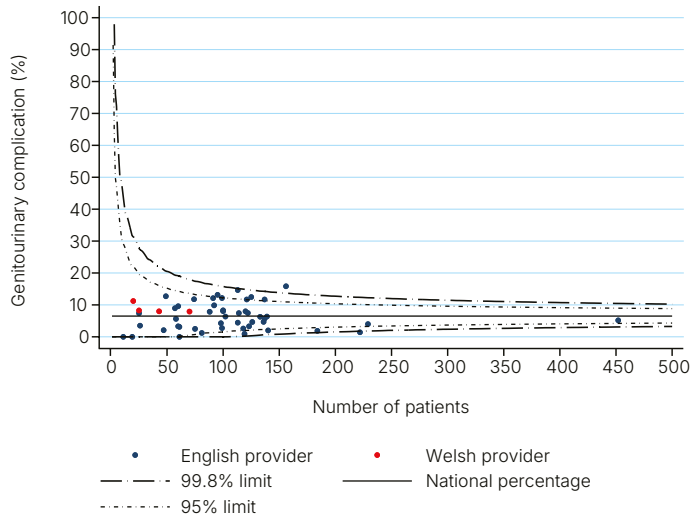
In England, 8% of patients diagnosed with low-risk (CPG1) localised disease received radical treatment but there was substantial variation between sMDTs (ranging between 0% and 24%). In Wales, this was 11% and varied between 12% and 18%. In England, 68% of patients diagnosed with high-risk/locally advanced disease received radical treatment but there was substantial variation between sMDTs (ranging between 49% and 78%). In Wales, this was 69% and varied between 69% and 82% by sMDT. This variation is after adjustment for age and

4 The definition of 'low-risk' is the same as CPG1

5 Our definition of 'high-risk or locally advanced' differs from CPG4/5 due to the inclusion of N1 in the NPCA definition

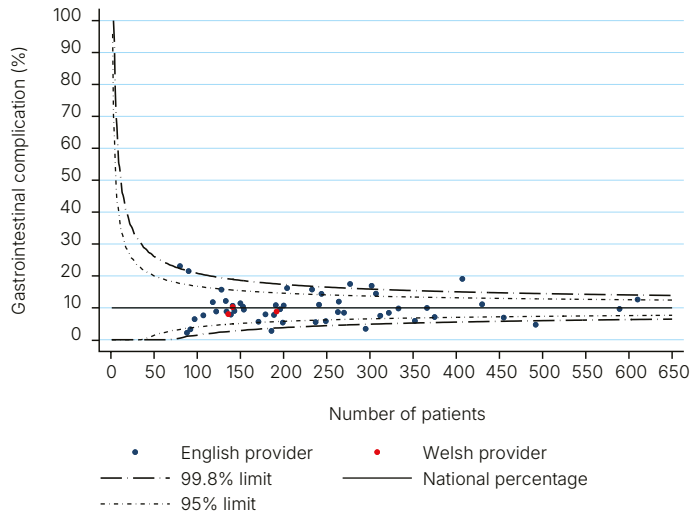
comorbidity and further local investigation is necessary. In England, 12% of men undergoing radical prostatectomy had a readmission within 90 days of surgery, ranging from 2% to 35%. In Wales, it was 17%, ranging between 10% and 28%.

Figure 1. Adjusted funnel plot for the proportion of patients experiencing at least one genitourinary complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy (surgery between 1st September 2020 and 31st August 2021) by surgical centre in England (n=47) and Wales (n=4)



In England, 6% of men undergoing radical prostatectomy experienced a genitourinary (GU) complication within two years of treatment (Figure 1, surgical centre range 0-16%). In Wales, it was 8%.

Figure 2. Adjusted funnel plot for the proportion of patients receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity up to 2 years following radical prostate radiotherapy (radiotherapy between 1st September 2020 and 31st August 2021) by RT centre in England (n=50) and Wales (n=3)



In England, 10% of patients undergoing radiotherapy experienced a gastrointestinal (GI) complication over the same time-period (Figure 2, radiotherapy centre range 2-23%) and in Wales it was 8% across the three providers. These two performance indicators are subject to our outlier policy.

