

Citizen Participation and Public Petitions Committee

2nd Meeting, 2021 (Session 6)

Wednesday, 1 September 2021

PE1863: Mandatory annual cancer blood test from the age of 55

Note by the Clerk

Petitioners Michael Campbell

Petition summary Calling on the Scottish Parliament to urge the Scottish Government to provide mandatory annual blood tests from the age of 55 to detect cancer.

Webpage <https://petitions.parliament.scot/petitions/PE1863>

Introduction

1. This is a new petition that was lodged on 24 March 2021.
2. A SPICe briefing has been prepared to inform the Committee's consideration of the petition and can be found at **Annexe A**.
3. While not a formal requirement, petitioners have the option to collect signatures and comments on their petition. On this occasion, the petitioner elected to collect this information. 624 signatures and 57 comments were collected.
4. The Session 5 Public Petitions Committee agreed to seek advanced views from the Scottish Government on all new petitions before they are formally considered. A response has been received from the Scottish Government and is included at **Annexe B** of this paper.

Scottish Government submission

5. The Scottish Government submission highlights that it recognises the importance of an early cancer diagnosis and its impact on cancer patient outcomes.
6. The Scottish Government advises it has already taken a number of actions to continue enabling an early cancer diagnosis. It notes Scotland's first Early Cancer Diagnostic Centres (ECDC) are being established in NHS Fife, NHS Dumfries & Galloway and NHS Ayrshire & Arran.
7. It states "these person-centred fast-track diagnostic pathways will provide primary care with a new referral route for patients with non-specific symptoms suspicious of cancer. ECDCs mark a new era in Scotland's early diagnosis efforts".
8. The submission advises the Scottish Government monitors and considers all available evidence and recommendations from the UK National Screening Committee (NSC), an independent expert advisory group which inform decisions taken on screening programmes across the four UK nations.
9. It highlights that although there is currently no single blood test that screens for different cancer types, there is some ongoing research, which the UK NSC will review to make a recommendation for population screening.

Action

10. The Committee is invited to consider what action it wishes to take on this petition.

Clerk to the Committee



Briefing for the Citizen Participation and Public Petitions Committee

Petition Number: [PE1863](#)

Main Petitioner: Michael Campbell

Mandatory annual cancer blood test from the age of 55

Subject: Calls on the Parliament to urge the Scottish Government to provide mandatory annual blood tests from the age of 55 to detect cancer

Background – Current Screening for Cancers

The petitioner is concerned that early cancer diagnoses have been affected by the impact of the pandemic in Scotland. He believes that early screening for cancer through blood tests could save money as well as lives in over 55 year olds.

[NHS National Services Division is responsible for all national screening](#) programmes in Scotland and more detail is available on the individual programmes.

In turn, there is a [UK National Screening Committee](#) (UK NSC), that informs and supports screening programmes across all four nations. This committee has a number of functions. It:

- “advises ministers and the NHS in the 4 UK countries about all aspects of screening including the case for introducing new population screening programmes and for continuing, modifying or withdrawing existing population programmes against a set of internationally recognised [criteria](#)
- supports implementation of screening programmes in the 4 countries including the development of high level standards and maintains oversight of the evidence relating to the balance of good and harm as well as the overall cost effectiveness of existing programmes
- works with partners to ensure it keeps abreast of scientific developments in screening, including screening trials, screening policy in other countries and emerging technologies
- is accountable to the 4 chief medical officers (CMOs), who agree work plans for the UK NSC on an annual basis.”

They also publish an [annual report of recommendations](#) based on evidence gathered internationally on population level screening programmes:

“[Screening programmes are assessed against criteria](#) to understand the balance of harms and benefits they deliver to the population, and include consideration of:

- the condition for which screening is suggested
- the test, which should be simple, safe, precise and acceptable
- whether there are effective interventions which lead to better outcomes for patients identified through screening
- whether there is evidence that screening would be effective in reducing mortality or morbidity, or where screening is aimed solely at providing information to allow the person being screened to make an ‘informed choice’ (such as Down’s syndrome or cystic fibrosis carrier screening), there must be evidence from high quality trials that the test accurately measures risk
- the process of implementation, which includes the managing and monitoring of screening against agreed standards”

Cost effectiveness is raised by the petitioner, and, as stated above, the UK NSC includes the consideration of cost effectiveness in its assessments. In 2013 [research was published on the cost effectiveness](#) of breast screening, in relation to the widely used metric in assessing the cost effectiveness of health interventions and medicines, ‘quality adjusted life years’¹. While the research findings were caveated because of small effects (of screening) over long time periods, and a lack of evidence in some areas, as well as the costs of overdiagnosis and treatment, the research found that there was only a moderate probability of breast cancer screening being cost effective. However, it is a programme that remains recommended by the UK NSC. There is [much research on the cost effectiveness](#) of a wide range of screening possibilities across a large number of conditions.

