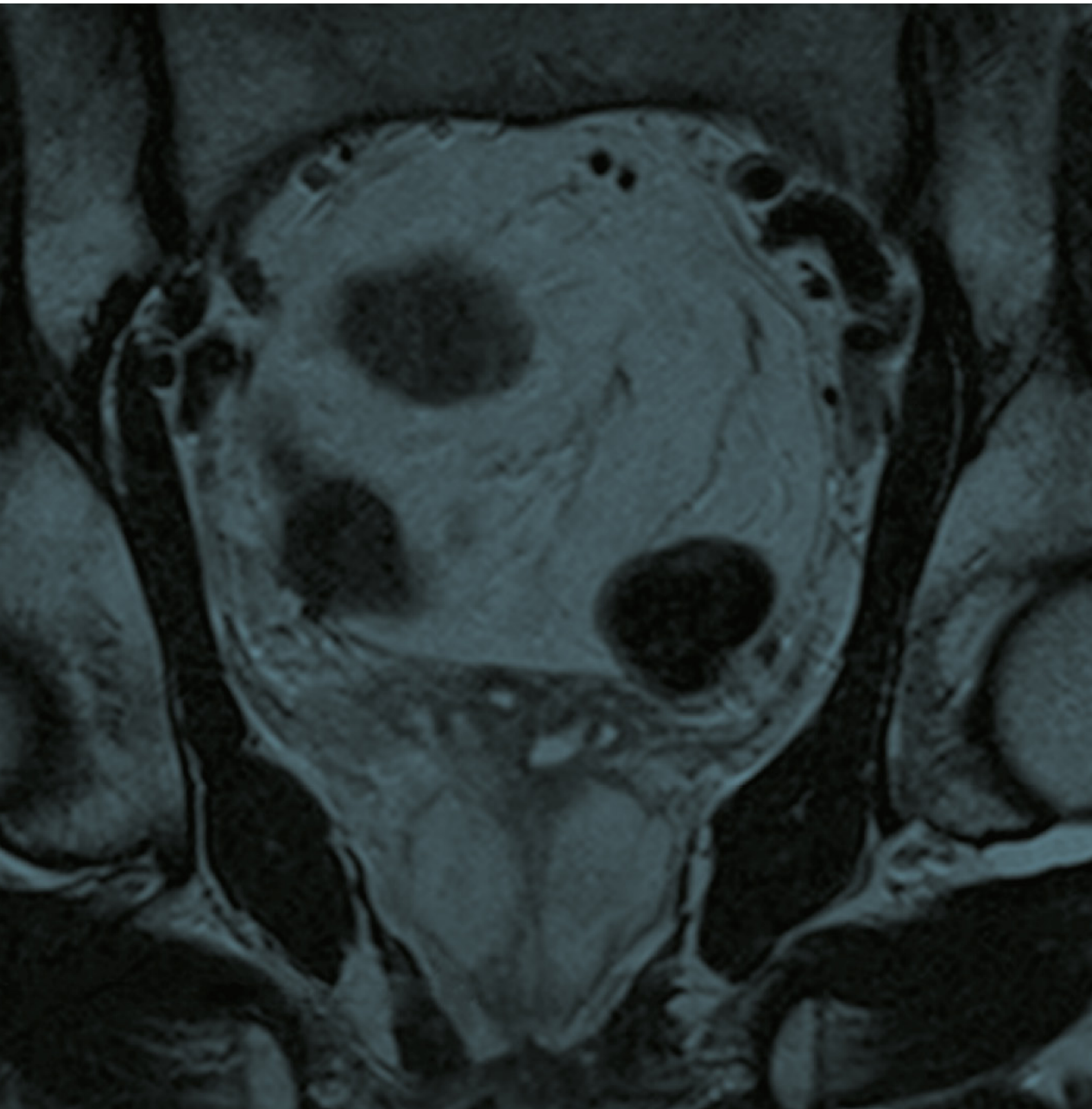
NPCA
National Prostate Cancer Audit

NATCAN
National Cancer Audit Collaborating Centre

NPCA State of the Nation Report

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



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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. Registered Charity no: 1116828

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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 Network 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.

1. Introduction

The aim of the National Prostate Cancer Audit (NPCA) is to evaluate the patterns of care and outcomes for patients with prostate cancer in England and Wales, and to support services to improve the quality of care. National guidelines underpin the management of patients with prostate cancer and the NPCA evaluates current patterns of care against these standards including guidance and quality standards from the National Institute for Health and Care Excellence (NICE).

The information presented here reports on prostate cancer services in England and Wales, showing variation across providers. We recommend that these data provide a starting point for all for reflection on the reasons behind variation in practice and outcome, and that this report be used to identify such areas. There are additional supplementary materials that accompany this document available on the NPCA website at: www.npca.org.uk. These include individual NHS provider results (data completeness and performance indicator results at the provider/Specialist Multi Disciplinary Team [SMDT]-level), a description of the audit methods and resources to support local quality improvement initiatives, such as an action plan template.

