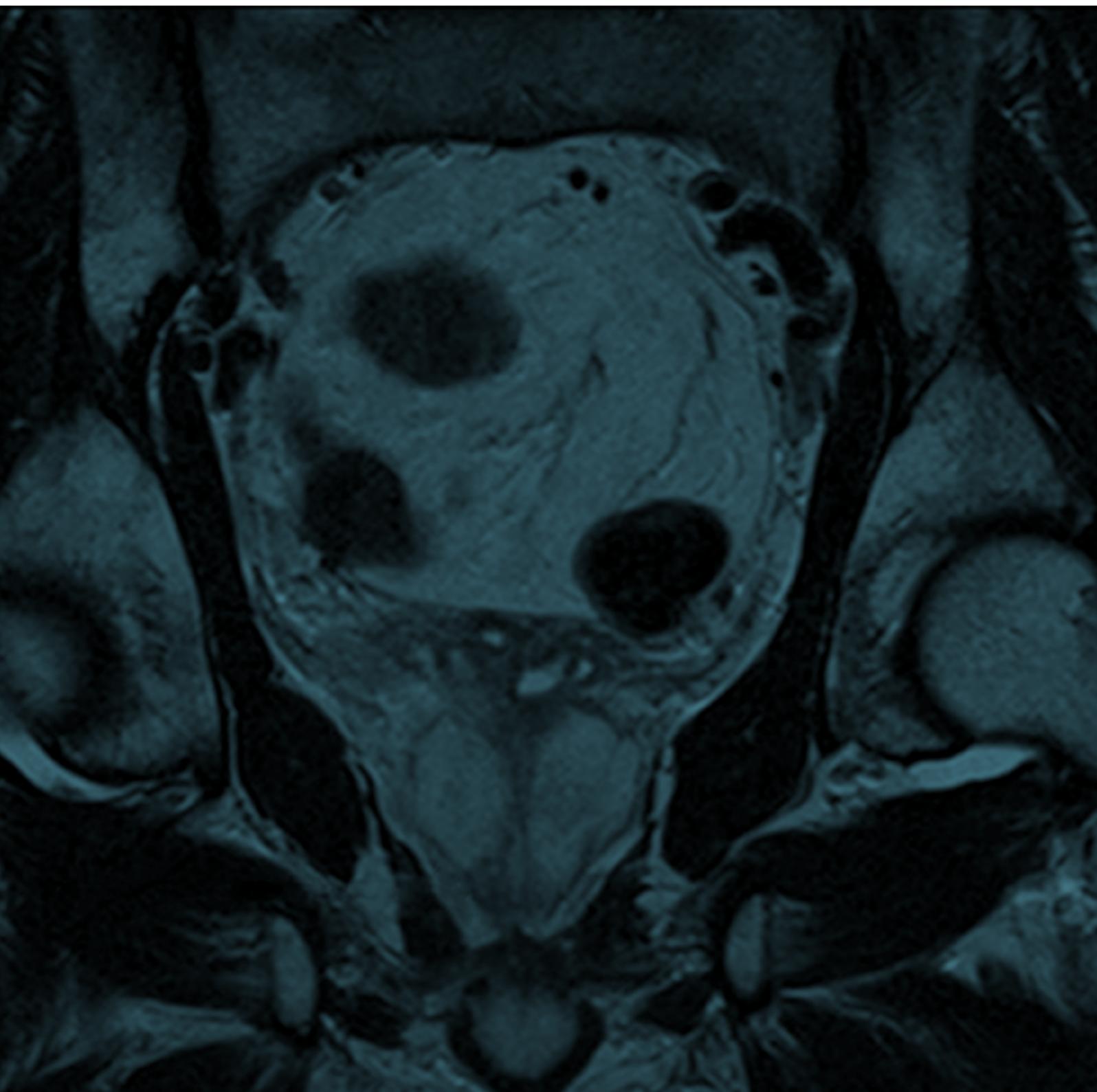

State of the Nation Report Appendix

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

Published January 2024



National Prostate Cancer Audit

NPCA State of the Nation Report Appendix

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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.

Commissioned by:



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, the Royal College of Nursing, and National Voices. 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>

Cancer Registration in England and Wales

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.

