with sarcoidosis and 13 samples showed benign or reactive features. 1 sample was suspicious for lymphoma on TBNA (this was later excluded by further investigations). 1 patient had EBUS-TBNA showing non-caseating granulomas but was subsequently re-evaluated for thrombocytopaenia and hyperferritinaemia. A lymphoma was later confirmed by extrathoracic lymph node biopsy.

Of the 8 cases where initial EBUS-TBNA samples were inadequate, 5 were deemed benign following multidisciplinary team assessment, subsequent biopsy or surveillance. 3/8 cases underwent a further EBUS-TBNA showing features consistent with sarcoidosis.

Conclusion In our population, EBUS-TBNA in asymptomatic individuals with BHMA rarely results in a diagnosis of malignancy or significant pathology. Careful evaluation combined with CT surveillance may be a suitable alternative to early EBUS/TBNA in this cohort of patients.

REFERENCES

1. Diagnosis and Detection of Sarcoidosis, Crouser, *et al.*, American Journal of Respiratory and Critical Care Medicine, Volume 201, Issue 8, 4/15/20
2. BTS Clinical Statement on pulmonary sarcoidosis, Thillai, *et al.* Thorax 2/12/20

P169

AN UPDATE ON THE STRATIFY (STAGING BY THORACOSCOPY IN POTENTIALLY RADICALLY TREATABLE NON-SMALL CELL LUNG CANCER ASSOCIATED WITH MINIMAL PLEURAL EFFUSION) STUDY

¹J Ferguson, ²N Rahman, ³N Maskell, ⁴J Lyons, ⁵S Grundy, ⁶D Sivakumar, ⁷J Corcoran, ⁸D Menzies, ⁹A Chalmers, ¹⁰L Alexander, ¹⁰C Kelly, ¹⁰A Shaw, ¹¹C Dick, ¹²S Tsim, ¹³G Cowell, ¹⁴T Hopkins, ¹⁴R Woodward, ¹⁵KG Blyth. ¹Glasgow Pleural Disease Unit, Queen Elizabeth University Hospital, Glasgow, UK; ²Oxford Respiratory Trials Unit, Oxford Radcliffe Hospital, Oxford, UK; ³Academic Respiratory Unit, Southmead Hospital, Bristol, UK; ⁴Wythenshawe Hospital, Manchester University, Manchester, UK; ⁵Salford Royal Hospital, Salford, UK; ⁶GSTT NHS Foundation Trust, London, UK; ⁷University Hospital Plymouth, Plymouth, UK; ⁸Glan Clwyd Hospital, Rhyl, UK; ⁹Beatson Institute for Cancer Research, Glasgow, UK; ¹⁰Cancer Research UK Clinical Trials Unit, Glasgow, UK; ¹¹Department of Pathology, Queen Elizabeth University Hospital, Glasgow, UK; ¹²Department of Respiratory Medicine, Queen Elizabeth University Hospital, Glasgow, UK; ¹³Department of Radiology, Queen Elizabeth University Hospital, Glasgow, UK; ¹⁴Glasgow Clinical Research Imaging Facility, Queen Elizabeth University Hospital, Glasgow, UK; ¹⁵Institute of Cancer Sciences, Glasgow, UK

10.1136/thorax-2021-BTSAbstracts.278

Introduction Pleural effusion is common in lung cancer. Metastatic disease may be confirmed on imaging or fluid sampling. A minority of patients however with otherwise radically treatable disease have a small effusion not amenable to aspiration, or from which fluid cytology is negative; termed minimal pleural effusion (mini-PE). Previous retrospective studies associate significantly shorter survival in mini-PE than stage-matched cases without mini-PE and hypothesise this reflects occult pleural metastases (OPM) in up to 80% of patients. STRATIFY (Staging by Thoracoscopy in Potentially Radically Treatable Non-Small Cell Lung Cancer (NSCLC) Associated with Minimal Pleural Effusion) is a multicentre, prospective observational study, which will determine the true prevalence of OPM in this setting. An update on the study is provided here.

Methods STRATIFY was funded by Chief Scientist Office and opened to recruitment in Jan-20. Target n=96 across 8 UK centres in 18 months. Key eligibility criteria include Mini-PE (defined by an ipsilateral effusion <1/3 hemithorax

on chest radiograph), radically treatable NSCLC and LAT feasibility (defined by sufficient fluid $\pm$ lung sliding on screening ultrasound). Primary endpoint: Prevalence of OPM, defined as NSCLC cells in parietal pleural biopsies. Key secondary endpoints include LAT safety, the impact of LAT results on NSCLC treatment plans and non-invasive MRI-derived measures of cardiac function and altered body composition (as alternative explanations for mini-PE). Study progress, including the impact of COVID19 was reviewed and summarised.