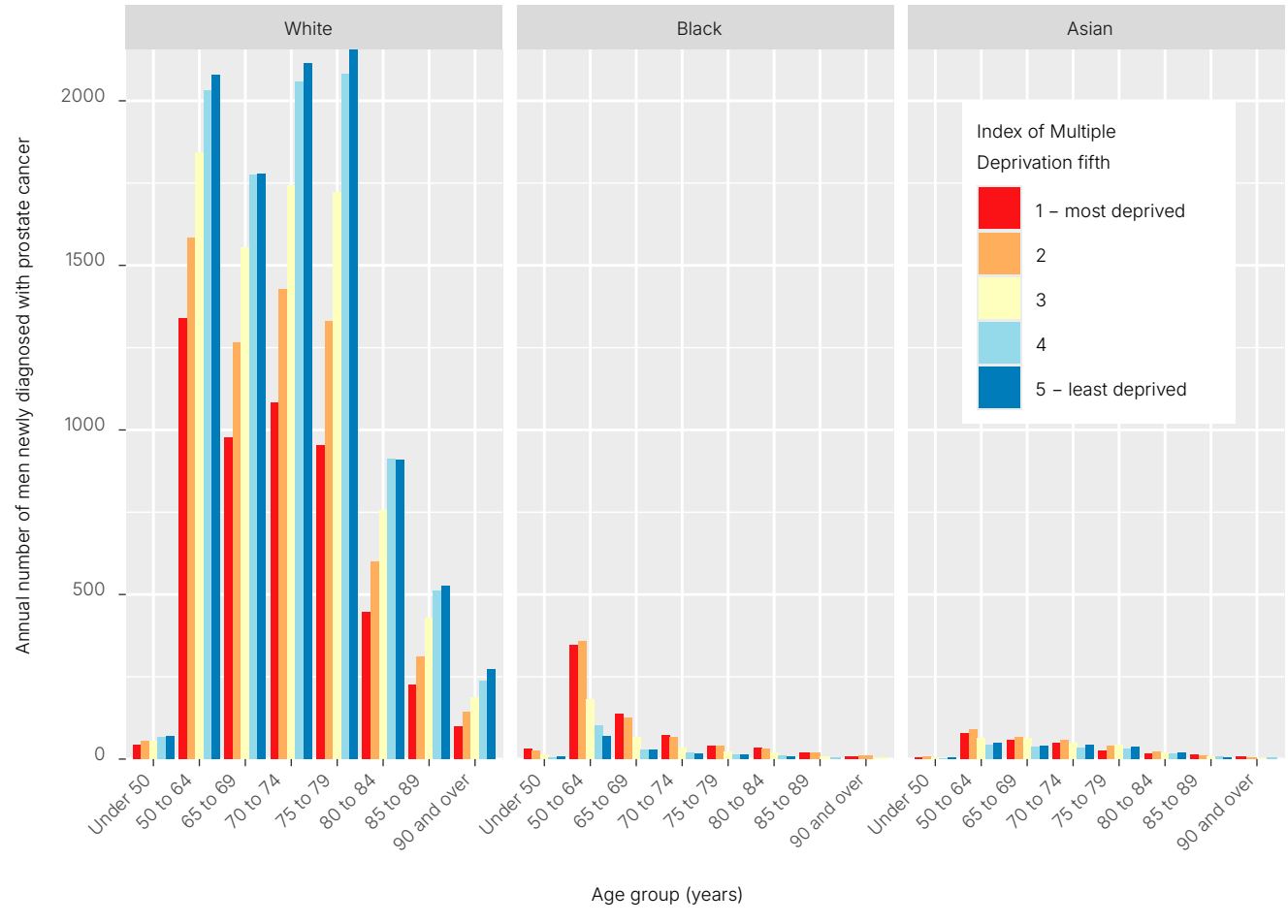
6. Inequalities in prostate cancer diagnosis and treatment

Diagnosis by age-ethnicity-deprivation group

This section presents numbers of new prostate cancer diagnoses by age, ethnicity, and Index of Multiple Deprivation fifth, in England from 1st January 2021 to 31st December 2023. We report both the count of new diagnoses and a relative count per 1000 men in the population. The number of new diagnoses in each age-ethnicity-deprivation group was obtained from the Rapid Cancer Registration Dataset[6]. The male population size in each age-ethnicity-deprivation group was based on 2021 Census estimates from the Office for National Statistics[7]. Index of Multiple Deprivation fifths[8] were defined from population-weighted average scores for 6,800 Middle Super Output Areas in 2019[9].

