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‘STATE-OF-THE-NATION’ STUDY: UNDERSTANDING NHS TREATMENT PATHWAY TO ADVANCE HR NMIBC PATIENT CARE in the United Kingdom (SPAN-UK)

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Key Takeaway

Variation in the real-world management of high-risk non–muscle invasive bladder cancer (HR-NMIBC) across the UK has been shown in this clinician-led cross-sectional study. Including limited specialist nurse resourcing, inconsistent Bacillus Calmette–Guérin (BCG) maintenance duration, and lack of standardized national audit data—highlighting an urgent need for updated national guidance and quality metrics.

Conclusions

- UK real-world practice shows significant variation in diagnostic timelines, time to Transurethral Resection of a Bladder Tumor (TURBT) and BCG maintenance schedule duration.
- Nearly half (46.6%) of BCG-unresponsive NMIBC patients in the UK are either ineligible for or decline radical cystectomy (RC). The current lack of evidence-based bladder-sparing treatment options beyond BCG re-challenge and the lack of clinical trial opportunities have been reported for these patients.
- Workforce gaps, including specialist nurses, urologists and pathologists persist across the UK and have contributed to treatment delays.
- There is strong support for adherence to Quality Performance Indicators (QPIs) and implementation of a national bladder cancer audit to reduce care variability across the NHS.
- Consistent interpretation of BCG-failure definitions is essential to inform future UK clinical practice and BCG-unresponsive NMIBC trial design. Patient toxicities, limited post-BCG options, and recurrence remain key challenges.

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Poster

Narrated poster video

Supplementary material

Disclosures

Jonathan Aning: JA has received honoraria for advisory boards or providing medical education from Accord, AstraZeneca, Astellas, Bayer, Curium, Janssen, Merck, Nonacus and has received institutional research funding from Nonacus. **James WF Catto**: JWFC has received consulting fees from AstraZeneca, Ferring, Ipsen, Roche, and Janssen; has received speaker fees from Bristol Myers Squibb, Pfizer, Merck Sharp & Dohme, Janssen, Astellas, Nucleix, InMed, and Roche; has received honoraria for membership in advisory boards from Ferring, Roche, Gilead, Photocure, Pfizer, Bristol Myers Squibb, QED Therapeutics, and Janssen; and has received institutional research funding from Roche. **Rebecca Martin**: RM has received consultancy fees +/- honoraria from Medac pharma, J&J, Pfizer. **Kathryn Chatterton**: KC has received speaker fees from Medac pharma, J&J and Photocure and has received honoraria for advisory boards from Medac pharma and Photocure. **Paramananthan Mariappan**: PM has received honoraria and consulting fees from Baxter, BMS, Coloplast, Ethicon, Janssen, Medac Pharma, Nucleix, Pfizer, Photocure, Storz. **Edward Ottley**: EO and **Joseph Hickey**: JH are employees of OPEN Health Communications LLP. **Stephen McCormack**: SMcC and **Simran Gill**: SG are employees of Johnson & Johnson Innovative Medicine Medical team. **Bernadett Szabados**: BS has received speaker fees from Merck, Janssen, Photocure, Astellas, Ferring and consulting/advisory fees from Pfizer, Astellas, Photocure, Johnson & Johnson.

Introduction

- The National Institute for Health and Care Excellence (NICE) guidelines for bladder cancer have not been updated since 2015.[1] Highlighting an urgent need for revised recommendations to improve care in high-risk non–muscle invasive bladder cancer (HR-NMIBC) across the United Kingdom (UK).[2]
- Real-world UK data on current practice and guideline adherence is scarce, and, to date, no clinician-led national review has mapped the HR-NMIBC care pathway across National Health Service (NHS) regions.
- To address this gap, this cross-sectional survey, **SPAN-UK** (‘State-of-the-Nation’ study: Understanding NHS Treatment Pathway to Advance HR NMIBC Patient Care in the UK), was conducted to understand current HR-NMIBC practice and real-world implementation of European Association of Urology (EAU) guidance.

Methods

Study design

- This descriptive, cross-sectional study utilised survey-methodology via an online platform developed with guidance from a steering group of UK clinical experts.
- Structured interviews with NHS healthcare professionals (HCPs) involved in HR-NMIBC care were led by a senior Medical Science Liaison (MSL) from the sponsor’s medical team. Interviews were conducted between June and September 2025.
- The survey explored multidisciplinary team (MDT) resourcing, diagnostic timelines, bacillus Calmette-Guérin (BCG) use, and radical cystectomy (RC) decision-making.