For patients diagnosed in Wales, the NPCA dataset is captured through a national system, Cancer Information System Cymru (CaNISC), after identification by hospital cancer services and uploaded via electronic MDT data collection systems to the Wales Cancer Network (WCN), Public Health Wales.

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1. Acknowledgements

On 1st July 2023, the NPCA moved into the National Cancer Audit Collaborating Centre (NATCAN) at the Clinical Effectiveness Unit (CEU) of the Royal College of Surgeons of England. NATCAN is a new national centre of excellence to strengthen NHS cancer services by looking at treatments and patient outcomes across the country. The new centre is commissioned by the Healthcare Quality Improvement Partnership (HQIP) on behalf of NHS England and the Welsh Government as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP).

The audit is a collaboration between the Clinical Effectiveness Unit (CEU) at the Royal College of Surgeons of England (RCS), the British Association of Urological Surgeons (BAUS) and the British Uro-oncology Group (BUG). We would like to thank BAUS and BUG for their continued professional guidance and for raising awareness amongst urological and uro-oncological colleagues.

We would also like to thank all urologists, uro-oncologists and their clinical and non-clinical teams at NHS Trusts in England and Health Boards in Wales who collected and submitted data for the audit. Your support is key to enabling the NPCA to evaluate the care that men receive following a diagnosis of prostate cancer in England and Wales and whether this care reflects recommended guidelines and quality standards.

The NPCA compares NHS Providers in England and Wales and provides these results to underpin quality improvement activities. We are grateful to the National Cancer Registration and Analysis Service (NCRAS) which is part of the National Disease Registration Service, NHS England (NHSE) and the Wales Cancer Network, Public Health Wales for supporting routine cancer data submissions from Trusts and Health Boards and for supplying data for this report. We particularly appreciate the efforts of the cancer intelligence analysts and cancer information specialists at NCRAS and the Wales Cancer Network who supplied the data during the COVID-19 pandemic.

We would also like to thank all members of the NPCA Patient and Public Involvement (PPI) Forum for providing advisory support and ensuring the voice of patients is central to the direction and delivery of the NPCA. A lay report summarising the key results will be developed in consultation with the NPCA PPI Forum and published in Spring 2024.

2. Supplementary tables: national results

Table S1. Number of patients diagnosed with prostate cancer in England by month and year from 1st January 2019 to 31st January 2023.

Month	Year					Total
	2019	2020	2021	2022	2023	
Jan	3,957	4,134	2,907	3,666	4,387	19,051
Feb	3,694	3,737	2,764	3,819	-	14,014
Mar	3,641	3,872	3,192	4,312	-	15,017
Apr	3,692	1,640	3,047	4,042	-	12,421
May	3,708	1,414	3,026	4,614	-	12,762
Jun	3,422	1,666	3,320	4,114	-	12,522
Jul	3,792	2,198	3,446	4,238	-	13,674
Aug	3,384	2,174	3,331	4,302	-	13,191
Sep	3,302	2,862	3,635	4,109	-	13,908
Oct	3,846	2,977	3,691	4,307	-	14,821
Nov	3,572	3,091	3,820	4,922	-	15,405
Dec	3,650	3,240	3,709	4,257	-	14,856
Q1 total	11,292	11,743	8,863	11,797	4,387	
Q2 total	10,822	4,720	9,393	12,770	-	
Q3 total	10,478	7,234	10,412	12,649	-	
Q4 total	11,068	9,308	11,220	13,486	-	
Total	43,660	33,005	39,888	50,702	4,387	171,642

Table S2. Number of patients diagnosed with prostate cancer in England and Wales by quarter (and by Cancer Alliance for England) from 1st January 2019 to 31st January 2023 (can be found in Section 3).

Table S3. Patient and diagnostic characteristics for men newly diagnosed with prostate cancer in England over the period of 1 January - 31 December in 2019, 2020, 2021 and 2022.

