Self-Referral Chest X-ray (SRCXR) for suspected lung cancer

Greater Manchester Cancer Alliance

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This project is part of a joint working agreement with AstraZeneca.

Background

Primary care chest x-ray (CXR) requesting has still not increased back to pre-COVID levels. Increasing the uptake of CXRs in symptomatic patients with suspected cancer may lead to a stage shift towards early-stage disease and improved survival (Kennedy et al, Thorax 2018). Accelerated pathways can help improve survival in lung cancer patients (Navani et al, Lancet Respiratory 2015, Hall et al, Lung Cancer 2021). The Northern Care Alliance, in conjunction with Greater Manchester Cancer Alliance, set out to implement a SRCXR pathway to allow for improved early-stage detection whilst reducing clinical burden. We present updated data and results from this project.

Criteria for self-referral

If a patient meets the following pre-defined criteria, they can attend a participating radiology department for a CXR:

- Age > 40 years

AND has had any of the following symptoms for more than 3 weeks:

- Cough
- Fatigue
- Shortness of breath
- Chest pain
- Weight loss
- Appetite loss
- Haemoptysis

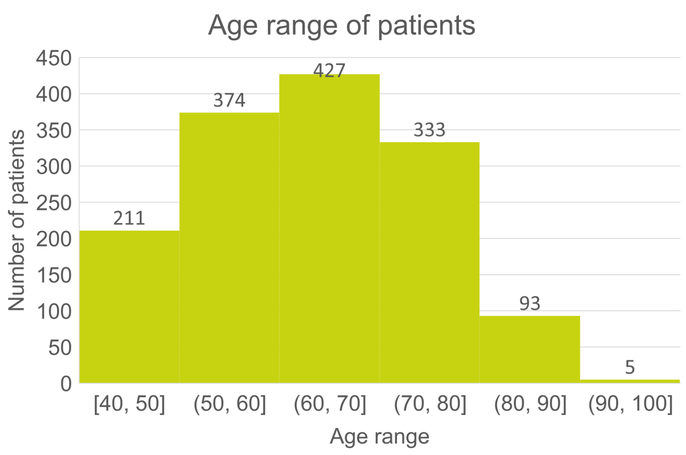
Methods

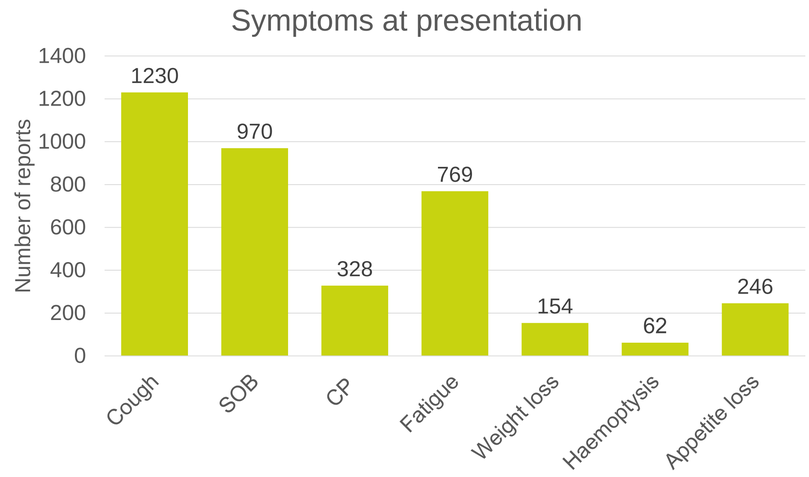
We analysed data from 1444 patients who used the SRCXR system covering the first nine months of the project. Patients were separated into one of three categories depending on their CXR findings: SRCXR 1 – normal CXR; SRCXR 2 – non-cancer abnormality; SRCXR CATCH – possible cancer. We collected data looking at the patient's age at presentation, gender, time from CXR to report, smoking history, symptoms at presentation and ethnicity. We also collected data from patient feedback surveys looking at how likely patients were to present to their GP with their symptoms and how they were made aware of the SRCXR pathway.