For the first time since the NPCA Annual Report 2020, we report results from all six of our performance indicators for both England and Wales, using the most recently available data to the audit (Table 1). Four performance indicators:

- proportion of men with low-risk localised cancer undergoing radical prostate cancer treatment
- proportion of men with high-risk/locally advanced disease undergoing radical prostate cancer treatment
- proportion of patients experiencing at least one genitourinary (GU) complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy (RP)
- proportion of patients receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity up to 2 years following radical prostate radiotherapy (RT)

require risk stratification using the Gleason score, which is not currently available in the Rapid Cancer Registration Dataset (RCRD) used by the NPCA for recent Annual Reports (2021 and 2022). Therefore, to include these, we have used the National Cancer Registration Dataset (NCRD) in England. The most recently available data to the audit from the NCRD in England is between 1st April 2020 and 31st March 2021.

In Wales, the data we receive includes the Gleason score, and the most recently available data to the audit covers patients newly diagnosed with prostate cancer between 1st April 2021 and 31st March 2022.

Previous analysis has shown that RCRD underestimated the proportion of men diagnosed with metastatic disease when compared to the NCRD, therefore we have used the NCRD in England to report this indicator. This means we report on different time frames for England and Wales. The proportion of patients who had an emergency readmission within 90 days of radical prostate cancer surgery however can be accurately calculated using the RCRD. Therefore, to compare rates between England and Wales, we selected the same timeframe for this indicator.

To report on the impact of and recovery from Covid-19 for prostate cancer services, we use the most recently available data in England from the RCRD between 1st January 2022 and 31st January 2023, and in Wales between 1st April 2021 and 31st March 2022.

Table 1: Cohorts reported on and datasets used for each section by country

	England	Wales
	Performance Indicator (PI)	
Disease presentation: • Diagnosed with metastatic disease (PI1) Treatment allocation: • Low-risk patients receiving radical treatment (PI2) • High-risk patient receiving radical treatment (PI3)	NCRD* Patients diagnosed between: 01.04.20-31.03.21	CaNISC** Patients diagnosed between: 01.04.21-31.03.22
Outcomes of treatment: short-term, • Readmission within 90 days (PI4)	RCRD*** Patients who underwent a radical prostatectomy between: 01.04.21-31.03.22	CaNISC Patients who underwent a radical prostatectomy between: 01.04.21-31.03.22
Outcomes of treatment: medium-term, • GU complication (PI5) • GI (gastrointestinal) complication (PI6)	NCRD Patients who received radical treatment between: 01.09.19-31.08.20	CaNISC Patients who received radical treatment between: 01.09.19-31.08.20
	National picture/recovery from Covid-19	
National picture / impact of Covid-19 time period	RCRD Patients diagnosed between: 01.01.19-31.01.23	CaNISC Patients diagnosed between: 01.01.19-31.03.22

*NCRD: National Cancer Registration Dataset; **Cancer Network Information System Cymru; *** RCRD: Rapid Cancer Registration Dataset

2. Key messages

1. The proportion of men diagnosed with high-risk/locally advanced prostate cancer undergoing radical prostate cancer treatment remained stable at 69% in England and Wales, (57-80% by SMDT n=46, in England) when comparing to 2019 (71% and 39-82% by SMDT).
2. The proportion of men diagnosed with low-risk localised prostate cancer undergoing radical prostate cancer treatment was 8% in England and 9% in Wales (0-29% by SMDT, n=46, in England). Comparison with previous years cannot be made since we have updated our low-risk definition to include patients with T stage 2 disease.
3. There was an increase in men newly diagnosed with prostate cancer in 2022 in England (27% more in 2022 compared to 2021 and 14% more compared to 2019) and in 2021 in Wales (15% more in 2021 compared to 2020 but 15% fewer compared to 2019).
4. There was an increase in men newly diagnosed with prostate cancer treated with either radical prostatectomy or radiotherapy (RT) in 2022 in England (14% and 10% increase respectively in Q4 2022 compared to same quarter in 2019)[1].
5. The proportion of patients experiencing a genitourinary (GU) or gastrointestinal (GI) complication within two years of radical treatment remained stable in England and Wales at 8% (on average), when comparing to 2015-2019 (10% on average). The variation in GI toxicity post RT observed between centres has decreased year on year since reporting commenced in 2019.
6. There were changes in some aspects of prostate cancer treatment, including an increased utilisation of ultra-hypofractionated radiotherapy (from 0.3% of patients in 2019 to 5% in 2022 receiving ultra-hypofractionation) resulting in 90% of RT patients receiving hypofractionated or ultra-hypofractionated radiotherapy, and a shift in the systemic agents used (26% of patients received apalutamide by Q3 2022).

[1] Due to the unavailability of one third of data from Cardiff and Vale UHB, a large provider of services in Wales, comparisons to previous years would be inaccurate.