Population screening for cancer in Scotland

Three of the national screening programmes in Scotland screen for cancers:

- [bowel screening](#) for men and women between 50 and 74 (home test kit)

¹ A QALY takes into account how a treatment affects a patient’s

- quantity of life (how long you live for) and
- quality of life (the quality of your remaining years of life).

The QALY combines both these factors into a single measure that puts a figure on the health benefits for any medical treatment. QALYs provide a benchmark that we can use to measure and compare the benefits that each medicine is likely to offer. (source: <https://www.scottishmedicines.org.uk/media/2839/guide-to-qalys.pdf>)

- cervical screening for women aged 25 - 64 (smear test)
- breast screening for women aged 50 - 70 (mammogram)

These and other population screening programmes were paused during the pandemic but have all restarted (March 2021).

None of these testing regimes are by blood test, but blood tests might be used in following up people who have displayed abnormalities during the screening process. All such screening is to identify the earliest signs of the particular cancer being screened for.

It is important to note that screening is not the same as diagnosis. Screening highlights potential cancers, which means that some abnormal tests might not mean that a person has cancer. Equally, screening might miss some cases. For example, around one in five women who are treated for breast cancer have abnormalities that will never have led to serious disease, but the mammogram will have picked up even small changes in the breast tissue. A UK breast screening review in 2012² found that screening leads to around 4,000 women being overdiagnosed in the UK each year.

Another potential screening test is the prostate-specific antigen (PSA) test for prostate cancer. As is explained by 'lab tests online':

- Current technology cannot tell a slow-growing cancer from a fast one, and the cancer may never significantly affect a man's health or life expectancy.
- Screening tests for prostate-specific antigen (PSA) (a blood test) do not detect all cases, and some elevated PSA results do not prove to be cancer.
- Diagnosis through biopsy (with a small risk of infection and bleeding) and side effects of treatment (which could cause erectile dysfunction and incontinence) can potentially be harmful. Most prostate cancers are slow-growing and may not cause any trouble.
- Results from long-term trials on whether PSA testing improves prostate-cancer survival rates has been inconclusive.

For these reasons, population screening for prostate cancer is not recommended. And, as is stated, raised levels of a specific reading in a blood test does not necessarily indicate cancer.

Diagnosing Cancer

² [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(12\)61611-0/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(12)61611-0/fulltext). Further review undertaken in 2018 by UK Government:
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/764413/independent-breast-screening-review-report.pdf

There are many different types of cancer, and each requires a different diagnostic procedure. [Macmillan have an A-Z of the range of diagnostic tests](#) in use that shows the wide range of tests that are required for the many different types of cancer.

Use of blood tests in diagnosing cancer

The petitioner does not specify the test or tests he thinks should be carried out on a population-wide basis, but it is clear from [the information Macmillan provides](#) on blood testing, that there are also a wide number of blood tests used in the diagnosis of different cancers and for different reasons. There is no single blood test that could screen for a range of cancers.

For example, a blood test might be to look for genetic markers implicated in making someone more susceptible to certain cancers, it might be to do a 'blood count', or to see how certain organs are functioning. However, the GP responds to symptoms that a person is either displaying or seeking advice about; they are not a generic set of tests done on everyone.

It is worth noting that if all over 55s were called in for screening, many people would be referred on for further testing with no resulting positive diagnosis. This would be very expensive, but moreover, if they have no other symptoms, it could also create unnecessary anxiety for those who get an initial abnormal test result, get called for further testing, and discover that no further treatment is indicated.

