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SCREENING

# Is the UK really ready to roll out prostate cancer screening?

**Proponents and positive news coverage suggest a national programme is "in the pipeline"—but Elisabeth Mahase finds uncertainty, controversy, and a need for more evidence**

Elisabeth Mahase

Late February saw a spate of breathless headlines urging the government to roll out "life-saving" prostate cancer screening in the UK, which is not currently recommended by the National Screening Committee (NSC).

The reports were based on a non-peer reviewed research abstract, and—while a change in advice in the European Union does point towards national screening—some doctors believe further evidence and other assurances are needed before it is implemented in the UK.

In the meantime, experts say that the current UK situation of "informed choice," in which men without symptoms can get a prostate specific antigen (PSA) test by request, is the worst of both worlds. Others have expressed frustration that government campaigning to encourage these requests goes against NSC recommendations and jumps the gun on any possible change.

## Review looming

Prostate cancer is the most common cancer in men, and the third leading cause of cancer death in men in Europe. But despite its prevalence, only two countries in the world—Kazakhstan and Lithuania—have an official population based screening programme.[1]

The main barrier is the harm-benefit calculation required for any screening programme. In this case, the initial test used to indicate whether someone may have prostate cancer, the PSA test, is unreliable. It can incorrectly suggest someone has prostate cancer when they do not, and it can also miss cancers: around one in seven people with normal PSA concentrations may have prostate cancer.[2] PSA screening reduces prostate cancer mortality by detecting aggressive cancers that need treatment—but it may also lead to harm in the form of overdiagnosis and overtreatment, by detecting cancers that would never cause symptoms or shorten life.

In the UK, while any man aged over 50 who asks to be tested for prostate cancer can have a PSA test,[3] NSC has not recommended a screening programme because it has not found that the benefits outweigh the harms.[4] This decision is reviewed every few years, with the last review taking place in 2020 and the next review expected in the next year.

With this review looming, some are arguing that the scales may have tipped towards screening being beneficial.

## Have harms reduced?

In a research abstract presented at the American Society of Clinical Oncology genitourinary cancers symposium in San Francisco earlier this year, Prostate Cancer UK (PCUK) argued that the introduction of multiparametric magnetic resonance imaging scans (MRI) and transperineal guided biopsies in the past few years have reduced the harms. Tens of thousands fewer men each year experience harms such as unnecessary biopsy or sepsis during diagnosis, the charity says.

Its research suggests 67% fewer men experience harm during the diagnostic process—around 900 fewer men for every 10 000 PSA tests carried out. This is because of an approximate 64% decrease in the number of unnecessary biopsies, a 55% reduction in the number of men who develop sepsis, and a nearly 77% reduction in the number of men receiving a diagnosis of "clinically insignificant cancer."[5]

"The UK may finally be in a position to roll out a screening programme for prostate cancer," the researchers say. The charity has submitted a proposal to the NSC for a screening programme for all men over 50, black men aged over 45, and men who have a first degree relative diagnosed with prostate, breast, or ovarian cancer.

This submission was confirmed by the NSC, with a spokesperson for the Department of Health and Social Care—under which the NSC falls—telling *The BMJ*, "NSC has received a set of proposals relating to screening for prostate cancer. It will explore these further and consider how best to take them forward."

The charity's report on this non-peer reviewed research garnered positive national media coverage, with prominent suggestions that screening could soon be rolled out and little consideration of the plausibility of that claim.[6 7]

## Additional considerations

GP Sam Merriel, honorary senior research fellow at Bristol Medical School, says, "The pre-biopsy MRI reduces the chance of overdiagnosis because it's more sensitive for the clinically significant cancers, and it also provides information for targeted biopsy for the urologists and radiologists that do the diagnostic testing to confirm diagnosis. So, that has clearly changed and has reduced risks for men."

However, Merriel—who has worked with PCUK as an expert reference panel member and has given educational talks for the charity (both unpaid)—tells

*The BMJ* it's not yet clear how much that risk has been reduced.

"Because MRI has come on relatively recently in the UK, we don't have that screening evidence yet," he explains. "The assumption from a lot of people is that because the diagnostic testing is getting better and the risks of overdiagnosis and unnecessary biopsies is lower, that the balance has changed. But it's unclear as to how much that's changed."

