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# Patient Organisation Submission Form

## Subject of SHTG Assessment

ROBOTIC ASSISTED BRONCHOSCOPY

## Name of patient organisation

THE ROY CASTLE LUNG CANCER FOUNDATION

## Health/medical conditions represented

LUNG CANCER

## Contact name for this submission

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## Role of contact person

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## Date of submission

18/11/2025

**Please complete the SHTG Declaration of Interest form.**

**Please complete this form using the accompanying guide and do not include patient identifiable information.**

**Accessible Language:** Where not specifically required for scientific/technical explanation, please use plain language, explaining acronyms and other non-lay terms.

Please note that the information submitted on this form will be held by the SHTG secretariat in accordance with Healthcare Improvement Scotland's [policies](#). This information may be published on the SHTG website or disclosed to third parties in accordance with the Freedom of Information (Scotland) Act 2002 (FOISA).

## 1. Tell us about the sources you used to gather information for this submission. (See page 6 of guidance.)

From conversations with those undergoing investigations and their loved ones on our nurse's helpline. Feedback from patients has also been provided through our online forum, emails to our nurse's team and online enquiry forms through our website.

We receive queries from all around the world, but these sources for this particular submission are more specific to Scotland and within the whole of the UK, it is not possible to determine how many queries we have had on this subject but it is a frequent topic on how disappointed the person is because they have been told that the lesion in the lung is either too small or the location makes it difficult to biopsy, ultimately this makes them less hopeful for a clear diagnosis.

Our ask the nurse service covers all queries from, the anxiety and worry about symptoms, the investigations involved, diagnosis and what this means, the different treatments and living with lung cancer.

We are in the process of providing a fact sheet about robotic assisted bronchoscopy which will be available to download once completed.

## 2. What is the health condition and how does it affect the day-to-day lives of patients and their carers? (See page 7 of guidance.)

Both men and women can have lung cancer, anyone of adult age (it is extremely rare in children) There are two different types of lung cancer, small cell lung cancer (being the most aggressive) and non-small cell lung cancer (more slow growing), however presentation can be different for both types and within each type.

Small cell lung cancer can often present as a late stage diagnosis, and the person may be acutely unwell when this is often detected.

Non-small cell lung cancer can be either an incidental finding, the person may not have any symptoms, or they may have a cough that does not go away, shortness of breath, loss of appetite, weight loss, tiredness, shoulder pain, coughing up blood, hoarse voice, finger clubbing or back pain.

Their symptoms can affect their day-to-day tasks, such as mobility, showering, shopping, driving, everything becomes an effort, stairs become difficult, they may lose their independence and confidence. There is a financial impact of not being able to work or go back to work depending on the type of job they have, increased costs to ongoing

appointments can be a tremendous added stress for all involved. They may be parents themselves with young children, or be carers for their own parents.

There is a huge emotional impact on both the person and their loved ones. There is great anxiety about the unknown, especially whilst awaiting investigations, the diagnosis and any possible treatment plan.

What is very prevalent is when they are told that it is not possible to biopsy the lesion/nodule as it is difficult to access with standard bronchoscopy and they are left with a choice of surgery, radiotherapy or drug treatment based on a diagnosis from the radiological imaging alone.

This can be very challenging for them to understand and can often put them off receiving treatment as they query this is perhaps not necessary if they do not have a clear diagnosis.

Lung cancer is a huge stress for the loved ones, dynamics in relationships can change, there is more demand for care, everyone's life is affected by the change in the person, a change in their normal routine, attending frequent hospital appointments and the financial impact of living with cancer.

### 3. What do patients and carers want from the health technology? (See page 8 of guidance.)

This would be such an improvement for patients to be told that with the assisted robotic bronchoscopy they are able to biopsy what would previously be thought of as a difficult to reach area, or too small a nodule.

Many lung nodules cannot be biopsied until they are at least 10mm or above, this technology could be revolutionary in being able to biopsy below this threshold and in detecting lung cancer early with a better prognosis and outcome.

Many patients have commented on how uncomfortable and sometimes painful experience they have had from a standard bronchoscopy with biopsy.