3. Recommendations

Recommendation	Audience	Results from 2023 report	Results from previous reports	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 variables	NHS England and Health Boards in Wales Prostate cancer teams (local and specialist MDTs) within NHS Trusts	Performance status: England (59%) Wales (100%) TNM: England (75%) Wales (72%) For both items, cohort for England: NCRD 1st April 2020-31st March 2021 and cohort for Wales: 1st April 2021-31st March 2022	Comparing to most recently published NCRD (NPCA AR2020): Performance status: Increase: England (52%) No change: Wales (100%) TNM: Decrease: England (79%) Increase: Wales (70%)	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. Improved completeness of this dataset is required to ensure quarterly reporting. 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	NHS England and Health Boards in Wales Professional bodies (Royal College of Radiologists, British Association of Urological Surgeons, Prostate Cancer UK)	8% of men diagnosed with low-risk localised cancer in England and 9% in Wales underwent radical prostate cancer therapy within 12 months of diagnosis	N/A*	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. NICE Guideline [NG131], 2019 1.3.8 Offer a choice between active surveillance, radical prostatectomy or radical radiotherapy to people with low-risk localised prostate cancer for whom radical treatment is suitable.
3. Investigate why men with high-risk/locally advanced disease are not considered for radical treatment and aim for 75% offered radical treatment	NHS England and Health Boards in Wales Cancer Alliances (CA)	69% of men diagnosed with locally-advanced prostate cancer in England and Wales underwent radical treatment within 12 months of diagnosis in England and Wales. Variation of 57-80% across SMDTs Cohort for England: NCRD 1st April 2020-31st March 2021 and cohort for Wales: 1st April 2021-31st March 2022	NPCA AR2020 71% of men diagnosed with locally-advanced prostate cancer underwent radical treatment within 12 months of diagnosis in England and Wales. Variation of 39-82% across SMDTs.	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 people with high-risk localised prostate cancer when it is likely the person's cancer can be controlled in the long term. Ongoing collaboration with NHS Cancer Programme and Cancer Alliance Treatment Variation Working Group to achieve as a target for this indicator that 75% of men diagnosed with locally-advanced prostate cancer should receive radical treatment within 12 months of diagnosis.

*Change in definition of low-risk disease in NPCA SotN Report precludes comparisons to previous years

Recommendation	Audience	Results from 2023 report	Results from previous reports	National Guidance
4. Review variation between providers in rate of GU/GI complications and 90 day readmission rates	NHS England and Health Boards in Wales Professional bodies (Royal College of Radiologists, British Association of Urological Surgeons) Cancer Alliances	Variation between providers for GU complications post radical prostatectomy is: 1%-31%; for GI complications post radical radiotherapy is 3%-17%; for emergency readmission within 90 days of surgery is: 3-37% 90 day readmission rate - cohort for England: RCRD 1st April 2020-31st March 2021 and cohort for Wales: 1st April 2021-31st March 2022 GU/GI complications rate: cohort for both England and Wales: 1st September 2019-31st August 2020	NPCA AR2022 Variation between providers for GU complications post radical prostatectomy was: 0%-36%; for GI complications post radical radiotherapy was: 2%-23%; for 90-day emergency readmission rate following radical prostatectomy was: 3 – 30%	Royal College of Radiologists Guidance: "Radiotherapy target volume definition and peer review"
5. Cancer Alliances should review processes of care to ensure equitable implementation of new technologies and pathways of care as evidence evolves	NHS England and Health Boards in Wales Professional bodies (Royal College of Radiologists, British Association of Urological Surgeons) Cancer Alliances	The RT fractionation schedules delivered in England and Wales during 2019-2022 showed a steady decrease in conventional RT which was replaced by a 7% increase in hypofractionated RT (77% to 84%) and a 5% increase in ultra-hypofractionated RT (from 0.3% to 5%). The use of systemic therapy in prostate cancer has changed over time, reflecting the change in landscape of treatment options available (e.g. prior to 2021 apalutamide had not been used but by Q3 of 2022, 26% of patients starting systemic therapy received apalutamide)	N/A	This recommendation is based on NHS England "Roadmap for integrating specialised services within Integrated Care Systems" 5.7

NPCA
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Diagnosis

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

50,702 men were **diagnosed** with prostate cancer in England in 2022

2,168 men were **diagnosed** with prostate cancer in Wales in 2021

27% **increase** compared with 39,888 men in 2021

15% **increase** compared with 1,886 men in 2020

This may be explained by the reporting being in the Covid-19 recovery period

Disease presentation

For men diagnosed between April 2020 - March 2021 in England and between April 2021 - March 2022 in Wales

19% of men presented with **metastatic** disease in both England and Wales

Treatment allocation

For men diagnosed between April 2020 - March 2021 in England and between April 2021 - March 2022 in Wales

Low-risk*, localised disease

8% E
9% 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*

High-risk/locally advanced disease

69% E
69% W
of men had radical treatments in England (E) and Wales (W)

Treatment outcomes

For men undergoing surgery between April 2021 - March 2022 in England and Wales

13% of men were **readmitted** within 3 months **following surgery** in England

9% of men were **readmitted** within 3 months **following surgery** in Wales

For men undergoing radical treatment between September 2019 - August 2020 in England and Wales

7% 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
5% 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)

For the first time since the NPCA Annual Report 2020, we report results from all six of our performance indicators for both England and Wales, using the most recently available data to the audit. For disease presentation and treatment allocation, this corresponds to different time periods in England and Wales.

