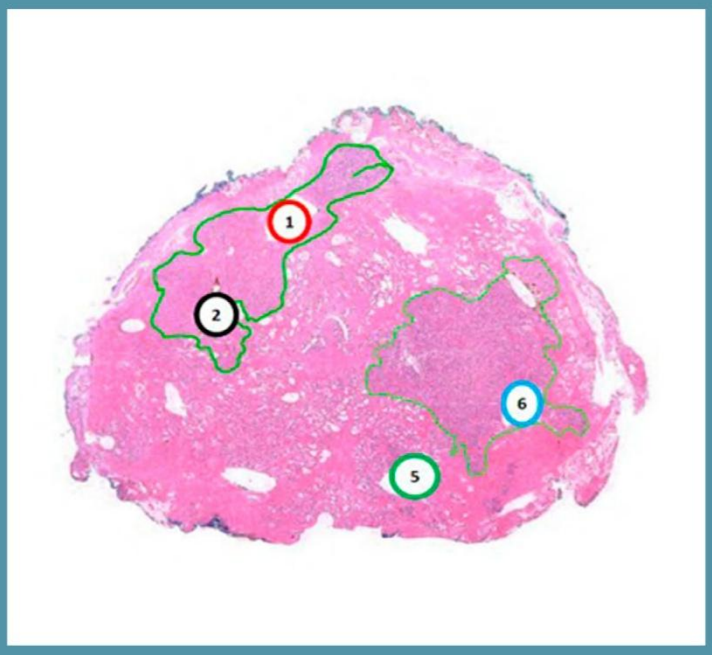
NPCA
National Prostate Cancer Audit

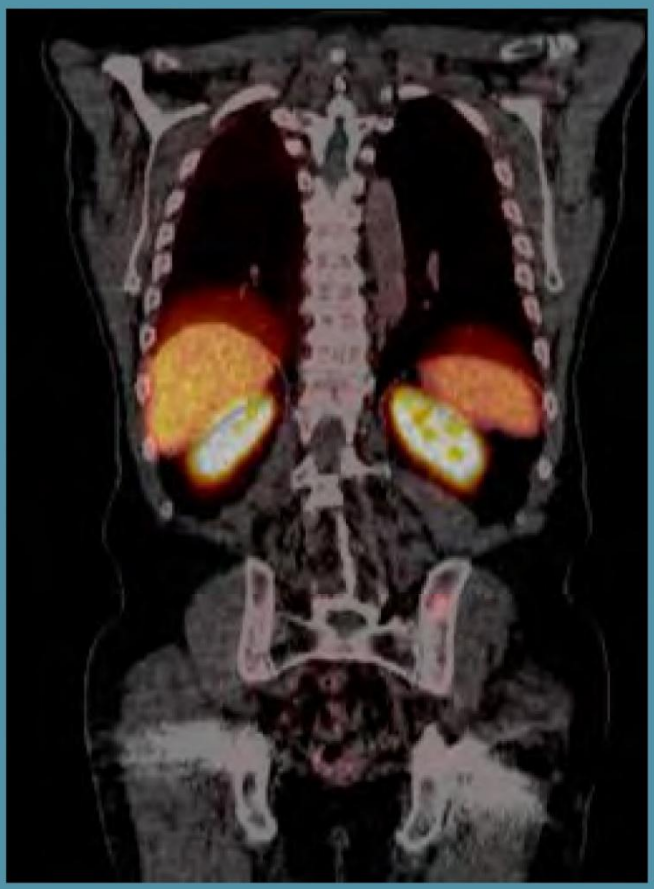
NATCAN
National Cancer Audit Collaborating Centre

National Prostate Cancer Audit State of the Nation Report 2026

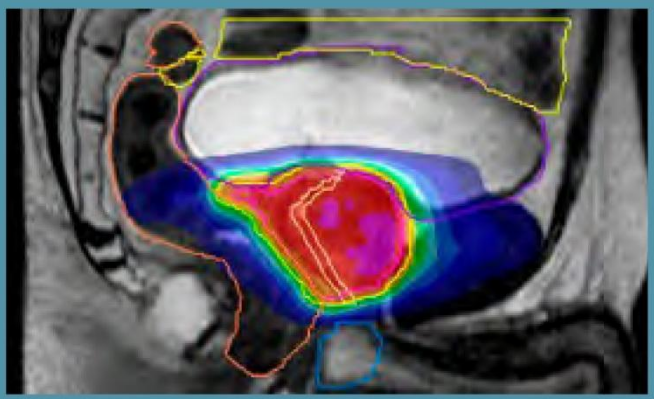
Outlier Communications

Published October 2026 *(Updated November 2026)*









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Introduction to the NPCA Outlier Process

The National Prostate Cancer Audit (NPCA) publishes risk-adjusted performance indicators of the quality of care received by men diagnosed with prostate cancer.

Using funnel plots to compare individual provider results with the national average, we can identify 'potential negative outliers' whose performance is outside normal limits (further from the national average than would usually occur by chance alone).

Alarm Outliers

An estimate for a performance indicator more than three standard deviations from the national average is deemed an 'alarm'. Trusts and health boards in the current report cycle (State of the Nation 2026) were considered potential outlier 'alarm' Trusts according to the NPCA Outlier Policy 2026. The outlier approach was adapted from the '*NCAPOP Outlier Guidance: Identification and management of outliers*'[1].

The potential outlier 'alarms' relate to three adjusted treatment-related outcomes:

- ***Performance indicator 6****: Percentage of men experiencing at least one genitourinary (GU) complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy (presented at the level of the surgical centre).*
- ***Performance indicator 7:*** *Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy (presented at the level of the radiotherapy centre).*
- ***Performance indicator 8:*** *Percentage of men experiencing at least one GU complication requiring a procedural/surgical intervention within 2 years of radical prostate radiotherapy (presented at the level of the radiotherapy centre).*

Alert Outliers

An estimate for a performance indicator more than two but below three standard deviations from the national average for two consecutive years is deemed to be an 'alert'. The condition that an estimate should be within the defined range for two of three consecutive years of reporting before it is considered an 'alert' was added to reduce the chance that a trust/health board is erroneously identified as a potential outlier.

The potential outlier 'alerts' relate to two adjusted treatment-related outcomes:

- ***Performance indicator 6****: Percentage of men experiencing at least one genitourinary (GU) complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy.*
- ***Performance indicator 7****: Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy.*

Following notification of potential 'alert' and 'alarm' outlier status, each trust was given the opportunity to review their individual data and check this against the NPCA data. The provider was then invited to respond by letter to the NPCA team about the possible underlying causes, and any relevant quality improvement interventions adopted or planned. The CQC was notified if a trust is confirmed as an alarm outlier after the process, as per the NPCA Outlier Policy 2026.

This document publishes the trust responses following this process, to support learnings from hospitals who are embarking upon an improvement journey.

Professor Noel Clarke, Urological Clinical Lead representing the British Association of Urological Surgeons

Dr Alison Tree, Oncological Clinical Lead representing the British Uro-oncology Group

[1] HQIP NCAPOP Outlier Guidance: Identification and management of outliers, updated October 2025

Responses from Trusts to the Potential 'outlier' alarm 'case to answer' during the NPCA Outlier Policy[2]

Each trust was contacted by means of a letter to the Clinical Lead. The letter contained an aggregate table explaining the distribution of certain patient characteristics of the patients of interest from their trust compared to national demographics. Trusts were also provided, on request, with a password protected spreadsheet which contained patient level data to support the review.

The following trusts were contacted in relation to the following specific performance indicators. Their final outlier status is also indicated, where "not confirmed" means the review process highlighted inaccuracies in the data held by the NPCA, so the provider is found not to be an outlier, and "confirmed" means the provider's outlier status was confirmed following the review process.

Surgical centres

Performance indicator 6: Percentage of men experiencing at least one genitourinary (GU) complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy (presented at the level of the surgical centre).

For men who underwent a radical prostatectomy between 1 September 2022 and 31 August 2023.

- Bradford Teaching Hospitals NHS Foundation Trust – **confirmed**
- Wirral University Teaching Hospital NHS Foundation Trust – **confirmed**

Radiotherapy centres

Performance indicator 7: Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy (presented at the level of the radiotherapy centre).

For men who underwent radical prostate radiotherapy between 1 September 2022 and 31 August 2023.