Definition of ethnicity: We analysed five ethnic groups as defined by the NHS and Office for National Statistics. We report results for the white, black (black, black British, black Welsh, Caribbean, or African), and Asian (Asian, Asian British, or Asian Welsh) groups only, due to evidence of low sensitivity and positive predictive value of hospital-recorded ethnicity compared with self-reported ethnicity for the 'mixed' and 'other' groups[10].

Figure 3. Annual number of men newly diagnosed with prostate cancer by age-ethnicity-deprivation group
Data for England from 1st January 2021 to 31st December 2023[11].



6 RCRD underestimates diagnoses compared to NCRD by around 10%. https://www.npca.org.uk/wp-content/uploads/2021/12/NPCA-comparison-of-standard-and-rapid-cancer-registry-data_19.12.21.pdf

7 https://www.ons.gov.uk/datasets/RM032/editions/2021/versions/1

8 https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019

9 Census 2021 geographies - Office for National Statistics (ons.gov.uk)

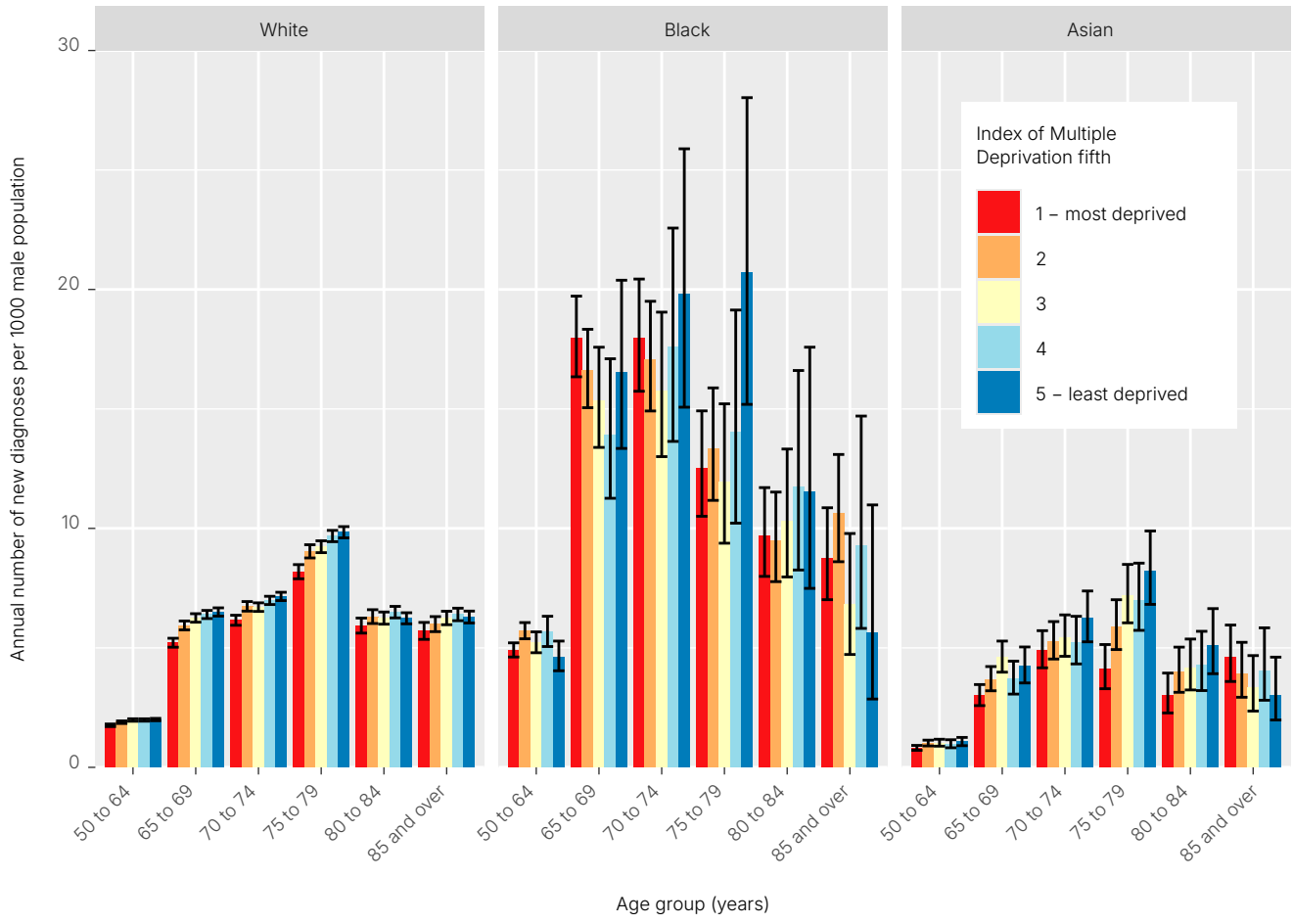
10 https://bmjopen.bmj.com/content/3/6/e002882.long