5. National picture and regional variation in the patterns of prostate cancer care during the Covid-19 pandemic and its recovery[2]

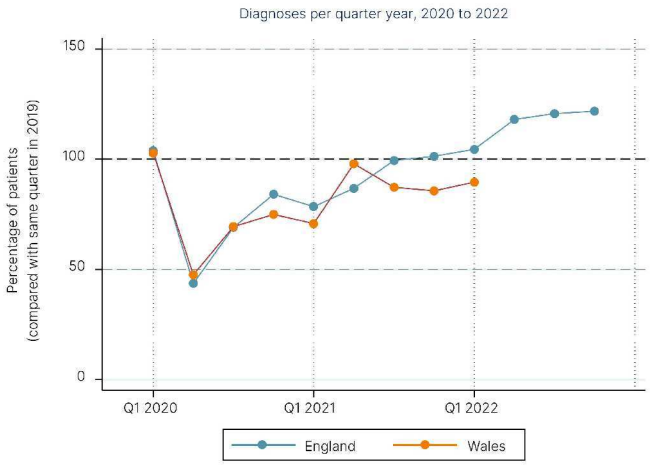

Figure 1. The number of men newly diagnosed with prostate cancer 2020-2022 presented as a proportion of the diagnoses per quarter in 2019 for England and Wales.

Note: The 100% line indicates numbers equal to those in 2019, above the line represents an increase and below a decrease. Quarters are by calendar year (e.g., Q1 2020: Jan-March 2020).

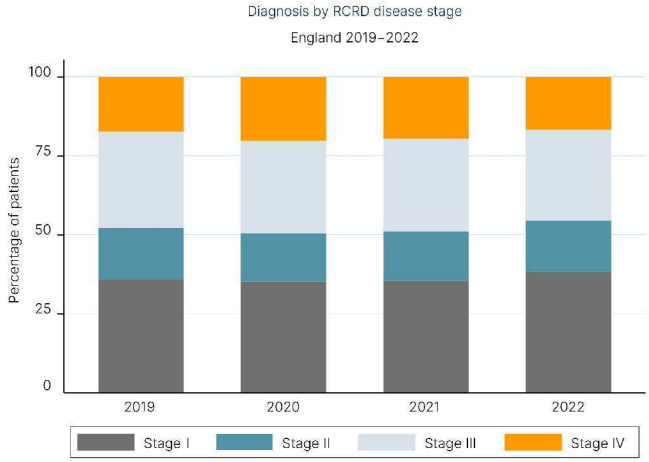

Figure 2. The distribution of prostate cancer diagnoses by cancer stage in England by year from 2019 to 2022.

Note: where stage is unknown, it has been excluded from this Figure. Table S3 details number of patients with missing stage information.

In England between 1st January 2022 and 31st December 2022, the number of men newly diagnosed with prostate cancer (n=50,702) reached ~120% of diagnoses for the last three quarters of that year when compared to the same quarters in 2019. This was consistent across Cancer Alliances (Figure 1, Tables S1 and S2). When analysing the clinical profile of patients diagnosed during this time period in England (Table S3) in the RCRD, we observed a consistent distribution of patients' characteristics such as age at diagnosis, social deprivation (IMD), Charlson comorbidity score, and stage. 13% of patients were <60 years at diagnosis, 45% of patients were <70 years and 15% of patients were aged 80 years or more. Of note, the proportion of men with metastatic disease at first presentation was much higher in those ≥80 years than in younger people (Table S4). When looking at the cancer stage of patients diagnosed by year between 2019-2022 (Figure 2), the stage distribution was unchanged in 2022 when compared to 2019.

In Wales, the number of men newly diagnosed with prostate cancer between 1st January 2021 and 31st December 2021, n=2,168 (Figure 1, Table S5), almost returned to levels seen in 2019 (90% in Q1 2022). The clinical profile of patients in 2021 considering age at diagnosis, social deprivation (IMD), Charlson comorbidity score, and stage, was similar both to 2019 and 2020 (Table S6).

[2]Wales data includes only two-thirds or patients from Cardiff and Vale University Health Board

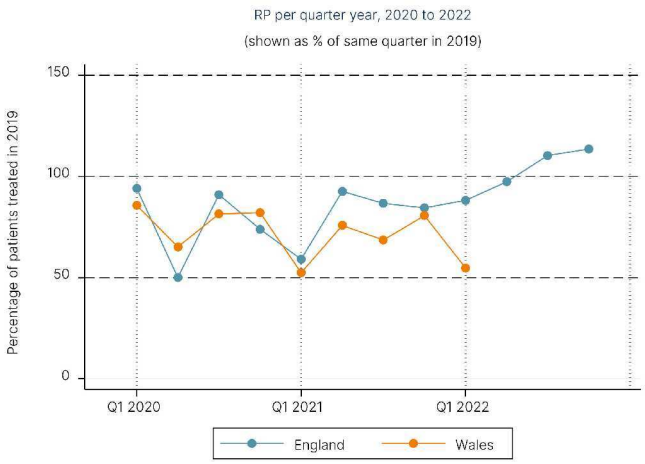

Figure 3. The number of radical prostatectomies (RPs) 2020-2022 presented as a proportion of the RPs per quarter in 2019 for England and Wales.