- Gloucestershire Hospitals NHS Foundation Trust – **confirmed**
- East Suffolk and North Essex NHS Foundation Trust – **confirmed**
- Hull University Teaching Hospitals NHS Trust – **not confirmed**
- East and North Hertfordshire NHS Trust – **not confirmed**

Performance indicator 8: Percentage of men experiencing at least one GU complication requiring a procedural/surgical intervention within 2 years of radical prostate radiotherapy (presented at the level of the radiotherapy centre).

For men who underwent radical prostate radiotherapy between 1 September 2022 and 31 August 2023.

- Worcestershire Acute Hospitals NHS Trust – **not confirmed**
- South Tees Hospitals NHS Foundation Trust – **not confirmed**

The responses from individual outlier trusts in relation to their potential outlier 'alarm' status are as follows:

[2] NPCA Outlier Policy 2026 - National Cancer Audit Collaborating Centre

Response from Bradford Teaching Hospitals NHS Foundation Trust (Confirmed)

Performance indicator 6: Percentage of men experiencing at least one genitourinary (GU) complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy.

ACTasONE

NHS
Bradford Teaching Hospitals
NHS Foundation Trust

Date: 22nd September 2026

John Bolton
Trust Headquarters
Bradford Royal Infirmary
Duckworth Lane
BRADFORD
BD9 6RJ

Professor Noel Clarke and Dr Alison Tree
National Prostate Cancer Audit
National Cancer Audit Collaborating Centre
The Royal College of Surgeons of England
38-43 Lincoln's Inn Fields
LONDON
WC2A 3PE

Dear Professor Clarke and Dr Tree

National Prostate Cancer Audit (NPCA)

Thank you for the outlier notification and accompanying documents. We are grateful for the opportunity to examine our practice and outcomes and compare with national data, the relevant performance indicator being "Proportion of patients experiencing at least one GU complication requiring a procedural/surgical intervention within two years of radical prostatectomy" performed between 1st September 2022 to 31st August 2023. We have discussed the findings and reviewed the patient level data.

As you are aware, we were identified as outliers in the previous reporting cycle (1st September 2021 to 31st August 2022). As a team, we noted that we had a low threshold for requesting flexible cystoscopy in men after radical prostatectomy (RALP). We have since changed our approach to using uroflowmetry, rather than invasive cystoscopy, as a first line to investigate these patients in acknowledgement that our threshold for undertaking a flexible cystoscopy was possibly too low. These changes were made in August 2025, so the effect of the changes would not be apparent in the current cohort being analysed.

To determine whether the themes identified in the 2021/2022 cohort were similar to the 2022/2023 cohort, we used the patient-level data kindly provided by NPCA, which fell under the parameters below:

Performance Indicator:	Proportion of patients experiencing at least one GU complication requiring a procedural/surgical intervention within two years of radical prostatectomy
Potential Alarm Outlier Criteria:	>3SDs from national average
Trust Result:	17.04%
National Result (E&W):	5.88%
Inclusion Criteria	Men undergoing a radical prostatectomy between 1st September 2022 and 31st August 2023. Derived using a coding-framework based on OPCS-4 procedure codes to capture genitourinary complications that required an intervention. These included complications of the urinary tract as opposed to those related to sexual dysfunction. Additional details can be found in our Methodology Supplement.

Response from Bradford Teaching Hospitals NHS Foundation Trust (Confirmed)

Exclusion Criteria	Men with an associated diagnosis of bladder cancer (ICD-10 “C67” code) or who received post-operative radiotherapy.

The men included for the period came to a total of 171. Of these, 29 men (17%) were annotated as having had an intervention. We would like to mention that out theatre records for the period had 196 men undergoing RALP during the study period, so 25 men were not included in our report.

Interventions Performed

Flexible Cystoscopy	21
[Intervention redacted to protect patient identifiable information]	1
[Intervention redacted to protect patient identifiable information]	1
[Intervention redacted to protect patient identifiable information]	1
[Intervention redacted to protect patient identifiable information]	1
No Record of Intervention	1

Flexible Cystoscopy

We performed patient-level analysis into the indications and findings of flexible cystoscopy procedures.

[Table redacted to protect patient identifiable information]

Other Interventions

One patient **[Redacted to protect patient identifiable information].**

One patient **[Redacted to protect patient identifiable information].**

One patient **[Redacted to protect patient identifiable information]**.

One patient **[Redacted to protect patient identifiable information].**

Discussion

Our findings for the 2022/2023 reporting cycle show that again, flexible cystoscopy is the most common intervention recorded. In 10 out of 21 patients having flexible cystoscopy, the findings were negative and no interventions were required. We are now performing flow studies for men with LUTS after RALP first, before deciding whether flexible cystoscopy is indicated. The men who needed intervention by way of bladder neck dilatation and/or clip removal had associated bladder neck strictures, which we think will be picked up on a flow study.

Clip migration is associated with visible haematuria, so a flexible cystoscopy in men with visible haematuria seems warranted. To reduce the incidence of clip migration, we have changed surgical technique by avoiding placement of surgical clips towards the apical prostatic pedicles. This should reduce the risk of surgical clips migrating into the bladder neck anastomosis.

For patients with displaced catheters, we observed that this happens when patients do not keep their catheters well strapped. We provide two thigh straps and written and pictorial instructions on how to keep the catheter secured at all times until removal. Unfortunately, the message occasionally is not adhered to. We will continue to ensure that our discharge teams do not omit this vital component of patient education.

The other interventions appear to be rare occurrences and possible coding errors. We also have a small number where the records were not available for review.

Response from Bradford Teaching Hospitals NHS Foundation Trust (Confirmed)

Conclusion

In conclusion, we would answer the questions posed by the NPCA team as follows:

1. Does the trust consider the NPCA data to be accurate in comparison to your hospital records?

The NPCA data was short by 25 men. There was at least one coding error, with a cystogram recorded as an intervention.

2. Subject to the data being accurate, are there justifiable reasons for the variation that mean the trust should not be considered an outlier for this performance indicator?

Assuming none of the 25 additional men that had RALP had no interventions and were included, our percentage of men having intervention would stand at 15%. This would presumably still leave us as outliers for this performance indicator.

3. Have quality improvement measures been put in place in order to correct potential problems in the future?

Following the previous reporting cycle (2021/2022), we have put measures in place to reduce the number of men having interventions after RALP. We are using non-invasive tests first for men with LUTS, and we have modified our technique for applying surgical clips near the bladder neck anastomosis. We are confident that these changes will become manifest in the 2025/2026 reporting cycle and onwards.

With kind regards.

Yours sincerely



John Bolton MD FRCS
Chief Medical Officer &
Consultant Urological Surgeon

On behalf of:

R Chahal, Consultant Urological Surgeon
C Gkikas, Consultant Urological Surgeon
C Molokwu, Consultant Urological Surgeon
R Singh, Consultant Urological Surgeon

Response from Wirral University Teaching Hospital NHS Foundation Trust (Confirmed)

Performance indicator 6: Percentage of men experiencing at least one genitourinary (GU) complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy.

Dear Prof Clarke and Dr Tree

Thank you for your correspondence regarding the potential outlier performance at Wirral University Teaching hospitals in relation to the proportion of patients experiencing at least one genitourinary complication requiring a procedural/ surgical intervention within two years of radical prostatectomy between 1st September 2022 and 31st August 2023.

As last year, we do appreciate the feedback and the opportunity to improve our procedures and pathways and reflect on the outcomes to improve patient care.

Following the review last year one area where we found the rates were higher than expected was in patients with clip migration into the bladder which was found in 2.8% of patients. Following that review we had already made changes to reduce the use of Hem-o-lok clips. Having made the changes in 2025 they would unfortunately not reflect in the outcomes of this audit as it is for patients operated during 2022-23 but should reflect in the outcomes over the coming years.

Looking at the patient dataset that your team kindly sent to us on 1/09/2026 there were 96 patients with 21 recorded events. However, four patients had not undergone radical prostatectomy (**[Interventions redacted to protect patient identifiable information]**) thus there are 92 patients on this NPCA database of which 21 (22.8%) had triggered an alert.

Analysing our own data there were 151 patients that had undergone a radical prostatectomy over this period and thus we have operated on 40% more patients than that recoded on the NPCA dataset. Of these 29 (19.2%) have had some intervention over two years. We do appreciate that these are a similar proportion of patients in the two datasets and have looked at each of these patients. The table below lists the interventions and their frequency.