11 Data for Wales for this period were not available

Most men (90.3%) diagnosed with prostate cancer had their ethnicity recorded in hospital data. Of these men, nine out of ten were white (90.4%), with black (4.6%) and Asian (2.7%) the next commonest groups. Figure 3 illustrates this and also shows that prostate cancer was most frequently diagnosed in age groups between 50 and 79 years old (83.6%) and in the least deprived areas of England (24.2% in the least deprived fifth).

Figure 4 (below) presents the same data now adjusted for the size of the male population in each age-ethnicity-deprivation group (for men aged 50 years or older). The black population had the greatest number of new diagnoses relative to population size, compared to the white and Asian populations. This figure was estimated to be largest in black males aged 70 to 74 years old (17 new diagnoses per 1000 men; 95% CI: 16 to 19 per 1000). Across the whole male population in England, men aged 75 to 79 years old had more new diagnoses per 1000 population (9.3 per 1000; 95% CI: 9.2 to 9.4 per 1000) than other age groups. Prostate cancer diagnosis was also commonest in populations living in the least deprived areas (4.7 per 1000; 95% CI: 4.6 to 4.7 per 1000) of all Index of Multiple Deprivation fifths.

Figure 4. Annual number of new diagnoses per 1000 male population by age-ethnicity-deprivation group
Data for England from 1st January 2021 to 31st December 2023[12].

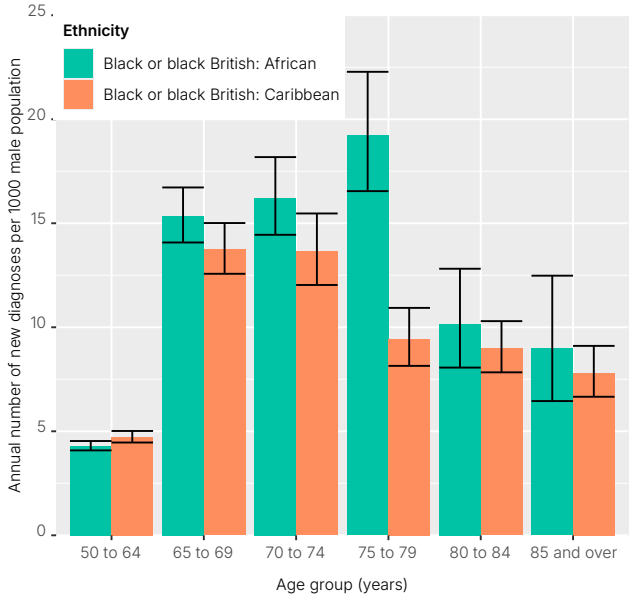


Error bars are 95% confidence intervals.

