people eligible. Across Wales the eligible population could vary from 493,000 using an age range of 50–74 years and a broad search strategy, down to 161,000 using an age range of 60–74 years and limiting the search strategy to current and more recent ex-smokers. As radiology reporting capacity may be the limiting factor for a national programme, focussing invitations to those at highest risk may be desirable in the early stages of project development.

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PREPARING WALES FOR LUNG CANCER SCREENING – UPDATING GP RECORD SMOKING DATA USING AN AUTOMATED TEXT MESSAGE SYSTEM

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Introduction Targeted lung cancer screening requires identification of current and ex-smokers. In the NHS England Targeted Lung Health Check Programme this relies on smoking history data in GP records. There are concerns about the completeness and accuracy of this data, meaning some eligible people may not be invited. We interrogated GP records at several practices in Wales to examine the completeness of smoking data and used an automated text message system to update smoking data for people with no smoking status recorded.

Methods GP records for patients aged 50 to 74 years (+ 364 days) were searched for the collective tobacco '137' Read code. Patients with no tobacco-related code were sent a standardised text message with the option of three replies to indicate their smoking status. On successful reply, a tobacco Read code was automatically recorded in the patient record, and a confirmation text including a link to 'Help Me Quit' was sent to the patient.

Results Across six GP practices, 670/20,402 patients (3.3%) aged 50–74 had no tobacco code recorded. Of these, 293 (43.7%) had a validated mobile phone number recorded, of whom 166/293 (56.7%) successfully replied to the text. Of these, 71/166 (42.8%) were current or ex-smokers, including 21 (12.7%) current smokers.

Conclusions An automated text message system was used to successfully update smoking data in patients with no smoking status recorded. Of the respondents, almost half proved to be current or ex-smokers who would be eligible for a Targeted Lung Health Check. This system could be used to improve the completeness of GP records smoking data, particularly as a resource-sparing method at practices with lower levels of data completeness.

P164

OUTCOME OF LUNG NODULE SURVEILLANCE: A BRIEF RETROSPECTIVE REVIEW OF A COHORT OF PATIENTS FOLLOWED-UP ACCORDING TO BTS GUIDELINES

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Introduction Lung cancer continues to be the leading cause of cancer death in the UK and the 2nd most common cancer diagnosed each year. In 2015, the British Thoracic Society (BTS) published the updated guidelines on lung nodule

STAGE AT DIAGNOSIS: GENERAL POPULATION VS BTS NODULE FOLLOW-UP

Abstract P164 Figure 1 Comparison between the stages at diagnosis in patients in surveillance programme (grey) vs those in the general population (black)

follow-up with the aim of improving early identification of lung malignancies and improving survival. Here we aim to determine the rate of early cancer detection in patients referred to the lung nodule MDT and explore their outcomes.

Methods Patients were identified from the minutes of lung nodule MDTs celebrated during 2018 and information gathered via RIS, PACS and clinical record systems of the hospital.

Results 92 patients were identified using the method described above. The median age of participants was 67.5 (42–88) and there were slightly more females than males (51 to 41; 55.4 to 44.6%). The rate of compliance with guidelines was very high at 98.9%. We identified 6 lung primary malignancies of which all but 1 (83.3%) were in early stages (stage I or II), compared to 27% in lung cancers detected in the population (figure 1). Of the patients with early-stage lung cancer, 3 were judged not fit for active treatment. The other 2 underwent lobectomies and have had more than 2 disease-free years as of the time of this writing.

Conclusion This data shows that implementation of the BTS guidelines in lung nodule follow-up leads to higher rates of early-stage lung cancer detection and improved prognosis for these patients. However, we also note that a relatively high proportion of these detected lung cancers are found in patients with poor functional status making them ineligible for active treatment. We propose that it may be beneficial for future editions of this BTS guidelines to explore including clear entry and retainment criteria for patients which, no matter the outcome, will be unable to withstand active treatment. These could include looking at, for example, elements such as minimum functional or pulmonary status. This would avoid some patients undergoing a 2 to 4-year-long surveillance programme which will ultimately not affect their management options.

P165

THE 'SUSPICIOUS' CHEST X-RAY. HOW GOOD ARE WE AT DISTINGUISHING HIGH RISK FROM LOW RISK ABNORMALITIES?

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Introduction We have developed two parallel direct recall CT pathways for patients with abnormal CXRs – a CX3 (NOLCP) pathway where CXR is suspicious for lung cancer,

Abstract P165 Table 1 Summary of final diagnoses for the two direct recall CT pathways – CX2, CXR with low suspicion of cancer but CT correlation required and CX3, CXR with high suspicion of cancer.