Table 1

Intervention	**Number of patients (%)**
Re-Catheterisation after TWOC	7 (4.6)
Flexible cystoscopy NAD	6 (3.9)
[Intervention redacted to protect patient identifiable information]	1 (0.6)
[Intervention redacted to protect patient identifiable information]	1 (0.6)
[Intervention redacted to protect patient identifiable information]	1 (0.6)
Clip removal	5 (3.3)
Isolated Bladder neck dilatation	<5 (<3.3)
Re-catheterization for Anastomotic leak	<5 (<3.3)

There were 9 (5.9%) patients that had a Clavien Dindo 3 complication requiring a procedure under GA.

Post operatively we leave a urethral catheter in for one week and do not routinely do a cystogram prior to catheter removal. When we had previously audited our outcomes the re-catheterisation rate for retention was 3% at one week and 0% if the catheter was left for two weeks. At present unless there is any concern at surgery we routinely arrange trail without catheter (TWOC) at one week. We plan to increase the catheter dwell time to 2 weeks to help reduce need for re- catheterisation. In future for patients we remove the catheter at one week we plan to undertake a cystogram prior to catheter removal.

Response from Wirral University Teaching Hospital NHS Foundation Trust (Confirmed)
Our trial without catheter (TWOC) service has moved away from a urology nurse delivered service to a generic hospital service in the hospital day case/ elective admissions lounge since 2020 when the department lost the use of a dedicated urology ward. Since then the service has staffing and logistical constraints beyond our control, it has made prompt recognition of any problems more difficult. We plan to revisit this and look at our outcomes before and after this change. We will audit our results over the three years prior to this alert and for the following year. This will give us five-year data which we will share with your NPCA team. We are now planning to change and have the TWOC service moved to our new urology investigation unit. Bladder neck contracture and urinary leak rates were 2.6% each. These are slightly higher than expected and higher than last year's data. As part of the five-year audit we also plan to audit our individual surgical outcomes and look at variation in practice and if necessary arrange an external review. As already mentioned, we have significantly reduced the use of hem-o-lok clips since 2025 and expect the clip migration rate to reduce significantly. As part of the review initiated by this alert, we will look at a full service review to identify all areas of improvement and look forward to working with you to improve patient outcomes and ensure that we are not outliers in the provision of this vital service. Kind regards, Manal Kumar Consultant Urologist and Urology Cancer Lead for WUTH Thiagarajan Nambirajan Consultant Urologist Nina Patrick Consultant Urologist Kunal Dholakia Consultant Urologist Snehal Patel Consultant Urologist Clinical Service Lead

Response from Gloucestershire Hospitals NHS Foundation Trust (Confirmed)

Performance indicator 7: Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy.

Gloucestershire Hospitals
NHS Foundation Trust

Gloucestershire Oncology Centre
Cheltenham General Hospital
Sandford Road
Cheltenham
GL53 7AN
9th November 2026

Dear Dr Tree, Mr Clarke and the NPCA team,

Thank you for your communication of 7th October. Following our engagement with the NPCA including sharing patient level comments with them, the NPCA agreed to remove three patients from our denominator and our numerator was reduced by eight patients. Our trust result was updated but we remained an outlier. As requested, we attach further clinical information in the 15 cases where no diagnosis of radiation proctitis was made or asymptomatic incidental diagnoses of radiation proctitis were seen after bowel investigations for other reasons. Three additional patients had radiation proctitis but after 55Gy in 20 fractions for low burden metastatic disease. These cases have not been further investigated. Details are provided in the comments column of the attached patient level data spreadsheet previously sent to us.

Seriously concerned by our outlier status, we explored best next steps in a meeting with clinical leadership from a centre previously noted to be an alarm outlier in the NPCA. Following their practice, we have now completed a dosimetry audit of all cases suggested to have experienced gastrointestinal complications where complete data were available (71/76). Results are attached. In 2022-2023 we followed the CHHiP trial protocol to deliver our radical prostate radiotherapy. Our audit demonstrates that all cases were treated per protocol. Rectal dose constraints were met in all but 2 cases, highlighted in the attached results file.

Rectal dose constraints used at the time are shown in the table below.

Dose to Rectum (Gy)	Primary Objective	Secondary Objective
60	**0%**	**3%**
57	**0**	**15**
53	**0**	**30**
49	**35**	**50**
41	**50**	**60**
32	**60**	**65**
25	**80**	**na**

Our business intelligence team have also produced an analysis of the diagnostic coding used in the 72 identifiable cases of radiation proctitis over the required period. The data are attached. Four cases were unable to be identified. We note with interest that radiation proctitis was coded as the primary diagnosis in just 23 cases (31.9%) and was the only diagnosis in 17 cases (23.6%). We recognise the complexity of many of these cases and that clearer clinical documentation regarding the link between precipitating symptoms and diagnosed condition may help make coding more accurate.

Thank you for allowing us time to respond. If you require any further detail, please be in touch.

Response from Gloucestershire Hospitals NHS Foundation Trust (Confirmed)
Yours sincerely,  **Warren Grant, Consultant Clinical Oncologist** **On behalf of the Urology MDT at Gloucestershire Hospitals NHS Foundation Trust**

Response from East Suffolk and North Essex NHS Foundation Trust (Confirmed)

Performance indicator 7: Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy.

NHS
East Suffolk and North Essex
NHS Foundation Trust

Dr Liz Sherwin,
Clinical Director
Oncology and Haematology
East Suffolk and North Essex NHSFT
Ipswich Hospital
Heath Road
Ipswich
IP4 5PD

National Prostate Cancer Audit

4th September 2026

Dear Dr Tree, Mr Clarke and NPCA team

National Prostate Cancer Audit (NPCA) Potential Alarm Outlier Notification

Thank you for your letter dated 27th July 2026 to Mr Sam Datta notifying us that NPCA results for the East Suffolk and North Essex NHS Foundation Trust (ESNEFT) continue to be further from the national average than expected and the trust has been identified as a potential 'alarm' outlier for the following Performance Indicator:

Proportion of patients receiving a procedure of the large bowel and diagnosis indicating radiation toxicity (GI complication) up to 2 years following radical prostate radiotherapy

We understand that the data demonstrates that ESNEFT is >3SDs from the national average for men undergoing radical radiotherapy between 1st September 2022 and 31st August 2023.

Thank you for providing us with the patient-level data items for the year that this notification relates to. Members of the multi-disciplinary team have collated information from our own hospital systems in respect of overall patient numbers and cases of proven radiation toxicity.

In response to your specific questions:

1. **Does the trust consider the NPCA data to be accurate in comparison to your hospital records?**

   Our own records suggest 416 men were treated with radical prostate radiotherapy between 1st September 2022 and 31st August 2023 in our radiotherapy departments in Colchester and Ipswich. This is slightly higher than the 397 reported in the NPCA. A total of 49 cases of proven radiation toxicity have been identified, lower than the number reported in the NPCA. Whilst there is some discrepancy in the data we do acknowledge our trust remains above the national average for radiation toxicity (GI complications) up to 2 years following radical radiotherapy to the prostate.

2. **Subject to the data being accurate, are there justifiable reasons for the variation that mean the trust should not be considered an outlier for this performance indicator?**

Response from East Suffolk and North Essex NHS Foundation Trust (Confirmed)

No, we believe the trust should be considered an outlier.

Our review following last years audit focused on the clinical protocols and applied PTV margins, radiotherapy treatment plan quality, adherence to protocolised margins and dose constraints, daily CBCT image guidance and the position of rectum and bowel in relation to high dose volumes following image matching.

Findings from the review indicated that the higher than average levels of GI toxicity were likely due in part to the documented procedures for daily CBCT image guidance and adherence to these protocols. A review of the patients with confirmed toxicity included in this years audit identifies similar issues. Whilst changes were made as a result of last years NPCA (detailed below) we do acknowledge that they will not be reflected in this years data.

We anticipate that toxicity events for patients receiving radical radiotherapy to the prostate at ESNEFT are likely to remain higher than the national average for a further 2 data collection periods.

3. **Have quality improvement measures been put in place in order to correct potential problems in future?**

Yes.

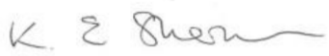
- Following a review of the clinical protocols for prostate radiotherapy an inconsistency in CTV to PTV margins between hospital sites was rectified. Margins were aligned informed by guidance from clinical trials and the East of England ODN Prostate Clinical Protocol. The revised margins were implemented in October 2025.
- The image guidance protocols for daily localisation with cone beam CT and their interpretation allowed for higher volumes of rectum and bowel in the treated volumes than indicated within the planning CT scan. The protocols have been updated to provide clearer guidance on the management of variations in rectal volume during treatment with specific actions documented for situations where the rectum within the treatment volume is greater than planned.
- The introduction of auto-segmentation in March 2024 has resulted in consistent voluming of normal tissues and organs at risk

Additionally our analysis of this year's patients demonstrates a possible link with difficulties in obtaining consistent bowel filling requiring a number of attempts to obtain the planning CT scan. Patient selection criteria will be reviewed accordingly however we anticipate that the introduction in 2025 of rectal spacers for patients meeting pre-defined criteria and the more recent introduction of daily adaptation of treatment volumes for patients identified as potentially struggling with maintaining consistency in internal anatomy throughout their course of treatment may improve things further.