Data variable	2019		2020		2021		2022	
	N	%	N	%	N	%	N	%
No. of men with new diagnosis of prostate cancer	43,660		33,005		39,888		50,702	
Age								
<60	5,618	13%	3,932	12%	4,726	12%	6,411	13%
60-69	13,777	32%	10,223	31%	12,085	30%	16,339	32%
70-79	17,193	39%	13,406	41%	16,355	41%	20,496	40%
≥80	7,072	16%	5,444	16%	6,722	17%	7,456	15%
Total	43,660	100%	33,005	100%	39,888	100%	50,702	100%
Missing	0	(0%)	0	(0%)	0	(0%)	0	(0%)
IMD								
1 (least deprived)	10,752	25%	8,135	25%	9,743	24%	12,532	25%
2	10,108	23%	7,801	24%	9,206	23%	12,029	24%
3	9,345	21%	7,086	21%	8,470	21%	10,641	21%
4	7,534	17%	5,672	17%	7,043	18%	8,817	17%
5 (most deprived)	5,921	14%	4,311	13%	5,426	14%	6,683	13%
Total	43,660	100%	33,005	100%	39,888	100%	50,702	100%
Missing	0	(0%)	0	(0%)	0	(0%)	0	(0%)
Charlson score								
0	35,615	82%	27,009	82%	32,754	82%	42,890	85%
1	4,248	10%	3,137	10%	3,700	9%	3,944	8%
≥2	3,797	9%	2,859	9%	3,434	9%	3,868	8%
Total	43,660	100%	33,005	100%	39,888	100%	50,702	100%
Missing	0	(0%)	0	(0%)	0	(0%)	0	(0%)
Stage								
I	11,395	36%	8,465	35%	10,417	35%	14,574	38%
II	5,146	16%	3,671	15%	4,596	16%	6,154	16%
III	9,699	31%	7,044	29%	8,630	29%	10,964	29%
IV	5,484	17%	4,868	20%	5,757	20%	6,339	17%
Total	31,724	100%	24,048	100%	29,400	100%	38,031	100%
Missing	11,936	(27%)	8,957	(27%)	10,488	(26%)	12,671	(25%)
T stage								
T1	2,916	10%	1,740	8%	1,990	8%	2,192	6%
T2	13,358	48%	10,307	48%	12,920	49%	18,334	53%
T3	10,117	36%	7,847	37%	9,826	37%	12,555	36%
T4	1,629	6%	1,475	7%	1,699	6%	1,794	5%
Total	28,020	100%	21,369	100%	26,435	100%	34,875	100%
Missing	15,640	(36%)	11,636	(35%)	13,453	(34%)	15,827	(31%)
N stage								
N0	24,278	90%	18,279	88%	22,920	88%	30,889	89%
N1	2,847	11%	2,605	12%	3,263	12%	3,781	11%
Total	27,125	100%	20,884	100%	26,183	100%	34,670	100%
Missing	16,535	(38%)	12,121	(37%)	13,705	(34%)	16,032	(32%)
M stage								
M0	22,592	87%	17,073	84%	21,114	85%	28,781	87%
M1	3,520	13%	3,269	16%	3,861	15%	4,258	13%
Total	26,112	100%	20,342	100%	24,975	100%	33,039	100%
Missing	17,548	(40%)	12,663	(38%)	14,913	(37%)	17,663	(35%)

Table S4. Patient characteristics for men newly diagnosed with metastatic prostate cancer in England over the period of 1 January - 31 December in 2019, 2020, 2021 and 2022.

Data variable	2019		2020		2021		2022	
	N	%	N	%	N	%	N	%
No. of men with new diagnosis of metastatic prostate cancer	3,520		3,269		3,861		4,258	
Age								
<60	249	7%	235	7%	273	7%	307	7%
60-69	794	23%	698	21%	833	22%	939	22%
70-79	1,387	39%	1,351	41%	1,600	41%	1,782	42%
≥80	1,090	31%	985	30%	1,155	30%	1,230	29%
Total	3,520	100%	3,269	100%	3,861	100%	4,258	100%
Missing	0	(0%)	0	(0%)	0	(0%)	0	(0%)
IMD								
1 (least deprived)	740	21%	735	22%	845	22%	1,000	23%
2	829	24%	738	23%	851	22%	961	23%
3	785	22%	681	21%	860	22%	854	20%
4	622	18%	591	18%	706	18%	791	19%
5 (most deprived)	544	15%	524	16%	599	16%	652	15%
Total	3,520	100%	3,269	100%	3,861	100%	4,258	100%
Missing	0	(0%)	0	(0%)	0	(0%)	0	(0%)
Charlson score								
0	2,800	80%	2,651	81%	3,141	81%	3,475	82%
1	336	10%	299	9%	327	8%	346	8%
≥2	384	11%	319	10%	393	10%	437	10%
Total	3,520	100%	3,269	100%	3,861	100%	4,258	100%
Missing	0	(0%)	0	(0%)	0	(0%)	0	(0%)

Table S5. Number of patients diagnosed with prostate cancer in Wales by month and year from 1st April 2019 to 31st March 2022.