Note: The 100% line indicates numbers equal to those in 2019, above the line represents an increase and below a decrease. RP = radical prostatectomy.
Quarters are by calendar year (e.g., Q1 2020: Jan-March 2020).

In England, between 1st January 2022 and 31st December 2022, we observed a steady increase of RP performed by quarter, reaching 114% in Q4 2022 compared to same quarter in 2019 (Figure 3, Table S7). Lymphadenectomy was performed in only 14% cases (Table S8). In Wales, between 1st January 2021 and 31st March 2022, we observed a steady increase of RP performed by quarter, reaching 81% in Q4 2021 compared to the same quarter in 2019 (Figure 3, Tables S7 and S8), the fall in Q1 2022 may be explained by an unusually high number of procedures in Q1 2019. Lymphadenectomy was performed in just over half of the 175 procedures with information captured (54%, Table S8).

Figure 4. The number of patients receiving RT 2020-2022 presented as a proportion of the RT per quarter in 2019 for England and Wales.

Note: The 100% line indicates numbers equal to those in 2019, above this line shows an increase compared to 2019, and below the line a decrease. RT = radiotherapy.
Quarters are by calendar year (e.g., Q1 2020: Jan-March 2020).

In England, between 1st January 2022 and 31st December 2022, levels of RT reached 110% by the last three quarters of 2022, compared to the same period in 2019, and this trend was consistent across Cancer Alliances (Figure 4, Table S9). The most prevalent radiotherapy modality for the 16,343 patients undergoing radical radiotherapy and having data captured was Intensity Modulated Radiation Therapy (IMRT), 92% of treatments (Table S8). For 20% of patients undergoing RT (3,170/15,943) procedures, the planned radiotherapy region included the pelvic lymph nodes. In Wales, between 1st January 2021 and 31st March 2022, we also observed a steady increase in patients starting RT up to Q3 2021, reaching 95% of 2019 levels for that same quarter before returning to 90% in Q1 2022. The most prevalent radiotherapy modality for the 664 patients undergoing radical radiotherapy and having data captured was IMRT, 99% of treatments (Table S8). For 28% undergoing RT (191/677) procedures, the planned radiotherapy region included the pelvic lymph nodes.

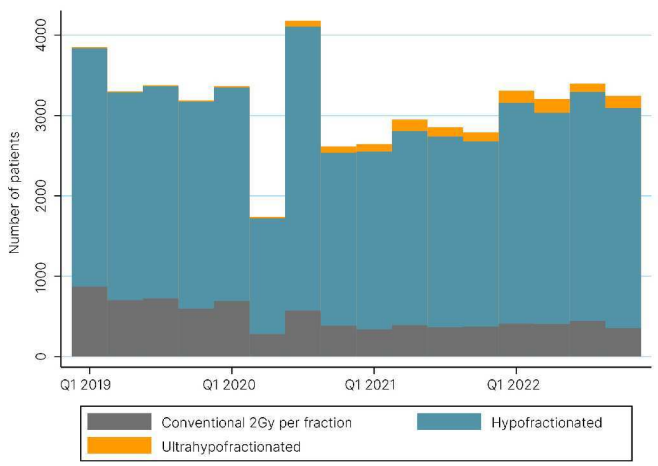

Figure 5: The number of patients starting different types of radiotherapy in England and Wales, by quarter from January 2019 to December 2022.

Note: Conventional 70Gy in 35 fractions
Hypofractionated 50-60Gy in 20 fractions
Ultra-hypofractionated 35Gy in 5 fractions
Quarters are by calendar year (e.g., Q1 2020: Jan-March 2020).

Sub-analysis of the RT fractionation schedules delivered in England and Wales during 2019-2022 (Figure 5) showed a steady decrease in conventional RT (typically 74Gy in 37 fractions, or similar) from 22.6% total RT delivered in Q1 2019 to 10.8% in Q4 2022. This was replaced over the same time by a 7% increase in hypofractionated RT (50-60Gy in 20 fractions, from 77% to 84%), already the most frequently delivered type of RT, and a 5% increase in ultra-hypofractionated RT (35Gy in 5 fractions, from 0.3% to 5%). These findings demonstrate a rapid uptake of evidence-based fractionation schedules[3] in the NHS since the pandemic.