The multi-disciplinary teams are continuing to review the identified patients and the potential for further improvements with planned internal audits will help to determine the effectiveness of the changes.

Please let us know whether you would like us to provide any further information at this time and thank you again for giving us the opportunity to comment on the findings in the audit.

Yours sincerely



Dr Liz Sherwin

Clinical Director
Oncology and Haematology
ESNEFT

Response from Hull University Teaching Hospitals NHS Trust (Not confirmed)

Performance indicator 7: Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy.

NHS
Humber Health
Partnership

Stephen Kendall
Consultant Therapeutic Radiographer (Urology)
Castle Hill Hospital
Castle Road
Cottingham
HU16 5JQ

Date: 13th October 2026

Professor Noel Clarke and Dr Alison Tree

National Prostate Cancer Audit
National Cancer Audit Collaborating Centre
The Royal College of Surgeons of England

38-43 Lincoln's Inn Fields

London

WC2A 3PE

Dear Prof Clarke, Dr Tree and NPCA Team

National Prostate Cancer Audit (NPCA) Potential Alarm Outlier Notification

Many thanks for your letter dated 27th July 2026 to Mr Matt Simms to notify us that the NPCA results for Hull University Teaching Hospitals NHS Trust, part of the NHS Humber Health Partnership. The letter identified the trust as a potential 'alarm' outlier for: ***Proportion of patients receiving a procedure of the large bowel and diagnosis indication radiation toxicity (GI complication) up to 2 years following radical prostate radiotherapy.***

The national data states the national average is 8.11%, with our trust results presenting an incidence of 13.78% (adjusted), which is >3SDs from the national average, between 1st September 2022 and 31st August 2023.

You kindly provided patient-level data to give our team opportunity to assess the results in greater detail for potential discrepancies or justification, in regard to patient numbers and cases of confirmed radiation toxicity diagnosis.

Please see our responses to the specific questions below:

1. **Does the trust consider the NPCA data to be accurate in comparison to your hospital records?**

   There are minor deviations in our data and the data provided by the NPCA. The NPCA data contained 351 patients, whereas we had located up to 360. Firstly, there were 3 patients on the NPCA's own data that we believe do not meet the inclusion criteria (**[Rationale redacted to protect patient identifiable**

information]). Therefore, we believe there are an additional 12 patients. Admittedly 6 of them had a diagnosis of Bladder Cancer at some point, which may make them exempt from the data as we were unsure what would be considered an 'associated diagnosis of bladder cancer', please can you confirm for future audits?

If we do exclude the bladder cancer patients, this would leave with 354 patients. We have confirmed endoscopic diagnosis of radiation toxicity in 39/354 (including 7 that were not on NPCA original data), compared to 56/351 that the NPCA have identified. The rationale that we can find for the discrepancies in data are due to 2 main reasons:

- No confirmed endoscopic diagnosis, with a large majority of colonoscopy/sigmoidoscopy summaries mentioning radiation proctitis as a differential without any confirmation.
- Non-specific information added to the reports e.g. a diagnosis of Proctitis without any specification that this derived from radiation toxicity.

We do acknowledge however, that despite the potential discrepancies, our trust would remain above the national average for radiation toxicity (GI complications) up to 2 years following radiotherapy to the prostate with an unadjusted value around 11.01% (39/354).

In addition to this, the NPCA data has suggested 64% of our patients are defined as locally advanced, which is already higher than the national average of 53%. However, when looking through our data, using the NCCN and RTOG diagnostic markers to define high-risk disease, we have found that 262/354 of our patients would be defined this way, an incidence of 74.01%. This will likely impact things such as treatment volumes and dose levels which could be taken into consideration.

2. **Subject to the data being accurate, are there justifiable reasons for the variation that mean the trust should not be considered an outlier for this performance indicator?**

The NPCA data suggests, that for the number of patients we treated, having an incidence over 13.08% is what deems us an outlier therefore if our data is confirmed then in theory this would not consider us an outlier. However, we do acknowledge that regardless of this, we do have a higher-than-average incidence of GI toxicity which is something that we will continue to monitor closely.

3. **Have quality improvement measures been put into place in order to correct potential problems in future?**

Positive changes were implemented in January 2023. The clinical protocol for the treatment of Prostate and Nodes patients was updated. Previously prescribing 74Gy/37#'s but now updated our standard practice to 60Gy/20#'s aligning with our Yorkshire and Humber Operational Network peers (YHODN). Initial toxicity assessments indicate that this change has had a positive impact with lower incidence of GI toxicity in the 60Gy/20# group (<7.46% - <5/67 patients), compared to the 74Gy/37# group (16.84% - 16/95 patients).

Additionally, we have updated our bowel preparation procedure since the dates covered by this national audit. We have removed laxatives as a standard preparation unless there is a clinical need for them, which has led to more consistent bowel volumes seen throughout treatment with fewer repeat CBCTs. We anticipate the reduction in additional bowel preparation will help to lower the risk of irritation or adverse effects from the laxatives, contributing to GI toxicity, which will hopefully be proven in subsequent audits. Further changes in the guidance around rectal volume variations at both CT planning stage and during treatment, enabling clearer information and image guidance decision trees available to assist with the clinical decisions/management for our patients.

Finally, another positive change to our pathway is the introduction of auto-contouring improving the consistency in the voluming of organs at risk.

Thank you for the opportunity to discuss the findings in this audit and providing us with additional areas for reflection and service development. We will be conducting a rolling prospective audit for new patients to ensure that these previously mentioned improvements are sustained, as well as writing up results of a separate PROMs study completed in the department which will offer us an additional opportunity to monitor. We look forward to receiving feedback from this review.

Addendum:

Following our engagement with the NPCA, including sharing patient level comments with them, the NPCA agreed to remove 2 patients from our denominator and our numerator was reduced by 8 patients. As a result, our trust result was updated, and we are no longer considered an outlier.

Yours sincerely



Stephen Kendall

Consultant Therapeutic Radiographer (Urology)

Radiotherapy, Castle Hill Hospital

Hull University Teaching Hospitals Trust

Response from East and North Hertfordshire NHS Trust (Not confirmed)

Performance indicator 7: Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy.

Response to the National Prostate Cancer Audit (NPCA)

GI Toxicity (Radiation Proctitis) Following Radical Prostate Radiotherapy

East and North Hertfordshire NHS Trust · Prepared by the MVCC Data Clinic · 11 September 2026

1. Background

NPCA identified this trust as an **alarm outlier** for Performance Indicator 7 (symptomatic GI toxicity within two years of radical prostate radiotherapy), with a reported rate of **11.8%** against a national average of approximately **8.11%** (n=736), after national case-mix adjustment. This document sets out the trust's proposed response, incorporating a full patient-level review of the audited cohort.

2. Methodology of the Patient-Level Review

The full audited cohort of 736 patients was matched at patient level against local records, and each case was reviewed as follows:

- Radical radiotherapy dose and fractionation were verified for every patient, and rectal dose-volume histogram (DVH) data were extracted from the treatment plan.
- Available endoscopy/scope reports were reviewed against a specific clinical definition of symptomatic radiation proctitis: an indication of PR bleeding, diarrhoea or anaemia, together with a scope finding of radiation proctitis or inflammation.
- Where no scope report could be located, the case was conservatively retained as a presumed-positive case rather than excluded, so the revised rate below is not inflated by under-ascertainment.
- 12 patients were excluded following this review (non-radical or otherwise unverifiable treatment courses), leaving 724 evaluable patients.

3. Revised Findings

The revised, patient-level-verified rate of symptomatic radiation proctitis is **9.25% (67/724)**. Of these 67 cases, **94% (63/67) are confirmed** by a located scope report; only 6% still rest on the conservative missing-data assumption above. The scope-confirmed-only rate is **8.70% (63/724)**.

This revised figure sits much closer to the national average (8.11%) than the originally reported 11.8%. The residual difference is attributable mainly to (a) a definitional gap between NPCA's any-qualifying-code criterion and this trust's more specific clinical definition, and (b) the national case-mix adjustment applied to the reported figure — rather than to inaccurate data or genuinely outlying clinical performance.