Results STRATIFY was rapidly halted due to COVID19 after 1 patient was recruited. The study was allowed to reopen in July-20 but given a dramatic reduction in lung cancer referrals across the UK and delayed site set up processes, the study team took the decision to close recruitment from Oct-20 to Apr-21. This was supported by the funder who provided a costed 6-month extension. By June-21, 4/8 sites have opened. 4/6 six screened patients have been recruited, 2/4 have entered the MRI sub-study.

Conclusions STRATIFY will determine the true prevalence of OPM in patients with radically treatable NSCLC and mini-PE. The study outcomes will be important in defining an extended role for LAT as a pleural staging tool.

P170

PLEURAL RECURRENCE AFTER TRANSTHORACIC NEEDLE LUNG BIOPSY IN STAGE I LUNG CANCER

K Jackson, O Kent, C Storey, E Pang, M Hadi, S VijayaGopal, A Aujayeb. Northumbria Healthcare NHS Foundation Trust, Newcastle upon Tyne, UK

10.1136/thorax-2021-BTSAbstracts.279

Introduction Hong *et al* determined, from 2394 patients with stage 1 lung cancer, that needle or intra-operative transthoracic biopsy had a higher risk for pleural recurrence.¹ There was local concern that a straight to surgery approach advocated might not be sustainable and/or warranted, that the data might only apply to Asian countries, and that there were missing values for microscopic invasion.

Methods An analysis of all Stage 1 lung cancers enrolled onto the Somerset cancer register was performed (Caldicott ref 3756). Exclusion criteria were mesothelioma, non-lung cancers and non-diagnostic biopsies. Data collected were demographics, diagnostic procedures, operation, pathology, CT findings, time to recurrence, recurrence type, survival and time to death.

Results 493 patients with stage 1 cancer were identified (Jan 2013-Dec 2020). Data was insufficient in 34.169 patients had a positive CT guided or pre-operative biopsy: mean age 73 years (range 48–97) and 105 (60%) females. Diagnoses were predominantly 99 (57%) adenocarcinomas and 49 (28%) squamous cell cancers. Any recurrence occurred in 42 (24% vs 19% with Hong *et al*¹) patients and concomitant ipsilateral pleural recurrence in 10 (6%-similar). Of those 10, 8 underwent CT guided biopsies, and 2 pre-operative biopsies, 8 were male, 2 female and 50% (5) were adenocarcinomas. 8 were solid tumours, and 6 had pleural contract. Lympho-vascular-pleural invasion was present in 6 of those 10 patients. Mean time to recurrence was 8.8 months (4–18) and mean time from recurrence to death 8.1 months (1–26). 210 patients had no biopsies, mean age was 77 years (49–99). Any recurrence occurred in 32 (15%); pleural recurrence in 2(1%), mean time 19 months. 2 patients in this

group had treatment (surgery with incomplete excision). Differences between the groups did not reach statistical significance.

Conclusions This single centre retrospective study in a predominantly Caucasian population replicates pleural recurrence rates from Hong et al.¹ This data might inform local processes but large prospective databases are required for national guidance. Significant limitations to this are its retrospective nature, reliance on coding, and length of follow up. Local recurrence is associated with Incomplete surgical resection and possibly the preceding biopsy.

REFERENCE

1. <http://dx.doi.org/10.1136/thoraxjnl-2020-216492>

P171 SABR: ACCEPTABLE AND EFFICACIOUS: A 7 YEAR EXPERIENCE FROM A NORTH EAST HOSPITAL

A Aujayeb. Northumbria Healthcare NHS Foundation Trust, Newcastle upon Tyne, UK

10.1136/thorax-2021-BTSabstracts.280

Introduction Stereotactic Ablative Body Radiation Therapy (SABR) is a treatment for inoperable stage 1 non-small cell lung cancer. Surgery is the gold standard (5-year survival rates ~70%).^{1 2} In a review of 4570 patients treated with SABR, overall local control rates were on average 92.7% at 1 year, 89.9% at 2 years, 86.7% at 3 years and 89.6% at 4–5 years with corresponding overall survival rates of 87%, 82.9%, 59.6% and 39.6% with a mean follow-up of 29.4 months.¹ No local review has ever been performed. We sought to add to the literature and inform local practice.

