

Chest x-ray code	Interpretation	Result
1	suspicion of lung cancer identified/urgent investigation indicated	Positive
2	abnormality identified/non urgent investigation indicated	Positive
3	non-specific reports, abnormality identified but no further investigation/assessment indicated	Negative
4	normal chest x-ray	Negative

Table S1: Chest x-ray codes denoting positive and negative results. Categories are based on the Royal College of Radiology national audit 'missed lung cancers on chest radiographs'

Cough, as a percentage (95% CI)	Haemoptysis, as a percentage (95% CI)	Breathlessness, as a percentage (95% CI)	Chest pain, as a percentage (95% CI)	Weight loss, as a percentage (95% CI)	Change in voice, as a percentage (95% CI)	PPV
1.24 (1.01 - 1.48)	4.67 (2.09 - 7.25)	1.44 (1.09 - 1.79)	1.49 (0.93 - 2.05)	2.31 (1.11 - 3.50)	0.75 (0.34 - 1.15)	As single symptom
	4.24 (1.67 - 6.80)	1.45 (1.08 - 1.82)	1.43 (0.85 - 2.01)	2.31 (1.07- 3.56)	0.66 (0.27 - 1.05)	Cough
		5.10 (1.66- 8.54)	3.70 (0.00- 7.82)	9.38 (0.00- 19.47)	1.45 (0.00 - 4.27)	Haemoptysis
			1.17 (0.56 - 1.77)	2.34 (0.91 - 3.77)	0.81 (0.28 - 1.34)	Breathless
				1.81 (0.00 - 3.83)	0.86 (0.02 -1.71)	Chest Pain
					1.18 (0.00 -2.80)	Weight loss

Figure S1: symptom combination PPVs as a percentage for entire study population (observed) with respect to diagnosis with lung cancer in the period 0-12 months following SR-CXR.

Cough, as a percentage (95% CI)	Haemoptysis, as a percentage (95% CI)	Breathlessness, as a percentage (95% CI)	Chest pain, as a percentage, (95% CI)	Weight loss, as a percentage (95% CI)	Change in voice, as a percentage (95% CI)	PPV
1.66 (1.39 - 1.93)	5.45 (2.67 - 8.22)	2.11 (1.69 - 2.53)	1.99 (1.35 - 2.64)	3.14 (1.75 - 4.52)	1.27 (0.74 - 1.79)	As single symptom
	5.08 (2.29- 7.89)	2.07 (1.63- 2.50)	1.93 (1.26 - 2.60)	3.20 (1.75 - 4.67)	1.08 (0.59 - 1.58)	Cough
		6.37 (2.55 - 10.19)	4.94 (0.22 - 9.66)	12.50 (1.04 - 23.96)	1.45 (0.00 - 4.27)	Haemoptysis
			1.83 (1.07 - 2.59)	3.27 (1.59 - 4.98)	1.62 (0.88 - 2.36)	Breathless
				3.61 (0.78 - 6.45)	1.30 (0.27 - 2.33)	Chest Pain
					1.76 (0.00 - 3.74)	Weight loss

Figure S2, symptom combination PPVs as a percentage for entire study population (observed) with respect to diagnosis with lung cancer in the period 0-24 months following SR-CXR. Since thrombocytosis was not used as a qualifying symptom for chest x-ray it has not been included in the figures. Cells which contain data from fewer than 5 cases are shaded grey.

Cough, as a percentage (95% CI)	Haemoptysis, as a percentage (95% CI)	Breathlessness, as a percentage (95% CI)	Chest pain, as a percentage, (95% CI)	Weight loss, as a percentage (95% CI)	Change in voice, as a percentage (95% CI)	PPV
0.67 (0.49 - 0.86)	3.92 (1.26 - 6.59)	0.93 (0.63 - 1.23)	0.92 (0.46 - 1.39)	1.40 (0.37 - 2.43)	0.71 (0.29 - 1.12)	As single symptom
	3.68 (1.01 - 6.36)	0.92 (0.61 - 1.23)	0.90 (0.41 - 1.39)	1.5 (0.4 - 2.60)	0.67 (0.26 - 1.08)	Cough
		4.72 (1.03 - 8.41)	2.82 (0.00 - 6.67)	11.54 (0.00 - 23.82)	1.75 (0.00 - 5.16)	Haemoptysis
			0.93 (0.36 - 1.50)	1.43 (0.19 - 2.68)	1.00 (0.38 - 1.62)	Breathless
				2.10 (-0.00 - 4.45)	0.72 (0.00 - 1.53)	Chest Pain
					0.68 (0.00 - 2.01)	Weight loss

Figure S3, symptom combination PPVs (observed) as a percentage for diagnosis with lung cancer in the period 0-24 months following SR-CXR for those who had a negative chest x-ray result

Cough, as a percentage (95% CI)	Haemoptysis, as a percentage (95% CI)	Breathlessness, as a percentage (95% CI)	Chest pain, as a percentage, (95% CI)	Weight loss, as a percentage (95% CI)	Change in voice, as a percentage (95% CI)	Cough, as a percentage (95% CI)
0.0054 0.0036 0.0080	0.0323 0.0139 0.0750	0.0073 0.0047 0.0113	0.0084 0.0046 0.0155	0.0080 0.0031 0.0202	0.0064 0.0032 0.0125	As single symptom
	0.0319 0.0142 0.0715	0.0073 0.0046 0.0117	0.0081 0.0042 0.0156	0.0086 0.0034 0.0218	0.0061 0.0030 0.0122	Cough
		0.0406 0.0166 0.0988	0.0275 0.0067 0.1121	0.0797 0.0213 0.2977	0.0166 0.0023 0.1222	Haemoptysis
			0.0084 0.0040 0.0177	0.0083 0.0029 0.0237	0.0088 0.0045 0.0173	Breathless
				0.0155 0.0041 0.0581	0.0073 0.0024 0.0228	Chest Pain
					0.0050 0.0007 0.0357	Weight loss

Figure S4: Adjusted marginal means for lung cancer in the period 0-24 months following negative chest x-ray as a percentage. Marginal means are the average risks of cancer for different groups of people – for example, people with or without a symptom – taking into account the characteristics of the people within each group, such as their age and sex. When we compare the average risk for people with a symptom to people without that symptom, we have an estimate of the additional risk of cancer for people with the symptom.