4. Response to NPCA's Three Required Questions

- **Is the NPCA data accurate?** — Largely: 94% of the locally-reconstructed positive cases are scope-report confirmed, and the confirmed rate sits close to the trust's reported figure once case-mix adjustment is accounted for.
- **Are there justifiable reasons for the variation?** — Partly: at this cohort size the audit's own alarm threshold is inherently tight, and the national any-code definition is not directly comparable to this trust's symptom-specific definition.

Response from East and North Hertfordshire NHS Trust (Not confirmed)

- **What quality-improvement measures are planned?** — A breach of rectal dose constraints was identified as independently associated with symptomatic proctitis; this is being fed back into local planning quality assurance as a modifiable target (see Section 5).

The full statistical methodology, cohort analysis and supporting figures underpinning this response have been circulated separately and are not repeated here.

5. Quality Improvement Team (QIT) review meeting 10th September

The NPCA data and locally corrected data were reviewed by the Mount Vernon Quality Improvement Team on 10th September.

The data was presented by Dr James Wang and reviewed by the urology QIT consisting of the consultants treating prostate cancer, planning physicists and radiographer teams.

The case mix reflects the practice of 2022 (see table 1) with an increasing number of stereotactic radiotherapy patients 83 (11.4% of the cohort) but with majority of patients receiving 60Gy in 20 fractions to prostate and seminal vesicles. Small numbers of patients were treated using 78Gy and 74Gy regimes which have been discontinued and a small number of patients received treatment using the Cyberknife machine which has subsequently been decommissioned. Higher numbers of SABR patients would be expected in a current cohort

Higher rates of proctitis were seen in the discontinued protocols of 74Gy and 78Gy (11.5% and 12.2%) than in the 60Gy cohort (8.3%) A higher rate of proctitis was seen in the SABR IMRT group as well although in keeping with the grade 2 toxicity rates reported in the PACE B trial.

Table 1

Cohort	n	SpaceOAR	Hip (unilateral)	Hip (bilateral)
SABR – IMRT	83	n*	n*	n*
SABR – CyberKnife	10	0 (0.0%)	n*	0 (0.0%)
55Gy Prescriptions	10	0 (0.0%)	0 (0.0%)	0 (0.0%)
60Gy Prescriptions	517	7 (1.4%)	23 (4.4%)	7 (1.4%)
74Gy Prescriptions	26	0 (0.0%)	n*	0 (0.0%)
78Gy Prescriptions	74	n*	n*	0 (0.0%)
Other Prescriptions	4	0 (0.0%)	0 (0.0%)	0 (0.0%)

[n* - actual number suppressed due to small numbers to protect patient anonymity]

A higher rate of proctitis was seen in the SABR cohort 12.9% versus 8.7% however the difference between SABR treated patients and IMRT treated patients is non-significant Fisher's exact/ chi-square test. Age, PTV/CTV size and rectal volume are statistically similar between men who did and did not develop symptomatic proctitis. (Table 2)

Table 2 Mann Whitney U test continuous factors between symptomatic and non-symptomatic patients

Response from East and North Hertfordshire NHS Trust (Not confirmed)

Factor	Comparison	Rate in group	p-value	Odds ratio
Technique	SABR* (n=93) vs non-SABR (n=631)	12.9% vs 8.7%	0.184	1.55
Age, years			73.0 (67–78)	
EQD2₃ (Gy) — dose to prostate, α/β=3			72.0 (72.0–74.3)	
PTV volume (cc)			141.1 (119.8–176.1)	
CTV volume (cc)			42.4 (32.7–57.0)	
Rectal volume (cc)			63.4 (47.8–74.1)	

The single significant factor predicting for future symptomatic proctitis is the exceeding of a rectal constraint 21.3% if one constraint is breached (20/94) versus 7.5% no constraints breached (47/623) Or 3.31 ($p<0.002$) Fishers exact test. Plans where a rectal dose constraint is exceeded was more predictive of future symptomatic proctitis than the radiotherapy technique IMRT or SABR.

The identification of exceeding a rectal dose constraint as the leading predictor of future rectal led to the following discussion:

1. to mandate a review of all plans at peer review where a dose constraint has been breached to allow review of volumes and plans. Plans might then be mitigated by the recommendation of a spacer insertion or by dose review and the use of a reduced dose or a change in treatment plan
2. to review CTV to PTV margin especially for stereotactic patients. This would be a longer action requiring change in protocol and would be undertaken by the physics team
3. the future use of adaptive plans to minimize rectal dose during treatment

This work will continue through the urology QIT but would be expected to bring the risk of future rectal toxicity down. The impacts however would not be seen until the audits of 2028-9 due to the lead time from treatment to the development of rectal toxicity.

Response from Worcestershire Acute Hospitals NHS Trust (Not Confirmed)

Performance indicator 8: Percentage of men experiencing at least one GU complication requiring a procedural/surgical intervention within 2 years of radical prostate radiotherapy.

NHS
Worcestershire
Acute Hospitals
NHS Trust

Response to NPCA Potential Alarm Outlier Notification

Genitourinary complications requiring procedural or surgical intervention within two years of radical prostate radiotherapy

National Prostate Cancer Audit
National Cancer Audit Collaborating Centre
The Royal College of Surgeons
38-43 Lincolns's Inn Fields
London
WC21 3PE

Worcestershire Acute Hospitals NHS Trust
Charles Hastings Way
Worcester
WR5 1DD

Dear Alison Tree, Clinical Lead Oncology, British Uro-oncology Group,

Noel Clarke, Clinical Lead Urology, British Association of Urological Surgeons

Re : Potential Outlier Alarm Notification

Thank you for your letter dated 27 July 2026 notifying Worcestershire Acute Hospitals NHS Trust that it had been identified as a potential alarm outlier for the proportion of men experiencing at least one genitourinary complication requiring a procedural or surgical intervention within two years of radical prostate radiotherapy. Following clarification from NPCA on 10 August 2026 that the indicator related specifically to GU toxicity, the Trust reviewed the patient-level dataset and returned its findings on 28 August 2026. NPCA subsequently confirmed on 17 September 2026 that the records identified by the Trust as miscoded or unrelated to radiotherapy could be removed and that the Trust falls within the normal expected range. This letter records the completed review and final outcome against the three questions in the original notification.

Question 1 — Does the trust consider the NPCA data to be accurate in comparison to your hospital records?

Trust conclusion on accuracy: The extract identified 29 coded events among 239 radiotherapy patients. Clinical review showed that 8 of these events arose from incorrect coding or interventions unrelated to radiotherapy and should not be classified as radiotherapy-related GU complications.

Review undertaken: The Trust reviewed the supplied patient-level data against local clinical records and returned narrative classifications to NPCA on 28 August 2026.

Reasons for reclassification: The excluded records included interventions planned or initiated before radiotherapy, procedures relating to pre-existing urinary or bladder pathology, unrelated hepatobiliary and orthopaedic procedures, postoperative retention following non-urological surgery, and surveillance unrelated to prostate radiotherapy toxicity.

NPCA confirmation: On 17 September 2026, NPCA confirmed that all records identified by the Trust for exclusion related either to incorrect coding or to interventions unrelated to radiotherapy and could be removed from the analysis.

Final numerator: 21 complications among 239 radiotherapy patients.

Question 2 — Subject to the data being accurate, are there justifiable reasons for the variation that mean the trust should not be considered an outlier for this performance indicator?

The Trust undertook a clinical review of all 29 records supplied by NPCA, comparing the coded event with the underlying indication, chronology, and available cystoscopic or operative findings. The review considered whether each intervention represented a complication attributable to prostate radiotherapy rather than simply an event recorded after treatment.

Clinically unrelated or incorrectly coded events: Eight records were identified for removal.

Remaining events: For many of the remaining patients, investigations had been undertaken for lower urinary tract symptoms or haematuria. Findings were frequently negative, normal, non-specific, or not clinically concerning; a smaller number documented changes consistent with previous radiotherapy. The Trust considers the active investigation of such symptoms appropriate clinical practice and notes that a procedure-based indicator does not distinguish severity or establish causation without clinical review.

Service context: There were no significant changes to the prostate radiotherapy service during 2022–2023 other than participation in the PACE trial.

Evidence of avoidable harm or care below expected standards: The review and NPCA's subsequent recalculation did not identify evidence that the Trust's result represented care outside the normal expected range.