12 Data for Wales for this period were not available

Using NHS and Office for National Statistics definitions, 'black or black British – African' and 'black or black British – Caribbean' populations both had greater numbers of new diagnoses per 1000 men than other ethnic groups (Figure 5), for example in the 65 to 84 years age range: 16.1 per 1000 (95% CI: 15.2 to 17.1 per 1000) and 12.1 per 1000 (95% CI: 11.4 to 12.8 per 1000) respectively.

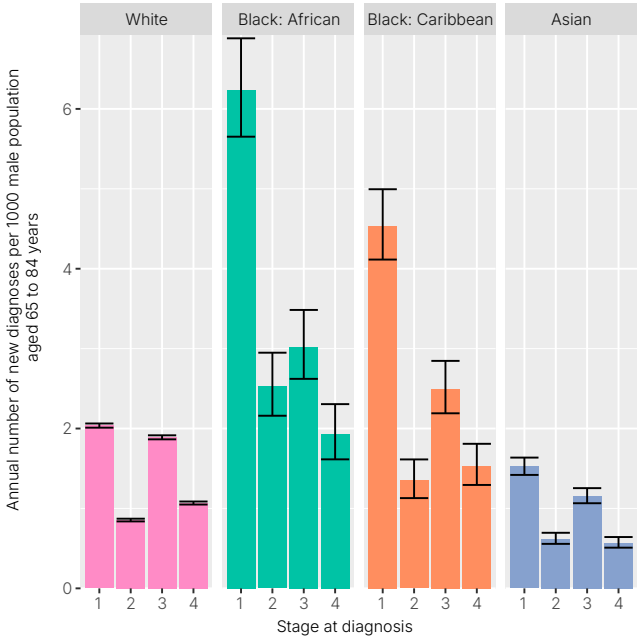
Figure 5. Annual number of new diagnoses per 1000 male population by age group of black men. Data for England from 1st January 2021 to 31st December 2023[13].



Error bars are 95% confidence intervals.

The stage at diagnosis (1 to 4) was recorded for 79.0% of diagnoses in the Rapid Cancer Registration Dataset, which was similar across the white, black, and Asian ethnic groups (78.8% to 82.4%). In men aged 65 to 84 years with a recorded stage at diagnosis, black ethnic groups had greater numbers of new diagnoses per 1000 men than other ethnic groups across all stages at diagnosis (Figure 6). Black ethnic groups also had a higher proportion of new diagnoses per 1000 men at stage 1 than other ethnic groups.

Figure 6. Annual number of new diagnoses per 1000 male population aged 65 to 84 years, by stage and ethnicity. Data for England from 1st January 2021 to 31st December 2023[14].