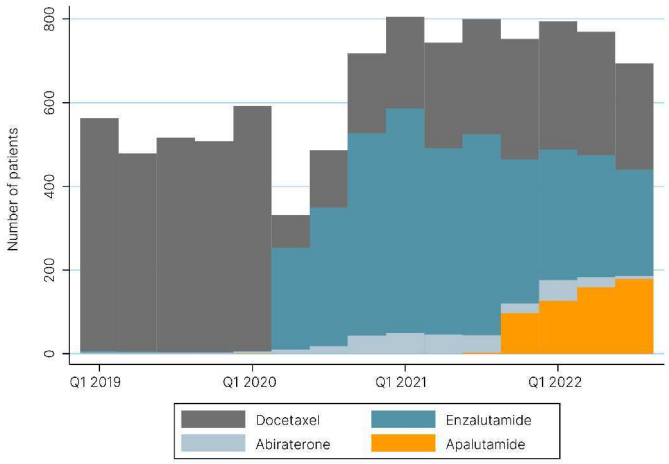

Figure 6: The number of patients starting different types of systemic therapy in England, by quarter from 1st January 2019 to 30th September 2022.

Note: Data for Wales is unavailable
Quarters are by calendar year (e.g., Q1 2020: Jan-March 2020)

For men diagnosed in England between 2019-2022 and starting systemic therapy, we tracked the changing usage of docetaxel, abiraterone, enzalutamide and apalutamide by quarter (Figure 6). The number of patients starting apalutamide steadily increased from Q3 2021, prior to which it was used infrequently and accounts for the decreased use of enzalutamide over that period. By Q3 2022, 26% of patients starting systemic therapy received apalutamide, 37% received docetaxel, following a large reduction in use at the start of the pandemic (Q2-Q3 2020), and 37% received enzalutamide. The use of abiraterone had always been low, between 3-6% Q2 2020-Q1 2022 but had fallen to 1% Q3 2022, despite the patent for abiraterone running out in October 2022 and therefore a generic, more affordable version being available.

Overall, in England in the most recent audit period up to January 2023 and in Wales up to March 2022, we observed a substantial increase in diagnoses and treatments delivered, particularly radical prostatectomies and radiotherapy, when compared to previous audit periods which were affected by the Covid-19 pandemic but also in England, when compared to 2019, pre-pandemic. We did not observe a change in the clinical or demographic profile of patients diagnosed, however. In England, there continues to be a transition to hypofractionated radiotherapy fractionations. In addition, over the most recent audit period, we found a steady increase in the use of apalutamide, which by Q3 2022 was being given to 26% of patients starting systemic therapy, with a simultaneous reduction in the prescription of enzalutamide (from 60% in Q3 2021 to 37% in Q3 2022) and no change in the use of docetaxel (37%).

[3] NICE Guideline [NG131], 2019 1.3.19. For people having radical external beam radiotherapy for localised prostate cancer offer hypofractionated radiotherapy (60 Gy in 20 fractions) using image-guided intensity modulated radiation therapy (IMRT), unless contraindicated https://www.nice.org.uk/guidance/ng131/chapter/recommendations

6. Performance indicator results and patient risk groups

In England and Wales, we report our performance indicators across three and two separate time periods respectively, in order to be able to report on all our performance indicators.

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 covered for patients diagnosed		**1 Apr 2020 – 31 March 2021**			**1 Apr 2021 – 31 March 2022**	
PI1: Proportion of men diagnosed with metastatic disease[1]	29,058	5,625	**19** (8-27%; n=47)	2,203	421	**19** (16-28%; n=4)
PI2: Proportion of men with low-risk localised cancer undergoing radical prostate cancer treatment[1]	3,258	275	**8** (0-29%; n=46)	422	39	**9** (5-12%; n=4)
PI3: Proportion of men with high-risk/locally advanced disease undergoing radical prostate cancer treatment[1]	10,838	7,505	**69** (57-80%; n=46)	665	460	**69** (65-77%; n=4)
Time period: Patients who underwent a radical prostatectomy 1 Apr 2021 – 31 March 2022						
PI4: Proportion of patients who had an emergency readmission within 90 days of radical prostate cancer surgery[2],*	6,459*	813	**13** (3-37%; n=47)	200	18	**9** (3-13%; n=3)
Time period: Patients who received radical prostate cancer therapy 1 Sep 2019 – 31 Aug 2020						
PI5: Proportion of patients experiencing at least one GU complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy[2]	5,728	374	**7** (1-31%; n=48)	195	16	**8** (5-10%; n=4)
PI6: 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[2]	12,625	1,287	**10** (3-17%; n=51)	522	28	**5** (5-7%; n=3)

[1] Provider: SMDT; [2] 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

In England, between 1st April 2020 and 31st March 2021, 19% men with newly diagnosed prostate cancer had metastatic disease at first presentation (Table 2). The rate varied between 8% and 27% among SMDTs (Table 2, provider level results). In Wales, between 1st April 2021 and 31st March 2022, 19% men with newly diagnosed prostate cancer had metastatic disease at first presentation (Table 2): varying between 16% and 28% by SMDT.