CXR abnormality	CX2 pathway (CXR low suspicion of cancer)				CX3 pathway (suspicion of cancer)			
	Lung cancer	Other cancer	Non cancer	% Cancer	Lung cancer	Other cancer	Non cancer	% Cancer
Nodule/mass	2	1	43	6.5	54	5	38	60.8
Other/unspecified peripheral opacity (incl. consolidation)	17	7	252	8.7	9	3	41	22.6
Hilum	2	0	67	2.9	8	2	25	28.6
Effusion/pleural abnormality	6	2	21	27.6	5	4	15	37.5
Collapse/atelectasis	1	0	34	2.9	6	0	1	85.7
Artefact/normal variant	3	1	100	3.8	0	0	0	-
Mediastinum/paratracheal	1	0	18	5.3	0	2	0	100.0
Normal but concerning symptoms	0	0	19	0.0	0	0	1	0.0
Elevated hemidiaphragm	0	0	8	0.0	0	0	0	-
Inappropriate use of pathway (e.g. ILD)	0	0	17	0.0	0	0	0	-
Total	32	11	579	6.9	82	16	121	44.7

and a CX2 (urgent but non 2ww) pathway where suspicion is low but CT confirmation is warranted. Normal and benign abnormalities are categorised as CX1. We looked at the types of CXR findings reported as suspicious vs low suspicion for cancer and the rates of cancer diagnosis within each pathway to assess how well radiologists were able to identify suspicious lesions.

Methods Using electronic records, patients that had a direct recall CT following primary care requested CXR from May 2018 – May 2019 were cross-referenced with our local cancer databases. Cancer diagnosis until May 2020 were recorded, such that all patients had 12–24 months of follow up following CXR. A respiratory lung cancer physician then subdivided CXR reports into broad categories of abnormalities and the incidence of cancer within each group was determined.

Results 622 abnormal CXRs were reported as low suspicion for cancer (CX2) and in this group 43 (6.9%) were diagnosed with cancer. 219 CXRs were reported as suspicious for cancer (CX3) and this was confirmed in 98 (44.7%). Results are summarised in *table 1*. Radiologists were good at distinguishing high risk from low risk abnormalities in the following categories: defined nodule/mass (cancer rate 60.8% vs 6.5%), collapse/atelectasis (85.7% vs 2.9%), hilar (29% vs 3%) and mediastinum (100% vs 5%) but were less able to distinguish between high and low risk pleural abnormalities (37.5% vs 27.6%) and other/unspecified peripheral opacities (22.6% vs 8.7%).

Conclusion We found a small but significant percentage of cancers following CXR abnormalities which did not meet NOLCP thresholds, suggesting there is still a role for direct recall CT outside NOLCP in this group. Our data suggests that radiologists should maintain a lower threshold to direct pleural effusions and other (non nodule) peripheral opacities through the fast track NOLCP pathway, as the ability to distinguish benign from malignant causes appears to be lower than for other types of CXR abnormality.

P166 CONTRAST ENHANCED PET-CT. DEVELOPMENT AND EXPERIENCE OF A NOVEL IMAGING PATHWAY IN SUSPECTED LUNG CANCER

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Background Neuroimaging is recommended for stage II and III lung cancer when radical treatment is being considered. Furthermore, patients with an initial non contrast scan may require a second contrast chest CT to delineate mediastinal structures, e.g. prior to surgery. We have developed a protocol for contrast enhanced PET-CT scan, which enables a PET scan and contrast CT brain and chest to be obtained during a single examination, reducing three separate patient appointments to one. We present outcome data for the first 12 months of the pathway.

Methods Patients are selected for contrast PET-CT if at risk of stage II or III disease on initial CT– i.e., tumour >2cm/central or suspicious N1/2/3 nodes. Contrast PET-CT imaging is undertaken on a Siemens mCT Flow Edge Biograph 128 scanner; CT slice thickness 1.5mm. Initial imaging is taken from base of skull to proximal thigh 60–70 minutes post FDG tracer and 70 seconds post IV contrast. CT Brain imaging is undertaken immediately after completion of PET component of scan (~20 minutes post IV-contrast). Data was collected retrospectively for patients undergoing contrast PET-CT from June 2020 to June 2021.

Results 44 patients have had contrast PET-CT scans via this novel pathway. Scanning protocols were optimised until diagnostic quality images of brain and mediastinum were obtained

Abstract P166 Table 1 Summary of final NSCLC staging/diagnosis for all patients who have undergone contrast enhanced PET-CT

Final staging/ diagnosis	Number	%
Stage I	6	13.6
Stage IIA	2	4.5
Stage IIB	2	4.5
Stage IIIA	7	15.9
Stage IIIB	6	13.6
Stage IIIC	1	2.3
Stage IVa	6	13.6
Stage IVb	5	11.4
Carcinoid	2	4.5
Metastatic cancer	4	9.1
Non-malignant diagnosis	3	6.8