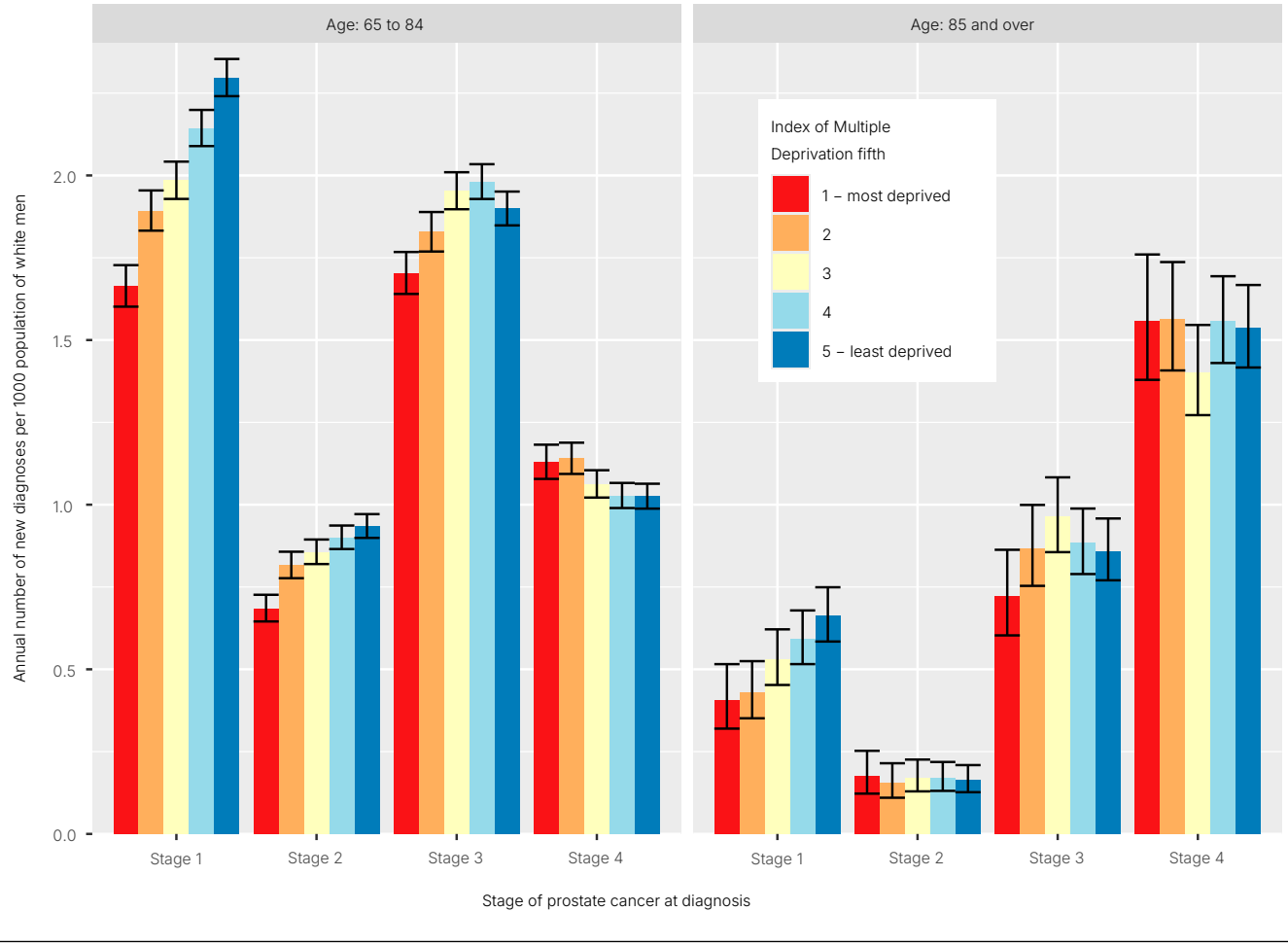
Error bars are 95% confidence intervals.

13 Data for Wales for this period were not available

14 Data for Wales for this period were not available

Figure 7 shows numbers of new diagnoses per 1000 population by stage, age, and deprivation for white men only. An important finding is that stage 4 cancer is the most common diagnosis in white men aged 85 years and over (right panel). In contrast, stage 1 and 3 prostate cancers are the most common in men aged 65 to 84 years (left panel), which highlights a potential issue of late diagnosis among older men. A limitation of this analysis is that the stage was recorded for 49.0% of white men aged 85 years and over (versus 80.2% of white men aged 65 to 84 years).

Figure 7. Annual number of new diagnoses per 1000 male population by stage, age, and deprivation in white men. Data for England from 1st January 2021 to 31st December 2023[15].



Error bars are 95% confidence intervals.