It may be very appealing to them that with the general anaesthetic, they will be fully asleep, and this would certainly be less traumatic for them.

Both patients and their loved ones would have more confidence in the accuracy that the assisted robotic bronchoscopy can provide by both procedure and diagnostic yield.

Having access to this technology truly matters to the patient in that, with the ability to obtain a tissue sample, this will enable them to be offered a more direct and appropriate treatment plan with a better outcome.

The risks may be acceptable to the patient as there are risks with a standard bronchoscopy, as in lung collapse or bleeding, and for a clear diagnosis, they would be willing to have the

general anaesthetic. In fact, many of our callers often query why they are not offered a general anaesthetic for their biopsy and would prefer to have one.

Some patients may not be happy to have a general anaesthetic but may be willing to have this for short duration to have the benefit of the biopsy, especially if they are within the group of patients that normally would not even be offered a standard bronchoscopy.

This could have a huge emotional impact on both the patients and their loved ones, in that there is hope of a biopsy being done, which to them would mean tailored treatment for their lung cancer type including any potential biomarkers present from the tissue sample.

Many patients have a great deal of anxiety on watch and wait CT surveillance for any lung nodule that has not quite got to the 10mm mark, for those that have continued at the same measurement through their check scans, perhaps in time this will be available to them as an option rather than this continued anxiety over a year or two. Although many lung nodules are benign, it can bring peace of mind if it is not cancer and if it is, then early intervention can provide better prognosis, and this will have not just an impact on their quality of life but a positive economical impact on the NHS long term.

4. What difference did the health technology make to the lives of patients that have used it? (Leave blank if you didn't make contact with anyone who had experience of the health technology.) (See page 9 of guidance.)

We had posted on our online forum to hear some patient feedback/experience of having a robotic assisted bronchoscopy/biopsy, and I have placed their quote below:

“Hi I had assisted robotic bronchoscopy under GA for a biopsy in September this year. My consultant referred me to this hospital after my local hospital said they were unable to do a biopsy until the mass had grown and therefore easier to reach, I guess.

I went into hospital the day before and stayed overnight, had CT scan and blood tests. The next morning, I went down for my scope and biopsy. Amazing team recovered quickly and had x ray to ensure lungs had not collapsed. I returned home via train that evening. Amazing team and procedure”

This was a very positive experience of the robotic assisted bronchoscopy compared to the people that contact us stating how uncomfortable, unpleasant, painful and traumatic the biopsy can be, and also for those who were unable to have a biopsy, as it is either too small or too difficult to reach by standard means.

5. Additional information you believe would be helpful for SHTG to consider. (See page 9 of guidance.)

There is no effective alternative (apart from surgery) to access and biopsy difficult to reach areas within the lung.

This is a very exciting field of medicine and can provide better future health care especially for those who have small lesions, or have difficult areas to access within the lungs. There is a huge unmet need for these patients and technology could certainly provide an accurate and easier tool to use in the process of diagnosis.

6. Please summarise the key points of your submission in up to 5 statements. (See page 9 of guidance.)

Lung cancer can have troublesome life limiting symptoms that impact in a major physical and emotional way affecting the person's quality of life.

There is an unmet need to provide a way to access and biopsy abnormal lesions in the lung that are difficult to access or are too small, however, this new technology has the potential to address that need and revolutionise the future in lung cancer diagnostics.

The disadvantage of robotic assisted bronchoscopy is the need for a general anaesthetic compared to standard bronchoscopy.

Anyone with a small nodule or lesion that is difficult to access within the lungs would benefit from this new technology.

There are no restrictions of areas within the lungs for this new technology. This provides hope for every patient that their treatment will be appropriate and provide a better outcome because tissue biopsy is possible, therefore a clearer diagnosis that is not based on radiological imaging alone.

7. Please give us details of anyone outside your organisation that had a role in preparing your submission. (See page 10 of guidance.)

None.

8. Do you consent for your submission to be posted on the SHTG website? (See page 10 of guidance.)

Yes

No

Thank you for completing this form. It will be given to SHTG members to inform their development of an Advice Statement for this technology.

**Please return the form to:**

**his.shtg@nhs.scot**