Using genomics to inform screening

In 2016, the Chief Medical Officer for England challenged the National Screening Committee to consider the place of genomics³ in national screening programmes. As a response, the UK NSC, [produced a report](#) considering genomics in relation to inherited or 'germ line' mutations, rather than those mutations that might have an environmental or lifestyle cause. DNA can be collected from blood or tissue samples and can provide more individualised information on risk as well as active disease.

[Research](#) has been underway for a number of years to ensure that the knowledge derived from genomics is used in diagnostics and more

³ The study of all the DNA in the genome together with the technologies that allow it to be sequenced, analysed and interpreted is collectively called genomics, or genomic medicine if applied to patients.

DNA is the main constituent of chromosomes and the carrier of genetic information. A genome is an organism's whole set of DNA. A gene is a piece of DNA with a code for a specific instruction – like whether your eyes are blue or brown.

A person has around 20,000 genes which make up about 5% of DNA. The rest of the DNA has a vital role in controlling and regulating the way your body works. That's why the whole genome is sequenced. About 99.8% of our DNA is the same as other human beings. The 0.2% that is different – about 3 to 4 million letters – is what makes each of us unique. Genes give the code for a specific instruction. This instruction may or may not be 'followed', this means that it does not always lead to a specific condition or state. The degree to which a gene might lead to a specific disease is called its penetrance. A gene's penetrance may be modified by other genes or lifestyle issues.

personalised medicine. [Cancers are one of the groups of diseases where this is already in use](#), it having been recognised that certain people carry gene markers, or variants for certain cancer risks. Knowledge of having such variants has led people to have sometimes extensive surgery, for example, to effectively remove the risk.

Scottish Government Action

The Scottish Government introduced a '[Detect Cancer Early](#)' programme in 2012, and timeliness of cancer diagnosis, referral and treatment have featured as [key NHS targets for a number of years](#). For up to date cancer statistics see the [relevant Public Health Scotland website pages](#).

In July 2020 the Scottish Government published an overview of mortality, incidence, waiting times, risk factors and treatment etc: [Cancer in Scotland](#).

They have also published a public-facing website '[Get Checked Early](#)' which prompts people to seek advice if they are concerned about any symptoms. There is a 'symptom checker', and information on the screening programmes, and advice about a range of common cancers.

In 2020, an update to their [2016 Cancer Strategy](#) was published '[Beating Cancer: Ambition and Action \(2016\) update: achievements, new action and testing change](#)'. The Strategy has a focus on early detection and diagnosis.

Scottish Parliament Action

The Scottish Parliament has not taken any specific action on the introduction of blood test screening for cancers. However, over the lifetime of the parliament, the different health committees have focused on different aspects of cancer diagnosis, treatment and care.

Key Organisations and relevant links

[Public Health Scotland provides links](#) to a number of organisations, information and research on cancer and patient support.

[Public Health Information for Scotland \(ScotPHO\)](#)

**Anne Jepson
Senior Researcher, SPICe
30 March 2021**

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Scottish Government submission of 19 May 2021

PE1863/A

Thank you for highlighting the Petition PE01863 on behalf of the public Petitions Committee regarding implementing a mandatory annual cancer blood test from the age of 55.

I would like to take this opportunity to highlight that this is a very important policy area and the Scottish Government recognises the importance of an early cancer diagnosis and its impact on cancer patient outcomes.

To make the Petitions Committee aware, the Scottish Government has already taken a number of actions to continue enabling an early cancer diagnosis. Scotland's first Early Cancer Diagnostic Centres (ECDC) are being established in NHS Fife, NHS Dumfries & Galloway and NHS Ayrshire & Arran. These person-centred fast-track diagnostic pathways will provide primary care with a new referral route for patients with non-specific symptoms suspicious of cancer. ECDCs mark a new era in Scotland's early diagnosis efforts.

The Scottish Government monitors and considers all available evidence and recommendations from the UK National Screening Committee (NSC), an independent expert advisory group which inform decisions taken on screening programmes across the four UK nations. There is currently no single blood test that screens for different cancer types, there is some ongoing research, which the UK NSC will review to make a recommendation for population screening.

Currently in Scotland we screen for Breast, Bowel and Cervical Cancer, the Scottish Government will continue to review the advice from the UK NSC on population screening.

I hope this response reassures the Committee of the steps the Scottish Government has and will continue to take to drive an earlier diagnosis for cancer across Scotland.