Trust conclusion on outlier status

NPCA confirmed the following final position on 17 September 2026:

Measure	Original analysis	Updated analysis
Complications/radiotherapy patients	29/239	21/239
Unadjusted result	12.13%	8.79%
Adjusted result	11.18%	likely 7.84%
Alarm threshold	10.25%	
Alert threshold	8.30%	

On the basis of these updated figures Worcestershire Acute Hospitals NHS Trust falls within the normal expected range.

Question 3 — Have quality improvement measures been put in place in order to correct potential problems in the future?

Action	Purpose	Outcome
Clinical reconciliation of all NPCA-flagged records	Distinguish clinically attributable toxicity from unrelated or incorrectly coded events	Completed: 29 records reviewed; 8 exclusions accepted by NPCA
Return detailed clinical classifications to NPCA	Enable correction of the national analysis	Completed on 28 August 2026
Confirm revised outlier position	Obtain external assurance following recalculation	Completed: NPCA confirmed normal expected range on 17 September 2026
Retain learning from the review in local audit and coding processes	Support accurate interpretation of future procedure-based toxicity indicators	While procedure coding falls outside the control of the radiotherapy service, a patient-level data review would be undertaken if the service were identified as an outlier in the future

Governance, oversight and assurance

The potential outlier notification was reviewed by the Radiotherapy Clinical Lead. The completed patient-level review was submitted to NPCA within the requested timescale. NPCA independently reviewed the Trust's classifications, accepted the exclusions, recalculated the result, and confirmed that the toxicity rates fall within the normal expected range. No specific remedial programme has been identified in response to an outlier status review.

Worcestershire Acute Hospitals NHS Trust welcomes NPCA's confirmation that the revised result falls within the normal expected range and that the Trust will be removed as a potential negative outlier. We appreciate NPCA's review of the locally supplied clinical context. The Trust remains committed to transparent review, accurate data interpretation, and continuous improvement wherever a need is identified.

Yours sincerely,



Dr Jules Walton

Chief Medical Officer

Response from South Tees Hospitals NHS Foundation Trust (Not confirmed)

Performance indicator 8: Percentage of men experiencing at least one GU complication requiring a procedural/surgical intervention within 2 years of radical prostate radiotherapy.

South Tees Hospitals NHS
NHS Trust

The James Cook University Hospital

Marton Road

Middlesbrough

TS4 3BW

Date: 29 Sep 2026

To: Whom it may concern,

On review of a proportion of the identified patients with genitourinary (GU) complications within 2 years from radical prostate radiotherapy treated at University Hospital Tees requiring intervention, it became apparent that a significant number of episodes were incorrectly attributable to toxicity from radiotherapy; such cases included patients admitted for treatment of ureteric kidney stones, patients requiring catheterisation for unrelated surgical procedures and admissions for unrelated medical causes. The NPCA team accepted these findings, putting us within the national expected range. Learnings from this process suggests that it would be prudent for us to internally look at how our coding of GU events leads to NPCA database acquisition - ideally each event should be "sense checked" and explained at the time as we are artificially inflating treatment attributable GU toxicity rates.

Yours faithfully



Dr D Leaning

Clinical Director, CSU 6 (Oncology and Radiotherapy)
Consultant Clinical Oncologist
South Tees Hospitals NHS Foundation Trust
The James Cook University Hospital, Marton Road, Middlesbrough, TS4 3BW

Responses from Trusts to the Potential 'outlier' alert 'case to answer' during the NPCA Outlier Policy[3]

Each trust was contacted by means of a letter to the Clinical Lead. The letter contained an aggregate table explaining the distribution of certain patient characteristics of the patients of interest from their trust compared to national demographics. Trusts were also provided, on request, with a password protected spreadsheet which contained patient level data to support the review.

The following trusts were contacted in relation to the following specific performance indicators. Their final outlier status is also indicated.

Surgical centres

Performance indicator 6: Percentage of men experiencing at least one genitourinary (GU) complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy (presented at the level of the surgical centre).

For men who underwent a radical prostatectomy between 1 September 2022 and 31 August 2023.

- East Lancashire Hospitals NHS Trust – **not confirmed**
- Mid Yorkshire Teaching NHS Trust – **confirmed**

Radiotherapy centres

Performance indicator 7: Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy (presented at the level of the radiotherapy centre).

For men who underwent radical prostate radiotherapy between 1 September 2022 and 31 August 2023.

- Royal Free London NHS Foundation Trust – **confirmed**
- Royal Surrey County Hospitals NHS Foundation Trust – **confirmed**
- Barking, Havering and Redbridge University Hospitals NHS Trust – **confirmed**

The responses from individual outlier trusts in relation to their potential outlier 'alert' status are as follows:

[3] NPCA Outlier Policy 2026 - National Cancer Audit Collaborating Centre

Response from East Lancashire Hospitals NHS Trust (Not confirmed)

Performance indicator 6: Percentage of men experiencing at least one genitourinary (GU) complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy.

East Lancashire Hospitals NHS
NHS Trust

Division of Surgery & Anaesthetic Services
Tower View Offices
Royal Blackburn Hospital
Haslingden Road
Blackburn, Lancashire
BB2 3HH

Date 25.08.2026

Dear NPCA,

Thank you for informing us that ELHT is an outlier in the NPCA with respect to patients experiencing at least one severe genitourinary tract complication within 2 years of radical prostatectomy. This was clearly very disappointing for us to discover as a trust and consequently we have investigated our data in detail.

At the time of this Audit the trust was introducing an electronic patient record and consequently we are aware that there are some errors in data from the trust at the time.

We have investigated our data in detail and have submitted our findings previously in an email with exact numbers and complication rates. According to our cancer service records we have performed **104** radical prostatectomies during this period and not **94** as described earlier by yourselves, for the reporting period 1/9/22 to 31/8/23.

Two patients had **[Redacted to protect patient identifiable information]** and were excluded as per the criteria.

A total of 13 patients were identified as having a urological intervention for complications.

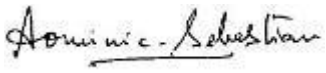
- 1 case had **[Redacted to protect patient identifiable information]** - Not a GU complication
- 1 case had **[Redacted to protect patient identifiable information]** - again this is not a GU complication
- 1 case was **[Redacted to protect patient identifiable information]** – Not a GU complication.
- 1 had an **[Redacted to protect patient identifiable information]**. Outside of Audit.
- The remaining nine patients have had genuine GU complications requiring intervention, representing a GU complication rate of 9% for the reporting period.

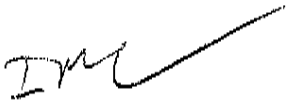
When we reviewed our data we are aware that there is a slightly higher than expected urinary tract complication rate. During this time, we were also training a new consultant to perform the procedure which may have had a slight effect on urinary tract complications. Changes to practice have already been made in terms of the use and positioning of clips, suture choice for bladder neck anastomosis and catheter size/make.

We also note that we have double the rate of socio-economic depravation compared to national data. We are however confident that our rate of complications will improve for future audits and we will continue to monitor this locally.

Yours sincerely,

Response from East Lancashire Hospitals NHS Trust (Not confirmed)





Dr Domnic Sebastian
Divisional Medical Director
Surgical & Anaesthetics Division
East Lancashire Hospitals NHS Trust

Mr I Campbell
Clinical Director
Urology Directorate
East Lancashire Hospitals NHS Trust

Cc:
Dr Julian Hobbs
Executive Medical Director
East Lancashire Hospitals NHS Trust

Mr Martin Hodgson
Chief Executive
East Lancashire Hospitals NHS Trust

Response from Mid Yorkshire Teaching NHS Trust (Confirmed)

Performance indicator 6: Percentage of men experiencing at least one genitourinary (GU) complication requiring a procedural/surgical intervention within 2 years of radical prostatectomy.

Note from NPCA: Upon reviewing the below response letter from Mid Yorkshire, we agreed to remove two patients from their numerator. Mid Yorkshire's trust result was updated but they remained an outlier.

Dear Professor Clarke and Dr Tree,

Re: Response to NPCA Outlier Notification – Genitourinary (GU) Complications Following Radical Prostatectomy

Thank you for the outlier notification and the accompanying documentation.

We are grateful for the opportunity to review our practice and outcomes and to benchmark our performance against national data, specifically in relation to the following performance indicator 'Proportion of patients experiencing at least one GU complication requiring procedural or surgical intervention within two years of radical prostatectomy'.