Starting with this State of the Nation report, we have updated our definition of low-risk disease due to an improvement in the data quality and to better reflect current clinical practice. We are therefore unable to compare findings from this report with previous reporting periods. The new definition of low-risk disease used in this report, and in future, is patients with T stage 1/2, Gleason ≤6 and M/N stage 0 or missing. In England, of the 31,775 men newly diagnosed with prostate cancer between 1st April 2020 and 31st March 2021, 39% were considered high-risk/locally advanced, 29% were considered intermediate risk and 12% low-risk[4] (Table S11). In Wales, of the 2,286 diagnoses between April 2021- March 2022, 31% were high-risk/locally advanced, 30% intermediate and 20% low-risk (Table S11).

In England, few patients diagnosed with low-risk localised disease underwent radical treatment (8%: inter-SMDT range 0-29%) and in Wales a similarly low proportion: 9%, range amongst SMDTs 5-12%. The updated definition of low-risk disease meant 3,258 patients were identified as such in England and 422 in Wales.

In England, 69% of patients diagnosed with high-risk/locally advanced disease received radical treatment. A significant number who were untreated were elderly and with co-morbidity, which may influence suitability of treatment, but after adjustment for these factors substantial variation remained between SMDTs with the radical treatment rate ranging between 57 and 80%. In Wales, the same proportion, 69% of patients diagnosed with high-risk/locally advanced disease, received radical treatment. This varied between 65% and 77% by SMDT. Again, this variation is after adjustment for age and comorbidity and further local investigation is necessary.

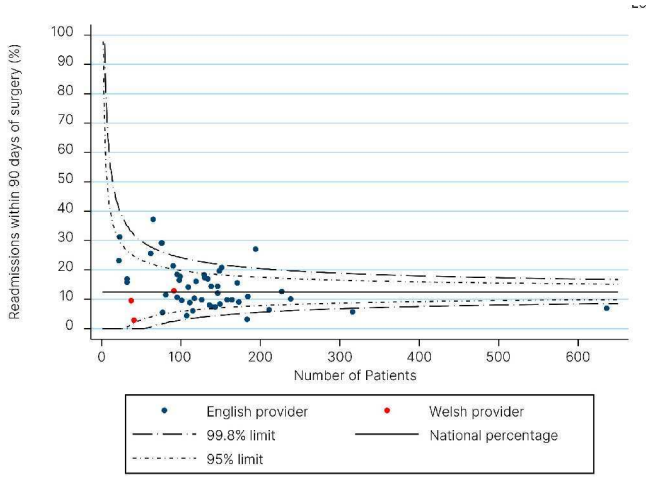

Figure 7. Adjusted funnel plot for the proportion of patients readmitted as an emergency within 90 days of radical prostatectomy (between 1st April 2021 and 31st March 2022) by surgical centres in England (n=47) and Wales (n=3).

In England, using Rapid Cancer Registration Data for patients undergoing radical prostate cancer surgery between 1st April 2021 and 31st March 2022, 13% had an emergency readmission within 90 days of surgery: this varied between 3 and 37% by surgical centre, of which there were 47 (Figure 7). In Wales, for patients undergoing radical prostate cancer surgery between 1st April 2021 and 31st March 2022, 9% had an emergency readmission within 90 days of surgery: this varied between 3 and 13% by surgical centre, of which there were three. Where high rates were identified, this will be fed back to individual Trusts for further investigation.

[4] A three-tiered disease status category, assigned according to their TNM stage, Gleason score and PSA level, using an algorithm previously developed by the NPCA. NPCA Annual Report 2016. Download from: https://www.npca.org.uk/reports/npca-annual-report-2016/

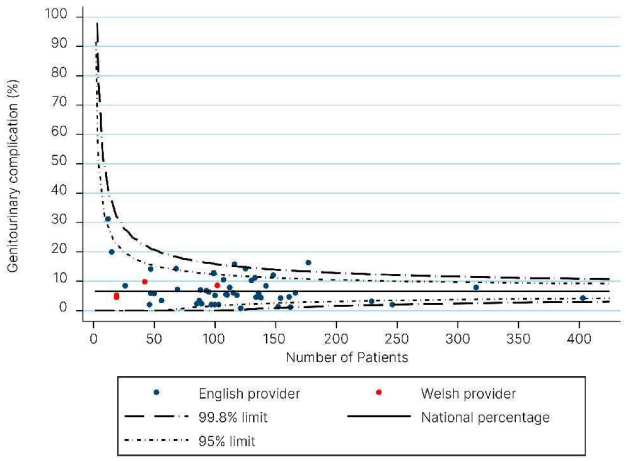

Figure 8. Adjusted funnel plot for the proportion of patients experiencing at least one genitourinary complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy (surgery between 1st September 2019 and 31st August 2020) by surgical centres in England (n=48) and Wales (n=4).