Additionally, he highlights that the PCUK research used data on higher risk men who had already been referred, meaning "it's not quite representative of a screening programme, which is applied to a whole population."

He adds that there are many other factors that must be taken into consideration for screening programmes, including ensuring equity of access for the whole population and capacity in the system for additional scans and investigations.

## Movement in Europe

Merriel says there are suggestions that we are moving towards being able to roll out a screening programme, even if we are not quite there yet. He points to changes in the European Union, where member states were advised by the Council of the European Union in November[8] to assess the "feasibility and effectiveness" of prostate cancer screening for men, using PSA testing and an MRI follow-up.[9]

This recommendation was based on an evidence review by Science Advice for Policy by European Academies.[10] The report, published in March last year, acknowledged the risks of "overdiagnosis and overtreatment" but said the change in advice was in response to advances in technology—such as MRI—as well as an observed rise in metastatic prostate cancers diagnosed in men over 75 following a recommendation in the US to stop PSA screening.

The report said there is "good evidence" that PSA based screening can "reduce deaths from prostate cancer" and suggested that imposing an upper age limit on screening (for example, up to 65 or 69), as well as using high quality MRI scans for PSA positive men, could "reduce overdiagnosis and improve the harm-to-benefit ratio."

While seemingly recommending in favour of screening, however, the report also advised against the "informed choice" schemes currently in place in countries including the UK. It argued that this often leads to younger men getting unnecessarily tested, and overdiagnosis in older men, such as those over 70.

This chimes with the view of a group of experts from across Europe and the US who, writing in *The BMJ* this week, say informed choice policies have led to "paradoxically high rates of PSA testing, clear medical harm, scant benefit, and inequities."

Six months after the EU recommendations were put to member states, no state has yet announced a national prostate cancer screening programme.

## The creep of "case finding"

While the debate on screening continues, there has been an NHS campaign of case finding initiatives—which experts have argued amount to unofficial screening programmes.

In early 2022, NHS England launched a campaign to find the 14 000 "missing men" who had not started treatment for prostate cancer since the beginning of the pandemic. Following this, NHS England's national cancer director Cally Palmer told MPs in March 2023 that their push to diagnose three cancers—one of which is prostate cancer—through awareness campaigns has led to "an uptick in people seeking assessment of 7-15%."[11]

As revealed by *The BMJ*, NHS England also began to launch prostate cancer "case finding" pilots last year, targeting men over 50, men with a close relative who has had prostate cancer, and black men over 45. According to plans, these men would be invited for PSA testing and counselling.[12]

*The BMJ* understands these pilots have been focused in areas deemed to have a shortfall in people starting treatment: Greater Manchester, west London, and mid and south Essex. No impact data have yet been made available.

For Richard Martin, professor of clinical epidemiology and deputy head of Bristol Medical School, the harm-benefit calculation remains of concern when it comes to these case finding schemes.

"There are well established criteria for appraising screening programmes before their introduction. Judged against those criteria, we do not yet have the required evidence to introduce population wide prostate cancer screening," says Martin, whose research focuses on prostate cancer and screening. "The potential for harms outweighing benefits remains when ad-hoc PSA testing or case finding occurs."

## Population level evidence will take time

Nationally, Merriel suggests the NSC is unlikely to approve a screening programme at this point, because they will want to see high level evidence of benefit that can be applied across the population.

"I don't think there's clear, strong evidence that this new approach is worth rolling out nationally, inviting all men regularly," he says. "There are a lot of questions—not only about capacity to deliver, and equity in access, but also how often you screen men and what the thresholds are. This is what the research evidence is needed for, to work out how it can best be applied."

A prostate cancer screening programme would be a "big thing for the NSC to commission," Merriel adds, and providing "good quality research evidence" to show whether a screening programme incorporating MRI works on a population level could take 10 to 20 years.

"It's needed because we still have lots of men being diagnosed at a late stage, and symptoms often don't present until late. In terms of generating that evidence, it's going to take time," he says.

Not externally peer reviewed


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