Data analysis

- Quantitative data were analysed descriptively, with frequencies, means, medians, and interquartile ranges calculated for categorical and continuous variables. No inferential statistics or hypothesis testing were performed, consistent with the descriptive nature of the study. Qualitative free-text responses underwent thematic analysis using an inductive approach, involving systematic coding of each response in turn to identify themes that represent a narrative of real world challenges. .

Ethical requirements

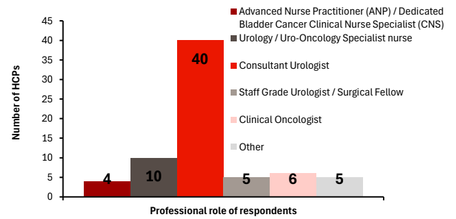
- The study complied with General Data Protection Regulation (GDPR) and the Declaration of Helsinki.
- Ethics approval was not required and written informed consent was obtained from each HCP participant.

Results

Respondents

- A total of 70 healthcare professionals (HCPs) were included across England (87.1%), Wales (4.3%), Northern Ireland (4.3%), and Scotland (4.3%).
- The professional job roles of the HCPs are summarized in **Figure 1**.

Figure 1: Job roles of HCPs



*Other: Nurse Consultant within Urology (n=1); Urology Oncology Lead Nurse (n=1); Urology Nurse Practitioner (n=1); Specialist Urology Diagnostic Nurse (n=1); Urology Nurse Practitioner (Bladder Cancer Team) (n=1).

Referral-to-diagnosis timeframe

- Reported timeframes for referral to communication of a confirmed diagnosis of HR-NMIBC are summarized in **Table 1**.
- Most HCPs reported that a confirmed diagnosis was achieved within 6–8 weeks of referral.

Table 1: Referral-to-diagnosis timeframes

Typically, at your site, overall, how long is the typical timeframe from referral to a confirmed and communicated diagnosis of HR-NMIBC? n (%)	N=70
≤4 weeks	1 (1.4)
≤6 weeks	28 (40.0)
≤8 weeks	33 (47.1)
>8 weeks	8 (11.4)

BCG treatment duration

- Reported timeframes for BCG treatment duration are summarized in **Table 2**.
- BCG maintenance was variable. Following BCG induction, HCPs reported that a median of 20.0% (interquartile range [IQR] 5.0-32.5%) and 60.0% (40.0-70.0%) of their patients completed ≥2 or ≤1 years of maintenance, respectively.

Table 2: BCG treatment duration

For those HR-NMIBC patients who receive intravesical BCG what proportion typically complete the following, median (IQR) %	N=67
Complete BCG induction followed ≥2 years of maintenance	20.0 (5.0-32.5)
Complete BCG induction followed by ≤1 year of maintenance	60.0 (40.0-70.0)
Receive **only** ≥5 doses of BCG induction and ≥2 doses of maintenance or 2nd induction (Adequate BCG: FDA BCG-unresponsive Treatment Guidance for Industry[3])	10.0 (10.0-15.0)
Complete ≥5 doses of BCG induction only	4.0 (3.0-5.0)
Fail to complete BCG induction (<5 doses, due to disease recurrence or unacceptable toxicity/QoL impacts)	1.0 (1.0-2.0)

Real-world challenges associated with BCG use

- Patient experience of toxicities (87.1%), lack of options after BCG (77.1%) and recurrence on/after BCG (57.1%) were the most frequently reported real-world challenges associated with BCG use reported by HCPs (**Table 3**).