Radical treatment by age, ethnicity, and deprivation

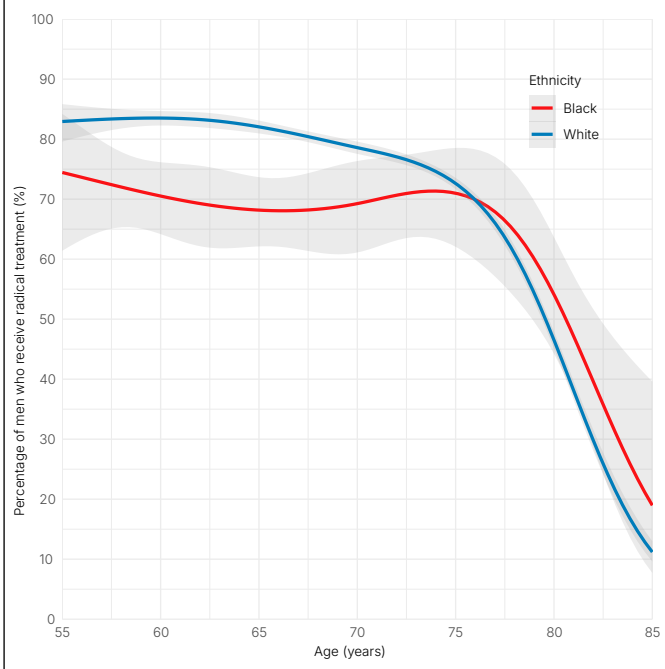
This section presents percentages of men with high-risk/locally advanced cancer or low-risk cancer who received radical treatment, by age, ethnicity, and Index of Multiple Deprivation fifth (as defined before). The populations were defined using the National Cancer Registration Dataset (since the Rapid Cancer Registration Dataset is inadequate for this purpose) and included men diagnosed in England from January 2020 to December 2021.

High-risk/locally advanced cancer

In the analysis of 26,432 men with high-risk/locally advanced cancer, black men aged 60 to 69 years were less likely to receive radical treatment than white men in the same age category (67.8% [95% CI: 62.3% to 72.8%] versus 81.6% [95% CI: 80.6% to 82.6%], Figure 8). In addition, there was a graded association between treatment and deprivation, with treatment rates decreasing from 83.2% (95% CI: 81.4% to 84.8%) in the least deprived areas to 75.4% (95% CI: 72.8% to 77.8%) in the most deprived areas for men aged 60 to 69 years (Figure 9). Regardless of ethnicity or deprivation, receipt of curative therapy declines significantly from the age of 75.

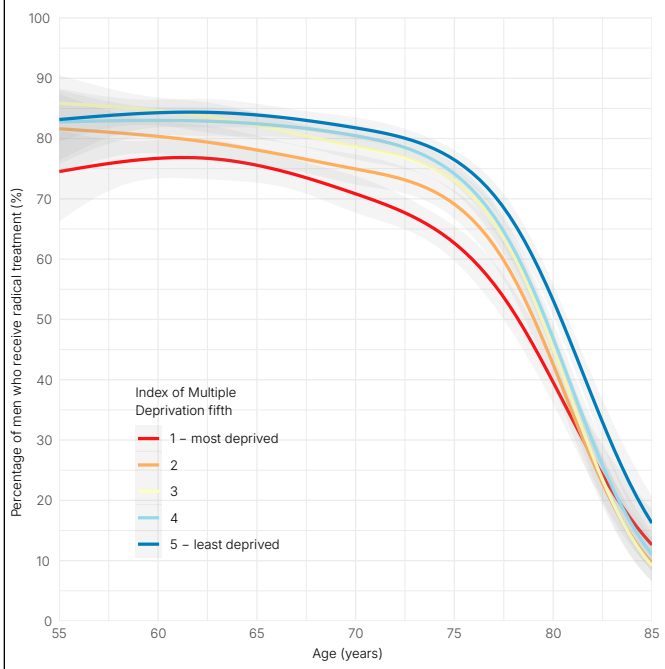
15 Data for Wales for this period were not available

Figure 8. Percentage of white and black men with high-risk/locally advanced cancer who received radical treatment, by age (in England, 1st January 2020 to 31st December 2021[16]).



Grey areas represent 95% confidence intervals.

Figure 9. Percentage of men with high-risk/locally advanced cancer who received radical treatment, by Index of Multiple Deprivation fifth by age (in England, 1st January 2020 to 31st December 2021[16]).



Grey areas represent 95% confidence intervals.