We continuously monitor and review our radical prostatectomy outcomes. Each surgeon maintains data on their individual performance, and we also undertake whole dataset audits conducted by an allocated individual who was not involved in the procedures, in order to minimise potential bias. The findings of these audits are regularly discussed at our CEPOD meetings, where conclusions are shared across the department and recommendations are implemented as appropriate.

We have carefully cross-referenced our data with the findings kindly provided by the NPCA and would like to share our observations and request that the following cases be reconsidered.

1. Patients who, in our opinion, should not have been classified as having undergone reintervention or a procedure

Of the 15 patients identified by the NPCA, we believe that four should not have been classified as having undergone a reintervention or procedure.

Patient 9 **[Rationale redacted to protect patient identifiable information]** *NPCA note: We agreed to remove this patient from the numerator.*

Patient 12 **[Rationale redacted to protect patient identifiable information]**

Patient 13 **[Rationale redacted to protect patient identifiable information]** *NPCA note: We agreed to remove this patient from the numerator.*

Patient 15 **[Rationale redacted to protect patient identifiable information]**

2. Patients with potentially justifiable reasons for the reported complications

Following further analysis of the data, we identified potentially relevant clinical factors that may explain the variation in outcomes for three patients and should be taken into consideration when interpreting these cases.

Patient 10 **[Rationale redacted to protect patient identifiable information]**

Patient 8 **[Rationale redacted to protect patient identifiable information]**

Patient 6 **[Rationale redacted to protect patient identifiable information]**

3. Remaining patients classified as outliers

Of the remaining eight patients classified as outliers, two experienced major GU complications requiring intervention. Following our review, we identified potentially justifiable mitigating factors in one of these cases.

Patient 4 **[Rationale redacted to protect patient identifiable information]**

Patient 14 We agree with the NPCA assessment and were unable to identify any justifiable mitigating factors to explain the need for reintervention.

The remaining six patients underwent relatively minor interventions, including: **[Intervention details redacted to protect patient identifiable information]**

4. Clarification of the total number of procedures

Our data, which has been independently confirmed by the Coding Department, indicate that the total number of patients who underwent robotic radical prostatectomy during the relevant period was 118 rather than 94. Taking this revised figure into account, our complication rate decreases significantly. We would be grateful if this discrepancy could be investigated and the analysis updated accordingly.

5. Conclusion and ongoing quality improvement initiatives

Taking into consideration the above clinical clarifications, the number of patients incorrectly classified as having undergone a reintervention, the potentially relevant mitigating factors and the corrected total number of procedures, we would respectfully request that the NPCA reconsider the outlier classification of our Trust.

We are grateful to the NPCA team for sharing this analysis, particularly as we have also recently observed an increased incidence of anastomotic strictures and bladder neck stenosis within our practice. We are actively investigating potential contributing factors and have initiated several quality improvement measures. These include:

- Peer observation and learning. We have arranged visits to other Trusts to observe experienced surgeons and discuss operative techniques and approaches to reducing complications.
- Review of catheter management protocols. We are considering extending the TWOC period from seven to ten days in selected patients. We intend to compare outcomes with our standard practice to assess whether this approach may reduce the incidence of anastomotic strictures.
- Assessment prior to catheter removal. We are also considering the introduction of cystography before TWOC in selected patients to exclude anastomotic leaks, which may potentially contribute to subsequent stricture formation.
- Surgical video recording and review. As part of our commitment to continuous learning and improvement, we have acquired digital recording equipment and are planning to record all procedures going forward. This will allow us to review operative techniques systematically, identify opportunities for improvement and evaluate potential modifications to individual surgical steps.

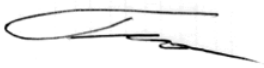
We remain committed to continuous improvement, transparency in reporting our outcomes and sharing learning across the department and with the wider surgical community.

We would welcome the opportunity to discuss our findings further and would be grateful if the NPCA could review the above information and reconsider our Trust's outlier classification.

Thank you again for bringing this matter to our attention and for providing the opportunity to undertake this review.

Yours sincerely,

Rafal Turo



Consultant Urological Surgeon

On behalf of:

M Dooldeniya, Consultant Urological Surgeon, Associate Medical Director

[Table redacted to protect patient identifiable information]

Response from Royal Free London NHS Foundation Trust (Confirmed)

Performance indicator 7: Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy.

Royal Free London
NHS Foundation Trust

Royal Free Hospital
Pond Street
London
NW3 2QG

27/10/2026

Response from Royal Free London NHS Foundation Trust

Performance Indicator 7: Proportion of patients receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) up to 2 years following radical prostate radiotherapy.

Dear Dr Tree, Professor Clarke and NPCA Team,

National Prostate Cancer Audit (NPCA) Outlier Notification

Thank you for writing to us and providing data regarding rectal toxicity for patients treated between 1 September 2022 and 31 August 2023 at Royal Free London NHS Foundation Trust.

As discussed with the NPCA team, The Royal Free London comprises two radiotherapy centres: The Royal Free Hospital (RFH) and North Middlesex Hospital (NMH). Although both centres operate within the same Trust, radiotherapy planning and treatment delivery are undertaken independently and we appreciate the assistance given by the team in helping us identify the patient cohorts belonging to each service so we can audit and improve our own practices.

We have reviewed the data supplied and can confirm that the number of reported events attributed to the Trust is correct. We have been able to identify the patients treated at each radiotherapy centre and have undertaken an initial review of the available data.

In response to your specific questions:

1. Does the Trust consider the NPCA data to be accurate in comparison to your hospital records?

Yes. We have reviewed the NPCA data and can confirm that the number of patients attributed to Royal Free London NHS Foundation Trust is accurate. The distribution across the 2 services is as follows:

Radiotherapy Centre	Number of Events	Total Treated	Percentage
North Middlesex Hospital	23	229	10%
Royal Free Hospital	27	196	14%
Missing Centre Identifier	1	-	-
Total	51	-	-

Whilst we confirm the accuracy of the reported event numbers, we have not yet completed a full patient-level review of all identified toxicity cases.

2. Subject to the data being accurate, are there justifiable reasons for the variation that mean the Trust should not be considered an outlier for this performance indicator?

At this stage we are unable to provide a definitive explanation for the observed variation and therefore cannot conclude that the Trust should not be considered an outlier.

Our preliminary analysis has, however, highlighted factors that may contribute to the observed rates.

At North Middlesex Hospital, most patients who developed toxicity received prostate and seminal vesicle radiotherapy alone (70%). In contrast, at the Royal Free Hospital, 63% of toxicity events occurred in patients who received prostate and pelvic node radiotherapy.

Radiotherapy Site	NMH	RFH
Prostate and Seminal Vesicles	16 (70%)	10 (37%)
Prostate and Pelvic Nodes	7 (30%)	17 (63%)

In addition, review of a subset of patients has highlighted potential limitations of the toxicity indicator itself. Of 12 patients reviewed at NMH, six (50%) underwent colonoscopy following a positive Faecal Immunochemical Test (FIT) result despite being asymptomatic. At RFH, seven of 27 patients (25%) were referred for colonoscopy following GP referral, and in none was radiation proctitis identified.

Whilst undergoing colonoscopy qualifies as a metric for Grade 2 rectal toxicity within the audit methodology, colonoscopy alone does not establish causation by radiotherapy. We therefore believe further patient-level review is required before conclusions can be drawn regarding the true incidence of radiotherapy-related toxicity.

3. Have quality improvement measures been put in place in order to correct potential problems in future?

Yes.

Several quality improvement initiatives have already been introduced across both radiotherapy centres during the last two years, prior to receipt of these outcome data:

- Introduction of rectal spacers for suitable patients receiving prostate and seminal vesicle radiotherapy.
- Introduction of bi-weekly radiotherapy seminars before CT simulation to improve patient understanding of bowel preparation requirements.
- Ongoing audits comparing planning CT datasets with cone beam CT verification images and linking findings to patient-reported bowel and bladder toxicity outcomes.
- Routine review of treatment preparation processes and image-guidance compliance.

In addition, further work is planned as part of the current investigation:

- Detailed review of individual patient pathways from CT planning through treatment completion.

- Assessment of rectal diameter at planning CT, rescan rates and bowel preparation compliance.
- Review of rectal dose-volume parameters and treatment verification imaging.
- Comparative analysis of treatment plans using ProKnow to benchmark rectal dose metrics against centres reporting lower toxicity rates.

Both services are reassured by the NHS Prostate Audit using ProKnow, 2025, where we collectively uploaded 100 patients. For both sites, our median and mean rectal volume receiving 60Gy and 48Gy was below the optimal constraint for the PACE trial.

The multidisciplinary team will continue its review of the identified patients to determine whether any additional quality improvement measures are required.