Month	Year				Total
	2019	2020	2021	2022	
Jan	-	239	137	197	573
Feb	-	240	163	165	568
Mar	-	166	144	200	510
Apr	172	72	182	-	426
May	215	81	181	-	477
Jun	189	121	202	-	512
Jul	271	156	221	-	648
Aug	178	129	168	-	475
Sep	228	185	202	-	615
Oct	228	145	188	-	561
Nov	227	179	210	-	616
Dec	208	173	170	-	551
Q1 total	-	645	444	562	
Q2 total	576	274	565	-	
Q3 total	677	470	591	-	
Q4 total	663	497	568	-	
Total	1,916	1,886	2,168	562	6,532

Table S6. Patient and diagnostic characteristics for men newly diagnosed with prostate cancer in Wales over the period of 1 April - 31 December in 2019, and over the period of 1 January - 31 December in 2020 and 2021.

Data variable	2019		2020		2021	
	N	%	N	%	N	%
No. of men with new diagnosis of prostate cancer	1,916		1,886		2,168	
Age						
<60	227	12%	206	11%	190	9%
60-69	681	36%	674	36%	719	33%
70-79	727	38%	761	40%	930	43%
≥80	281	15%	245	13%	329	15%
Total	1,916	100%	1,886	100%	2,168	100%
Missing	0	(0%)	0	(0%)	0	(0%)
IMD						
1 (least deprived)	225	14%	208	14%	222	13%
2	308	19%	269	18%	328	20%
3	328	21%	363	24%	361	22%
4	357	23%	352	23%	416	25%
5 (most deprived)	366	23%	345	22%	330	20%
Total	1,584	100%	1,537	100%	1,657	100%
Missing	332	(17%)	349	(19%)	511	(24%)
Charlson score						
0	1,626	85%	1,508	80%	1,707	79%
1	203	11%	256	14%	327	15%
≥2	87	5%	122	6%	134	6%
Total	1,916	100%	1,886	100%	2,168	100%
Missing	0	(0%)	0	(0%)	0	(0%)
Risk group						
Low risk	442	25%	388	22%	417	21%
Intermediate	531	29%	524	30%	636	31%
Locally advanced	583	32%	548	31%	606	30%
Metastatic	246	14%	316	18%	371	18%
Total	1,802	100%	1,776	100%	2,030	100%
Missing	114	(6%)	110	(6%)	138	(6%)
T stage						
T1	289	16%	196	11%	232	11%
T2	892	49%	890	51%	1,026	50%
T3	496	27%	493	28%	592	29%
T4	138	8%	153	9%	186	9%
Total	1,815	100%	1,732	100%	2,036	100%
Missing	101	(5%)	154	(8%)	132	(6%)
N stage						
N0	1,601	91%	1,493	88%	1,653	85%
N1	159	9%	203	12%	286	15%
Total	1,760	100%	1,696	100%	1,939	100%
Missing	156	(8%)	190	(10%)	229	(11%)
M stage						
M0	1,398	85%	1,210	79%	1,342	78%
M1	246	15%	317	21%	371	22%
Total	1,644	100%	1,527	100%	1,713	100%
Missing	272	(14%)	359	(19%)	455	(21%)

Table S7. Number of men undergoing radical prostatectomies (RP) in England and Wales by quarter (and by Cancer Alliance for England) from 1st January 2019 to 31st December 2022 (can be found in Section 3).