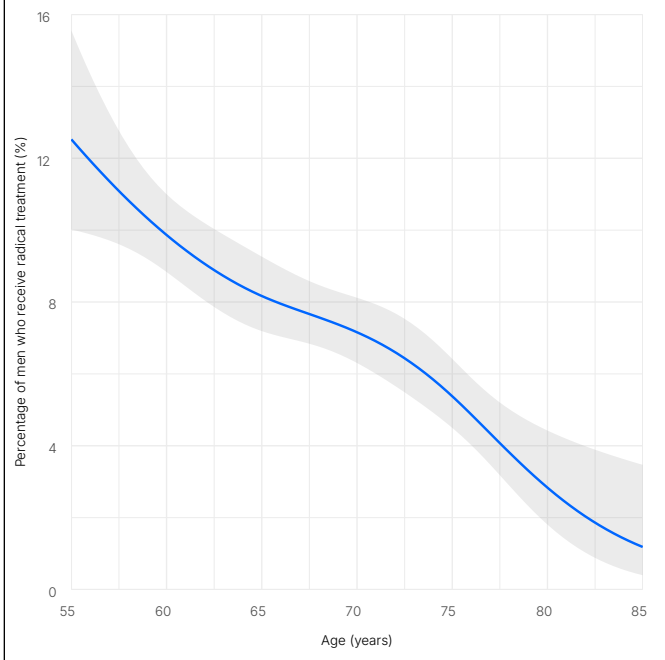
Low-risk cancer

In the analysis of 8,076 men with low-risk cancer, there was no evidence of inequalities in the percentages of men receiving radical treatment by ethnicity or deprivation. Figure 10 shows a strong association between these percentages and age, with younger patients more likely to receive treatment.

Summary of inequalities in diagnosis and treatment

In summary, 90% of prostate cancer diagnoses in England were in white men. Black populations had more cases per 1000 men than other ethnicities across all ages and stages at diagnosis. This was true in both 'black or black British –African' and 'black or black British – Caribbean' groups, with larger increases seen for the former group. White men aged 85 years and over were more often diagnosed with stage 4 cancer than younger groups. When analysing associations between the sociodemographic characteristics and treatment for high-risk/locally advanced disease, black men aged 55 to 70 years were less likely to receive radical treatment than white men, and men living in more deprived areas had lower treatment rates than those in less deprived areas. Potential overtreatment of low-risk cancer was more common in younger patients but was not associated with either ethnicity or deprivation.

Figure 10. Percentage of men with low-risk cancer who received radical treatment, by age (in England, 1st January 2020 to 31st December 2021[16]).



Grey areas represent 95% confidence intervals.

16 Small numbers of patients in Wales preclude this analysis for Wales

7. Commentary

The second State of the Nation report from the NPCA offers a concise overview of care for patients newly diagnosed with prostate cancer between 1st January 2019 and 31st December 2023 in England and Wales. Incomplete data collection hinders quality improvement, and we encourage clinicians to engage with improving accuracy of data collected. The findings of the report are intended to guide improvements in service availability and patient outcomes and can serve as a resource for patient charities and support groups.

The key findings include a 9%-26% increase in prostate cancer diagnoses compared to previous years and a corresponding increase in the number of men receiving radical radiotherapy or radical prostatectomy, this, at a time when staff shortages, particularly with respect to oncologists, radiographers, nurses and support staff are common. This phenomenon puts additional pressure on all aspects of prostate cancer care and suggests more resource will need to be allocated to prostate cancer to cope with a rising burden of disease[17]. The report shows that the results across our performance indicators are stable this year, though it points out ongoing variations in complication rates following radical treatment among providers, indicating opportunities for quality improvement. The special report on inequalities in this year's report underscores the need for targeted interventions to address sociodemographic and age-related disparities in diagnoses and management of both low and high-risk prostate cancer.

Looking ahead, the NPCA aims to continue enhancing prostate cancer care in England and Wales, with a focus on more frequent reporting through our quarterly reports and by working closely with professional bodies to drive quality improvement. Ongoing investigations include understanding regional variations in metastatic disease incidence and exploring under-treatment in metastatic prostate cancer, investigating long term cure rates from surgery, and outcomes of modern active surveillance.

17 The Lancet Commission on prostate cancer: planning for the surge in cases. James, Nicholas D et al. The Lancet, Volume 403, Issue 10437, 1683 - 1722