We appreciate the opportunity to review these findings and thank the NPCA team for bringing these results to our attention. We intend to provide a further update once our detailed analysis has been completed.

Yours sincerely,



Dr Jenny Cross BSc, MD, PhD FRCP

Medical Director

Royal Free Hospital

Response from Royal Surrey County Hospitals NHS Foundation Trust (Confirmed)

Performance indicator 7: Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy.

Re: NPCA Potential Outlier Notification

Thank you for your letter dated 28th July 2026 informing us of the information recorded in relation to radical radiotherapy, which set our Trust as outside the expected 'alarm' limits for the national mean rate for gastrointestinal (GI) complications. Many thanks for providing us the source data, which we have conducted a local review.

The adjusted percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity within two years after radical radiotherapy (GI complication) for RSFT remains above the National figure by 3.85%. This data applies to patients having undergone radiotherapy in 2022/2023. 51 patients were identified in the NPCA data who experienced radiation proctitis from the total of 395 patients in the audit.

On closer analysis of the 51 affected patients remaining, 14 patients were found to have a radiation proctitis on colonoscopy, but they did not present with rectal bleeding. They had colonoscopies for other indications and radiation proctitis was recorded as a finding. The indications for colonoscopies include regular colonoscopies for polyp surveillance, investigations of weight loss, haemorrhoids, and diverticulitis. Patients who have pre-existing GI issues cannot be excluded from the NPCA so would still be included in the data. As a trust, we are using patient report outcomes in our follow-ups including the use of the male health inventory, which allows early identification of any problems. Our patients are then being referred for investigations, including colonoscopies, more promptly. We have also began using this tool in our diagnosis clinics to aid patients when recalling history and symptoms. We hope this will help to identify patients who may need a more specific treatment plan including accepting optimal tolerances over mandatory.

As part of our ongoing Proknow data entry we added the 51 patients flagged by the NPCA onto the Proknow database. None of these patients were previously included in our depository. Of the 51 patients, 15 had received 78Gy/37# prostate and nodes treatments, and 36 had received 60Gy/20# prostate treatments. Within Proknow, we compared the dose statistics of the flagged patients against those in the clinical protocols used at planning.

For the rectum, the tolerances were largely the same for the 78Gy/37# and 60Gy/20# clinical protocols. Therefore, the screenshot below compares (1) the 15 flagged PPN patients, (2) the 36 flagged prostate patients, and (3) the 488 60Gy/20# prostate patients included in the national audit. While the rectum doses are understandably typically higher for the PPN patients, they are well within tolerance for most of the statistics. The only exception to this is the V75Gy which saw 4 PPN patients exceed optimal tolerance; however, these patients were still within the mandatory tolerance. The rectum doses for the 36 flagged prostate patients were all well within tolerance, and the means were comparable with the wider 60Gy/20# prostate collection. There is no indication from this data that the patients flagged by the NPCA had atypically high or out of tolerance rectal doses.



Prior to the NPCA audit findings, we have already implemented changes to improve practice and specifically reduce bowel and rectal radiation doses. This is unlikely to reflect an improvement in results (of reducing the proportion of GI complications) until data for patients having undergone radiotherapy from 2022/23 onwards are made available.

The changes that have been implemented since 2022/23 include:

- Switching to VMAT technique radiotherapy treatment for all patients so the dose distribution is more conformal
- MRI fusion planning is available, which allows more accurate delineation of the prostate
- Margin for the treated high dose radiation volume is reduced (CHIIP trial margins)
- Daily CBCT image guidance is done for radiotherapy treatment
- Identifying cohorts of patients to have a Space OAR to reduce rectal radiation dose
- Appropriate reduction in number of patients receiving pelvic lymph node radiotherapy
- Automated contouring as standard prior to clinician checks during planning.
- Peer review.
- For the future, we are looking at newer technologies including MRI planning and embarking on more SABR prostate trials to improve our expertise.

In addition to the above we have

- Removed 78Gy in 37# from our protocol which will mean it is no longer used. There was a slightly higher proportion of patients identified with radiation proctitis treated in the 37# group compared to the 20# group. This could potentially reduce the proportion further
- Started to develop a protocol for when to refer for colonoscopy post radiotherapy after clear guidance from our colorectal and gastroenterology colleagues.
- Uploaded 488 plans to the National Proknow database to ensure our dosimetry is benchmarked against evidence-based practice.

The on-going national data collection should hopefully demonstrate further improvements. I hope this is acceptable, but please let me know if anything further is required at this stage.

Yours sincerely

Chee Goh, Clare Williamson, Christos Mickropoulos, Dualta Mcquaid, & Sophie Urch.

Royal Surrey Cancer Centre

Royal Surrey NHS Foundation Trust

Response from Barking, Havering and Redbridge University Hospitals NHS Trust (Confirmed)

Performance indicator 7: Percentage of men receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity (gastrointestinal [GI] complication) within 2 years of radical prostate radiotherapy.

Note from NPCA: Following our engagement with Barking, we agreed to remove two patients from their numerator. Barking's trust result was updated but they remained an outlier.

Barking, Havering and Redbridge University Hospitals NHS Trust

Dr Andrew Bartlett
Department of Clinical Oncology
Queen's Hospital
Rom Valley Way
Romford RM7 0AG
29 October 2026

National Prostate Cancer Audit
National Cancer Audit Collaborating Centre
The Royal College of Surgeons of England
38–43 Lincoln's Inn Fields
London WC2A 3PE

Dear Sir or Madam,

National Prostate Cancer Audit (NPCA) Potential Alert Outlier Notification — Barking, Havering and Redbridge University Hospitals NHS Trust

Thank you for your letter of 11 September 2026 identifying the Trust as a potential 'alert' outlier for the proportion of patients receiving a procedure of the large bowel and a diagnosis indicating radiation toxicity within 2 years of radical prostate radiotherapy (Trust 13.77% vs national 8.13%; denominator 155). We have reviewed all 25 contributing patients against local records, and respond to your three questions below. No patient-identifiable information is included.

1. Is the NPCA data accurate against our records?

Broadly yes — in each verifiable case both an endoscopy and a radiation-toxicity diagnosis were present, and we do not dispute the data capture. Two points of note: for two patients we were unable to find records regarding intervention status (thus outcomes below are reflected as a range), and in two other patients **[Rationale redacted to protect patient identifiable information]**) rather than radiation change, which questions the accuracy of the toxicity coding in those cases.

2. Are there justifiable reasons for the variation?

We believe so, on grounds of severity and ascertainment. Of the 25 patients, only 9 required active intervention (Purastat, argon plasma coagulation or steroid suppositories), consistent with CTCAE Grade 2 or above; 14 required none and were managed expectantly, consistent with Grade 1; and 2 are unresolved. Our rate of clinically significant (≥Grade 2) toxicity is therefore 9/155 (5.8%), and at most 11/155 (7.1%) on the most conservative assumption — both below the national 8.13%, and consistent with the late Grade ≥2 GI rates reported in the CHHiP and PROFIT trials for 60 Gy in 20 fractions. The indicator counts any endoscopy plus a radiation code as a Grade ≥2 event; since endoscopic radiation change is near-universal and usually asymptomatic after prostate radiotherapy, it is highly sensitive to a trust's threshold for investigating post-radiotherapy rectal symptoms. Ours is deliberately low, to exclude a second malignancy, and 14 of the 23 patients we could characterise required no treatment after endoscopy — more consistent with thorough case-

finding than with a true excess of toxicity. We accept that our result exceeds the threshold as defined, but submit that the clinically significant component lies below the expected average.

3. Have quality improvement measures been put in place?

Yes. Our physics team reviewed all contributing plans; all met the organ-at-risk constraints in force at the time of planning. The review identified that our prostate and seminal vesicle protocol for some of the earlier cases specified only a single bowel constraint (at 40.8 Gy): one plan met that constraint but recorded a bowel V52 Gy of approximately 7.5 cc against the 0 cc now required on our current protocol. However, all other plans met current, stricter rectal and bowel constraints. We have since tightened our OAR tolerances for 20-fraction prostate and seminal vesicle plans, adopting the fuller bowel constraints commonly used for prostate-and-nodal treatments.

We would be glad to provide patient-level clinical classifications for review, should that assist recalculation, or to discuss further.

Yours faithfully,



Dr Andrew Bartlett MA(Oxon) MBBS PGDip(Oncol) MRCP FRCR

Consultant Clinical Oncologist

Clinical Lead for Uro-Oncology, BHRUT