Methods All patients with Stage 1 lung cancer receiving SBAR from the local Somerset cancer register were identified (local Caldicott guidance). on radiology reports Basic demographics and outcomes were collated.

Results 100 patients received SBAR from Jan 2013-Dec 2020. 61 were female, mean age was 76.5 years (range 48–97). Overall recurrence rate was 19% (n=19) [8 local recurrences and 11 metastatic]. Mean time to recurrence was 24.3 months. Due to concerns about biopsies causing recurrence, those with no pre-SBAR biopsy were analysed separately. 72% (72) patients were identified: recurrence rate was 13 (18%)- 4 local and 9 metastatic; mean time to recurrence 26 months. Survival was 90% at 1 year, 89% at 2 years, 65% at 3 years and 40% at 4–5 years. In the biopsy group (n=28), 25 did not have surgery and had SABR. 3 had post-operative SABR. Recurrence rate was 21% (6), mean time to recurrence in this cohort was 20 months, 4 local recurrences, 2 metastatic. Survival at the same above intervals were much lower (15% at 5 years). There was no statistical difference between the groups. Data on immediate toxicity was not available due to SBAR being performed in a regional centre but no adverse events were noted on local scans.

Conclusions This review shows that recurrence rates are comparable to previous evidence and surgical recurrence rates (30–77%).² SABR seems safe. There are significant limitations to this data set (retrospective nature, reliance on coding, no matched controls and no comparison to surgery locally).

REFERENCES

1. <https://www.sabr.org.uk/wp-content/uploads/2019/04/SABRconsortium-guidelines-2019-v6.1.0.pdf>
2. <https://erj.ersjournals.com/content/47/2/374>

P172 INDWELLING PLEURAL CATHETER REMOVAL AND AUTO-PLEURODESIS: PREDICTORS AND OUTCOME

DN Addala, EO Bedawi, A Sundaralingam, R Banka, M Ellayah, N Kanellakis, Y Zhao, NM Rahman. Oxford University Hospitals NHS Foundation Trust, Oxford, UK

10.1136/thorax-2021-BTSabstracts.281

Introduction Indwelling pleural catheters (IPC) provide definitive management of malignant pleural effusion. IPCs offer similar control of dyspnoea to talc pleurodesis without hospital admission but require ongoing management. Up to 47% of patients with IPC undergo auto-pleurodesis facilitating removal. Patient factors leading to this are not well understood.

Methods Retrospective analysis of IPC data at a UK tertiary centre between 2019–2021. Procedure reports, radiology, pathology and electronic patient records were reviewed to assess the most frequent diagnoses, imaging, and pleural fluid biochemistry leading to IPC removal. Outcomes and complications were analysed.

Results 115 patients underwent IPC insertion and 55 patients (47.8%) underwent IPC removal over the two year period. The median duration between insertion and removal was 97 days (IQR 62–133).

Indications 71% (39/55) of IPC removals were undertaken due to auto-pleurodesis, with other causes comprising of pain (3.6%; 2/55), blocked catheter (3.6%; 2/55) and non-draining, organised effusions (21.8%; 12/55).

The most common primary malignancies associated with auto-pleurodesis included mesothelioma (31%, n=12), lung (18%, n=7), breast (18%, n=7).

Lung-Sliding on Ultrasound Prior to IPC insertion Of the patients that underwent auto-pleurodesis, 24 had documentation pertaining to lung sliding on ultrasound. Lung sliding was present pre-insertion in 87.5% (21/24) and absent in 12.5% (3/24).

Inflammatory-Biochemistry Median pleural fluid LDH in patients with auto-pleurodesis was not significantly different vs baseline LDH in all patients with MPE (236.5IU/L auto-pleurodesis vs 326IU/L in all MPE, P>0.05, Mann-Witney).

Complications IPC removals resulted in few complications with retained catheter fragment (7.2%; 4/55) being the most reported. No patients required admission for a procedure related complication. Following IPC removal, 4 patients required further pleural aspiration and 3 re-insertion of IPC.

Conclusions A significant proportion of patients with IPC undergo auto-pleurodesis. In this cohort of patients IPC removal presents a low risk of complications and offers significant benefits to patient comfort. The presence of lung sliding on ultrasound prior to insertion appears to be correlated with auto-pleurodesis, and this requires further investigation in larger prospective studies. The ability to give patients more information regarding likelihood of auto-pleurodesis could add to the decision making process for definitive fluid control.