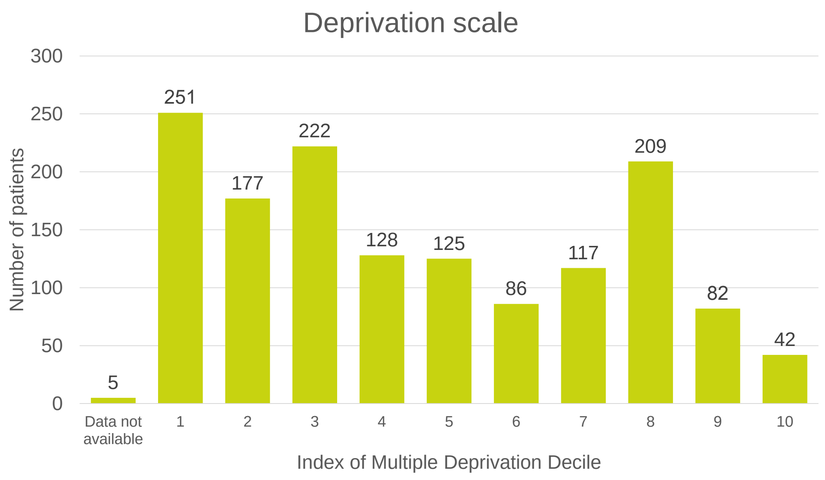
Results

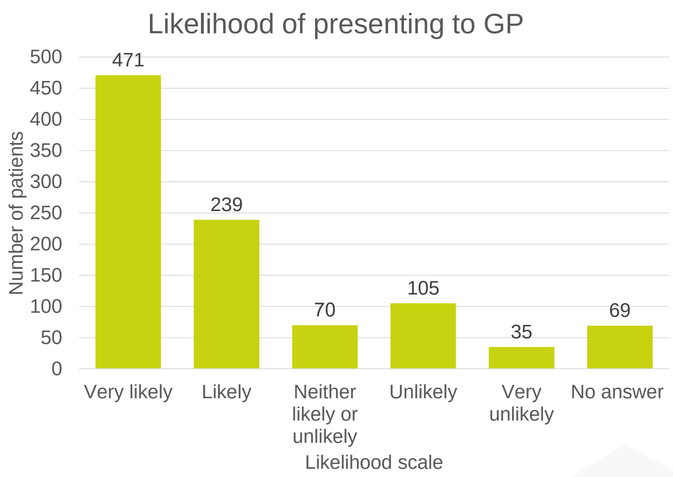
Table 1: Number of patients (raw and percentage) as categorised by CXR findings

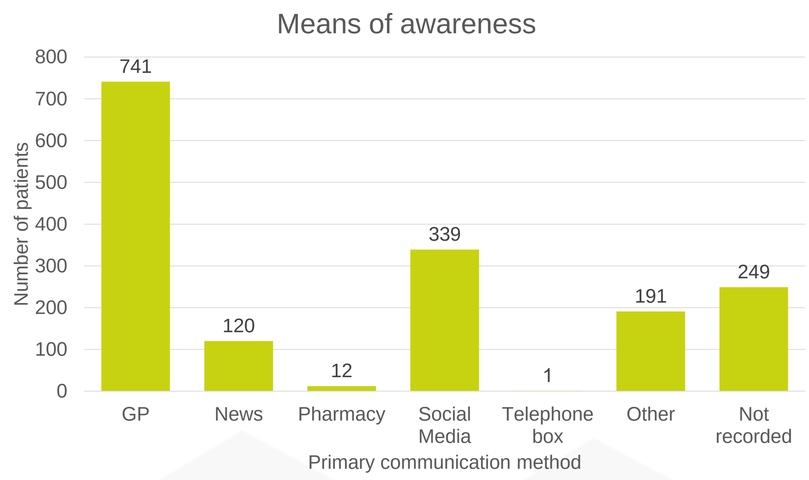
		SRCXR 1	SRCXR 2	SRCXR CATCH
Number of patients		*1371*	*46*	*27*
Percentage		*94.94%*	*3.16%*	*1.87%*
Smoking history	Current-	*223*	*8*	*5*
	Ex-	*513*	*15*	*11*
	Never-	*607*	*23*	*10*
	No record	*28*	*0*	*1*
Of SRCXR CATCH patients - 6 confirmed cancers				











Conclusions

This project further highlights the benefit of a SRCXR project in detecting abnormal CXRs and CXRs concerning for malignancy and reducing barriers to CXR access. With many patients stating they are unlikely or unable to see their GP, this project highlights the importance of a self-referral system in reducing barriers to CXR access. 45.1% of patients accessing the SRCXR system fall into the three most deprived deciles, thus highlighting the necessity of a SRCXR pathway in improving access to those who are disproportionately affected by lung cancer. (Cancer Research UK, 2019)

Patient Experience

To understand patient's motivations for attending service we carried out deductive thematic content analysis of semi-structured qualitative interviews with a sample of attendees. Fifty-one attendees were interviewed. Respondents gave the following feedback about the service:

- 57% female
- 94% White British
- 86% attended due to a health concern (eg cough, SOB)
- 22% tried to contact their GP but could not get an appointment
- Most participants heard about the service through word of mouth or advertisement (35%) or via their GP (22%)

<u>Patient's experience as related to the health belief model</u>

Perceived susceptibility: *'Family history of lung cancer, so always at the back of my mind'*
Perceived seriousness: *'Never know with chest, if it's nothing or something serious'*
Perceived benefits: *'Peace of mind'; 'At least I know what I've got, I wouldn't have known'*
Perceived barriers: *'The outcome, if they didn't want bad news'; 'How long is the wait'*
Self-efficacy: *'Skips the whole first layer, didn't have to worry the GP at all, reduced anxiety'*
Cues to action: *'Playing on my mind as the symptoms had gone on for so long'*

References

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