Table S8. Treatment characteristics for men receiving radical radiotherapy or prostatectomy in England over the period of 1 January 2022 and 31 December 2022 and in Wales over the period of 1 January 2021 and 31 December 2021.				
Data variable	England		Wales ¹	
	N	%	N	%
Time period covered	1 Jan 2022 – 31 Dec 2022		1 Jan 2021 - 31 Dec 2021	
Radical prostatectomy information				
No. of men undergoing radical prostatectomy	7,459		221	
Prostatectomy type				
Robotic	7,220	97%	159	78%
Laparoscopic	91	1%	35	17%
Open	148	2%	11	5%
Total	7,459	100%	205	100%
Missing	0		16	(7%)
Lymphadenectomy performed				
No	6,408	86%	81	46%
Yes	1,051	14%	94	54%
Total	7,459	100%	175	100%
Missing	0		46	(21%)
Radical radiotherapy information				
No. of men undergoing radical radiotherapy	16,343		831	
Radiotherapy modality				
Intensity Modulated Radiation Therapy	15,071	92%	660	99%
3D conformal	1,272	8%	4	1%
Total	16,343	100%	664	100%
Missing	0		167	(20%)
Planned radiotherapy region				
Prostate and/or seminal vesicles	12,773	80%	486	72%
Whole pelvis incl. lymph nodes	3,170	20%	191	28%
Total	15,943	100%	677	100%
Missing	400	(2%)	154	(19%)

¹Wales data includes only two thirds of patients from Cardiff and Vale University Health Board due to data unavailability

Table S9. Number of patients receiving radiotherapy (RT) in England and Wales by quarter (and by Cancer Alliance for England) from 1st January 2019 to 31st December 2022 (can be found in Section 3).

Table S10. Data completeness for selected data items for men newly diagnosed with prostate cancer in England between 1st April 2020 and 31st March 2021 and in Wales between 1st April 2021 and 31st March 2022.				
Data variable	England		Wales	
	N	%	N	%
<i>Time period covered</i>	1 Apr 2020 - 31 March 2021		1 Apr 2021 - 31 March 2022	
Diagnostic and staging variables				
No. of men with new diagnosis of prostate cancer	31,775 [NCRD]		2,286 [NPCA]	
Performance status completed	18,902 [NCRD]	59%	2,286 [NPCA]	100%
Biopsy performed	† - [HES APC]	-	2,283 [NPCA]	100%
PSA completed	19,285 [NCRD]	61%	1,930 [NPCA]	84%
Gleason score completed	24,833 [NCRD]	78%	1,930 [NPCA]	84%
TNM completed	23,765 [NCRD]	75%	1,648 [NPCA]	72%

Acronyms: NCRD = National Cancer Registration Dataset; NPCA = National Prostate Cancer Audit dataset; HES APC = Hospital Episode Statistics Admitted Patient Care; PSA = Prostate Specific Antigen; TNM = Tumour, Nodes, Metastases Classification of Malignant Tumours.

† Data completeness not applicable to England as biopsy performed is sourced from HES APC which doesn't allow calculation of data completeness.

When comparing data completeness of the NCRD for men diagnosed between 1st April 2020 and 31st March 2021 in England (Table S10) to the most recently published Gold Standard data (NPCA AR2020), there was an increase in recording of performance status (PS, data completeness 52% to 59%), but for all other variables: prostate specific antigen level (PSA), Gleason score (GS) and TNM staging, we observed a decrease in data completion (68% to 61%, 84% to 78% and 79% to 75% respectively). Data completeness remained high overall in Wales between 1st April 2021 and 31st March 2022 compared to the previous year, with no notable changes for PS, PSA, GS and TNM (100%: no change), 83% to 84%, 83% to 84% and 70% to 72% respectively). Data relating to the type of biopsy performed returned to 100% following a low of 48% in the previous year (NPCA AR2022).

Table S11. Patient and diagnostic characteristics for men newly diagnosed with prostate cancer in England between 1st April 2020 and 31st March 2021 and in Wales between 1st April 2021 and 31st March 2022.

