

# UK National Screening Committee: Population Screening for Bladder Cancer 2025 Evidence Map

## Yorkshire Cancer Research comments:

The evidence map concludes that there is insufficient evidence for population screening of asymptomatic people for bladder cancer to justify a more comprehensive evidence summary. It is recommended that the topic is re-considered in three years.

Yorkshire Cancer Research supports the conclusion that more research is required to increase the evidence on the feasibility of bladder cancer screening in relevant populations. The evidence map cites the Yorkshire Cancer Research funded YORKSURe study as an example of research which aims to address these limitations. This randomised controlled trial will evaluate the feasibility of bladder cancer screening. It will do so through the detection of haematuria in people who are at high risk of bladder cancer mortality in Yorkshire. In 2024, 486 people died from bladder cancer in the region, which is the equivalent of 4,858 life years lost - the number of years of life someone loses due to a premature cancer death.<sup>1, 2</sup>

The YORKSURe trial has involved a total of 5187 people from South Yorkshire. The first cohort includes participants aged between 55-80 attending the Yorkshire Lung Screening Trial.<sup>3, 4</sup> This cohort completed self-testing, with those testing positive undergoing further testing and an ultrasound scan. The second cohort includes men aged 65-79 from areas of South Yorkshire considered high risk of bowel cancer mortality.<sup>4</sup> Men who self-test positive were invited to attend local screening clinics for urine cytology and ultrasound. The third cohort completed urine self-testing whilst already being in the NHS pathway for investigation of haematuria<sup>4</sup>.

The study will assess outcomes including the acceptability of, and compliance with, urine self-testing, the prevalence of haematuria and the positive predictive value of urine self-testing, urine cytology and ultrasound scans.<sup>4</sup> This will provide the evidence required for a phase III randomised controlled trial.<sup>4</sup>

As part of the YORKSURe study, economic modelling has been developed to determine the cost effectiveness of urine self-testing for high-risk populations in England.<sup>5</sup> This found that urine self-testing was not cost effective for the general population of smokers in England at a threshold of £20,000 per QALY gained. However, screening may be cost-effective for men aged between 58 and 60 who currently or formerly smoked.<sup>5</sup> In addition, screening was likely to be more cost effective in areas with higher incidence and worse mortality outcomes for bladder cancer.<sup>5</sup> Ultimately, further analysis is required to understand if this is the case when real-world uptake of testing is considered outside of deterministic analysis.

To allow for a more comprehensive evidence summary by the UK National Screening Committee, Yorkshire Cancer Research recommends future screening studies are focused on high-risk populations. The initial modelling conducted as part of the YORKSURe trial indicates research should focus on populations including men who currently or formerly smoked and

people in occupations such as factory work. Furthermore, integrated screening approaches for different cancer types may increase patient benefit and improve cost effectiveness.

It will also be important for future research to determine the effect of screening on bladder cancer mortality, in particular the impact of a stage shift resulting from screening, and future modelling should incorporate information on stage-specific mortality by diagnostic-route.

The first results from the YORKSURE trial are expected in the second half of 2026. When the evidence regarding bladder cancer screening is reconsidered, the YORKSURE trial can support an evidence summary.

## References

1. Nomis. *Mortality statistics - underlying cause, sex and age*. 2023. Accessed: 29/01/2024. Available from: <https://www.nomisweb.co.uk/query/construct/summary.asp?reset=yes&mode=construct&dataset=161&version=0&anal=1&initset=>
2. Office for National Statistics. *National life tables – life expectancy in the UK: 2022 to 2024*. 2025. Accessed: 12/01/2025. Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/bulletins/nationallifetablesunitedkingdom/2022to2024>
3. International Standard Randomised Controlled Trial Number. *Yorkshire screening of urine trial (YORKSURE)*. 2025. Accessed: 06/01/2025. Available from: <https://www.isrctn.com/ISRCTN34273159>
4. Catto JW, North B, Goff M, Carter A, Sleeth M, Mandrik O, et al. *Protocol for the YORKSURE prospective multistage study testing the feasibility for early detection of bladder cancer in populations with high disease-specific mortality risk*. *BMJ Open*. 2023;13(9):e076612.
5. Mandrik O, Thomas C, Akpan E, Catto JWF, Chilcott J. *Home Urine Dipstick Screening for Bladder and Kidney Cancer in High-Risk Populations in England: A Microsimulation Study of Long-Term Impact and Cost-Effectiveness*. *Pharmacoeconomics*. 2025;43(4):441-52.