Table 3: Real-world challenges associated with BCG use

Challenges associated with BCG use, n (%)	N=70
Waiting times for new patient BCG initiations	10 (14.3)
Recurrence on/after BCG	40 (57.1)
Lack of options after BCG	54 (77.1)
Patient experience of BCG toxicities (e.g., cystitis, dysuria, polyuria, haematuria)	61 (87.1)
NHS workload associated with the management of BCG Toxicities	10 (14.3)
Patient experience associated hospital visits/treatment schedule/schema	6 (8.6)
Patient challenges associated travel for hospital visits/treatment schedule/schema (e.g., rural/ location/public transport issues)	19 (27.1)
Patient challenges associated work/family commitments and hospital visits/treatment schedule/schema	6 (8.6)
NHS Capacity considerations associated with BCG treatment schedule/schema	17 (24.3)
Patient education	0 (0)
Patient access to psychological support	2 (2.9)
Staff education	1 (1.4)
BCG shortages	7 (10.0)
Other*	5 (7.1)

*Other (summarized): Centralization of resources leading to referral elsewhere for RC, which can lead to BCG re-induction (n=1); contraindications to BCG (n=1); effective real-world tracking of HR-NMIBC on BCG, staff education of International Bladder Cancer Group post-BCG failure definition (n=1); historic BCG shortages which no longer exist, concerns of future shortages (n=1); patient quality of life is a key overall consideration (n=1).

BCG-unresponsive high-grade NMIBC and RC in the UK

- The proportions reported by HCPs of patients with BCG-unresponsive high-grade NMIBC relating to RC eligibility and consent are summarized in **Table 4**.
- As an estimate, almost half (46.6%) of patients with BCG-unresponsive high-grade NMIBC would require a bladder-sparing intervention.

Table 4: RC eligibility and consent in patients with BCG-unresponsive high-grade NMIBC

Proportion of BCG-unresponsive* high-grade NMIBC patients that tend to be: mean (SD) %	N=69
Eligible and consent to RC	53.4 (18.1)
Eligible but decline RC	22.0 (12.6)
Ineligible for RC	24.6 (14.9)

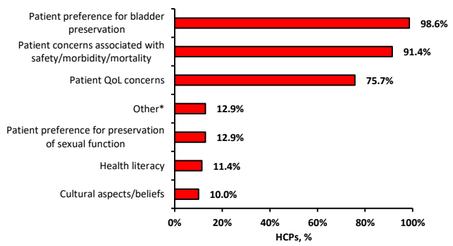
Patient reasons for not consenting to RC

- Patient reasons reported by HCPs for patients not consenting to RC was primarily due to patient preference for bladder preservation (98.6%), patient safety/morbidity concerns (91.4%), and patient quality-of-life concerns (75.7%) (**Figure 2**).

Bladder-sparing trial access

- Bladder-sparing trials were referenced in n=46 free-text responses, indicating a strong interest but limited access.
- Re-induction with BCG was often considered as a relevant bladder-sparing option (90.0%) in the BCG unresponsive setting .

Figure 2: Patient reasons for not consenting to RC

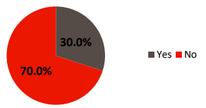


*Other (summarized): Concern about urinary diversion / anxiety about surgery and recovery (n=1); health illiterate patients follow HCP recommendation (n=1); patients are referred specifically in many cases (n=1); patients choosing bladder-sparing trials with standard of care radiotherapy (n=1); open trials or early access program (n=1); site takes RC referrals so considered by the respondent to be more likely to consent (n=1); in the past 12 months, few (~5%) have refused RC despite being eligible (n=1); quality of life is an important aspect (n=1). Denominator: n=70.

Workforce capacity

- A total of 70.0% of HCPs reported insufficient dedicated bladder cancer specialist nurse resourcing to meet foreseeable demands of HR-NMIBC care (**Figure 3**).

Figure 3: Does the respondent's local Bladder Cancer team currently have sufficient dedicated bladder cancer specialist nurse resourcing to meet foreseeable demands of HR-NMIBC patient care?



Consensus regarding quality performance indicators (QPIs) and a National Bladder Cancer Audit

- All HCPs reported that adhering to benchmarks for QPIs could help to reduce the risk of NMIBC recurrence and progression to MIBC while also reducing nationwide variance in NMIBC care.
- All HCPs reported that the clinical community would benefit from a Bladder Cancer National Audit.

Conclusions:

This national assessment highlights an urgent need to optimize HR-NMIBC care pathways across the NHS, including strengthening specialist nurse resources. Streamlining and aligning diagnostic and treatment pathways thus reducing variation in time to definitive treatment. Standardizing BCG protocols and clarifying BCG-failure definitions. Expanding access to clinical trials and broadening availability of evidence-based alternatives to BCG and bladder-sparing treatment options have been reported as critical unmet needs for HR-NMIBC patients by UK HCPs.

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