Data variable	England		Wales	
	N	%	N	%
<i>Time period covered</i>	1 Apr 2020 - 31 March 2021		1 Apr 2021 - 31 March 2022	
No. of men with new diagnosis of prostate cancer	31,775		2,286	
Age				
<60	3,693	12%	196	9%
60-69	9,739	31%	748	33%
70-79	12,861	40%	987	43%
≥80	5,482	17%	355	16%
Total	31,775	100%	2,286	100%
Missing	0	(0%)	0	(0%)
Performance status				
0	13,184	70%	1,388	61%
1-2	5,222	28%	829	36%
≥3	496	3%	69	3%
Total	18,902	100%	2,286	100%
Missing	12,873	(41%)	0	(0%)
Charlson score				
0	23,115	73%	1,776	78%
1	5,603	18%	360	16%
≥2	3,057	10%	150	7%
Total	31,775	100%	2,286	100%
Missing	0	(0%)	0	(0%)
Prostate Specific Antigen (PSA)				
<10	9,118	47%	1,068	55%
10-19	3,853	20%	423	22%
≥20	6,314	33%	439	23%
Total	19,285	100%	1,930	100%
Missing	12,490	(39%)	356	(16%)
Gleason score				
6	4,527	18%	557	29%
7	12,851	52%	936	48%
≥8	7,455	30%	437	23%
Total	24,833	100%	1,930	100%
Missing	6,942	(22%)	356	(16%)
T stage				
T1	3,047	12%	231	11%
T2	11,705	45%	1,059	49%
T3	9,730	37%	650	30%
T4	1,686	6%	219	10%
Total	26,168	100%	2,159	100%
Missing	5,607	(18%)	127	(6%)
N stage				
N0	21,663	86%	1,723	84%
N1	3,689	14%	330	16%
Total	25,630	100%	2,053	100%
Missing	6,145	(19%)	233	(10%)

Acronyms: PSA = Prostate Specific Antigen; TNM = Tumour, Nodes, Metastases Classification of Malignant Tumours.

Table S11. Patient and diagnostic characteristics for men newly diagnosed with prostate cancer in England between 1st April 2020 and 31st March 2021 and in Wales between 1st April 2021 and 31st March 2022.				
Data variable	England		Wales	
	N	%	N	%
<i>Time period covered</i>	1 Apr 2020 - 31 March 2021		1 Apr 2021 - 31 March 2022	
No. of men with new diagnosis of prostate cancer	31,775		2,286	
M stage				
M0	21,663	79%	1,377	77%
M1	5,630	21%	421	23%
Total	27,293	100%	1,798	100%
<i>Missing</i>	4,482	(14%)	488	(21%)
Risk group				
Low risk	3,346	12%	422	20%
Intermediate	8,010	29%	641	30%
High-risk/locally advanced	11,089	39%	667	31%
Metastatic	5,630	20%	421	20%
Total	28,075	100%	2,151	100%
<i>Insufficient</i>	3,700	(12%)	135	(6%)
Cambridge Prognostic Group (CPG)				
CPG1	3,695	16%	426	20%
CPG2	3,123	14%	419	20%
CPG3	1,862	8%	220	10%
CPG4	3,014	13%	271	13%
CPG5	4,337	19%	247	12%
Nodes/Nodal disease	1,443	6%	102	5%
Metastatic	5,630	24%	421	20%
Total	23,104	100%	2,106	100%
<i>Insufficient</i>	8,671	(27%)	180	(8%)

Acronyms: PSA = Prostate Specific Antigen; TNM = Tumour, Nodes, Metastases Classification of Malignant Tumours.

The English cohort for performance indicators 1, 2 and 3 were diagnosed from April 2020 - March 2021 (n= 31,775) (Table S11). The numbers are considerably lower than in previous years, due to the impact of the Covid-19 pandemic. 40% were diagnosed between the ages of 70 and 79 and nearly a fifth (17%) were 80 or more. 28% of men diagnosed had at least one comorbidity and, where performance status was recorded, 31% had reduced performance (≥ 1). It was possible to calculate the Cambridge Prognostic Group in 73% of patients: just under a third of these were classified as CPG4 or 5 and 16% CPG1. In Wales, total diagnoses for April 2021- March 2022 were 2,286 (Table S11), a substantially higher figure than the 1,685 patients diagnosed the previous year, the first year of the pandemic in the UK. Most men were diagnosed in their seventies or older (59%). 23% of patients had at least one comorbidity and 39% had a reduced performance (≥ 1). 20% of patients were CPG1, 13% were CPG4 and 12% were CPG5.

3. Supplementary tables: Results by Cancer Alliance

See supplementary Excel spreadsheet called "Section 3. Cancer Alliance Tables".