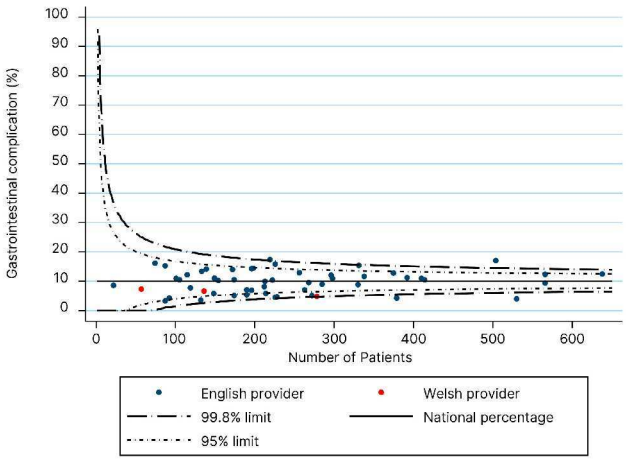

Figure 9. Adjusted funnel plot for the proportion of patients receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity up to 2 years following radical prostate radiotherapy (radiotherapy between 1st September 2019 and 31st August 2020) by RT centre in England (n=51) and Wales (n=3).

In England, 7% of patients undergoing radical prostatectomy experienced a genitourinary (GU) complication within two years of treatment (Figure 8, surgery centre range 1-31%) and in Wales, it was 8%. Where high rates were identified, this will be fed back to individual Trusts for further investigation.

In England, 10% of patients undergoing radiotherapy experienced a gastrointestinal (GI) complication over the same time-period (Figure 9, radiotherapy centre range 3-17%) and in Wales it was 5% across the three providers. Where high rates were identified, this will be fed back to individual Trusts for further investigation.

Overall, the underlying rate in each of our performance indicators (whose definitions remained unchanged) has remained stable when compared to previous audit periods. The proportion of men with high-risk/locally advanced prostate cancer undergoing radical prostate cancer treatment was 69% for both England and Wales in this report and was 67-71% between 2016 and 2019. This needs careful evaluation as improvement in the rate of people receiving radical treatment for high-risk disease has slowed.

7. Commentary

This is the first State of the Nation report from the NPCA and it provides a succinct summary of the care received by patients newly diagnosed with prostate cancer between September 2019 and January 2023 in England and Wales. Users of this report should take time to identify areas for improvement in data completeness, service availability and patient outcomes. An important aspect of this is the engagement of clinicians to ensure that the data reported on their behalf is both complete and accurate. The NPCA team are aware of Covid-19 related changes in the process and breadth of data collection and collation. However, where we have reported indicators, we are confident that the data are robust and it is therefore reasonable to act appropriately in relation to these findings. These results can be used by patient charities and support groups to inform their patient and carer networks and by patients to start conversations with their care providers.

Several important findings regarding prostate cancer care have been identified in this report. Both diagnosis and treatment numbers have surpassed those of pre-pandemic years in England and the number of men newly diagnosed with prostate cancer in 2022 in England and 2021 in Wales has increased compared to the previous year. Subsequently, there has also been an increase in men newly diagnosed with prostate cancer treated with either radical prostatectomy or radiotherapy in 2022 in England. This demonstrates a recovery of treatment services following the Covid-19 pandemic which is 'above and beyond' treatment levels seen pre-pandemic. The proportion of men who received radical treatment for high-risk disease remained stable in England and Wales when compared to previous years. Since our definition of low-risk disease has been updated in this report, comparisons to previous audit periods have not been made.

Given the increasing number of patients being diagnosed and treatments being given, it is important to maintain quality of care. This is reflected in the proportion of patients experiencing a GI or GU complication within two years of treatment which has remained stable for the reporting period of this State of the Nation report. Substantial variation between providers for the GU complications indicator remains and providers should review their performance and address problems in treatment delivery where they are required. However, a notable decrease in variation between providers has been observed for the GI complications indicator in the last two audit periods. Given the focus on two-year outcomes for these indicators, the data pertains to patients treated in 2019/2020. We therefore expect that practices of care may have already been adapted in the interim and any improvements will be reflected in later audit reports.

Management options for patients needing prostate cancer care are continuing to grow and there is increasing specialisation of radiotherapy and systemic therapy practice. Within this report we have identified that ultra-hypofractionation has been utilised more frequently by radiotherapy departments and the choice of systemic agents in metastatic disease has evolved in light of emerging evidence.

Going forward it is important that the NPCA plays a role in continuing to improve the care of prostate cancer patients in England and Wales. Structural considerations for how prostate cancer services are designed and implemented as well as advances in new treatment techniques are a key focus for NPCA reporting in the future. Following the NPCA's move into NATCAN (National Cancer Audit Collaborating Centre), the NPCA will move to more timely and more frequent reporting (on a quarterly basis) for certain indicators, with others remaining in the annual reports. There will also be a greater emphasis on quality improvement working with professional bodies, hospital Trusts and societies.

Further work reflecting on the findings described in this report will be undertaken by the audit team. Better understanding of the differences between England and Wales with respect to readmission rates is one of the topics under review, particularly any association with pre-op management and modality type, although incomplete data makes this a challenge. Additionally, a more detailed investigation mapping the regional variation in incidence of men being diagnosed with metastatic disease given the size of the population at risk (e.g. men over 50) is currently being undertaken. Finally, an exploration of the utilisation of systemic and radio-therapeutic treatments in metastatic prostate cancer is being conducted to provide insights into this key issue.