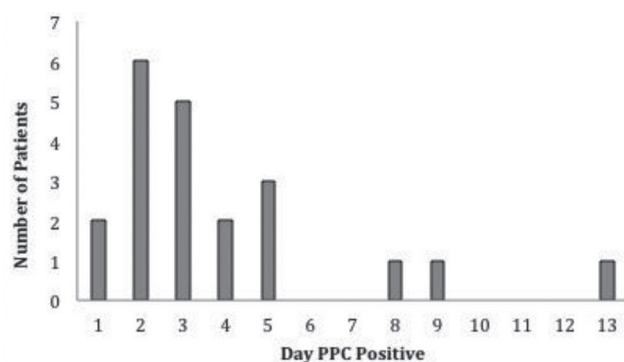


**Results** 287 patients underwent VATS lobectomy, 2 patients undergoing completion lobectomy were excluded. Of 285 patients; 137 were male (48%), median (IQR) age of 69 years (13) and mean ( $\pm$ SD) FEV1 of 87% ( $\pm$ 19). PPC developed in 21 patients (7.4%); the median day that PPC developed was postoperative day 3 (Figure 1). Patients who developed a PPC had a significantly longer hospital LOS (4 vs 3 days), higher rate of ITU admission (25% vs 0%) and higher hospital mortality (14% vs 0%) ( $p < 0.001$ ). Current smoking and COPD diagnosis were significantly different on univariate analysis ( $p < 0.05$ ), but on forward stepwise logistic regression, only current smoking was a significant independent risk factor for PPC ( $p = 0.015$ ). Those with PPC required significantly more physiotherapy contacts/time, with more specific pulmonary therapy and emergency out-of-hours therapy.



**Abstract S61 Figure 1** Day PPC detected following surgery

**Conclusions** Patients undergoing VATS remain at risk of developing a PPC associated with significantly worse short-term morbidity and mortality. Patients that develop a PPC following VATS required increased postoperative physiotherapy compared to non-PPC patients. Current smoking is an independent risk factor for PPC development following VATS, thus vigorous addressing of preoperative smoking cessation is urgently needed.

## REFERENCES

- Agostini P, *et al.* Postoperative pulmonary complications following thoracic surgery: are there any modifiable risk factors? *Thorax* 2010;**65**(9):815–8.
- Lugg ST, *et al.* Long-term impact of developing a postoperative pulmonary complication after lung surgery. *Thorax* 2016;**71**(2):171–6.

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## ADEQUACY OF INTRA-OPERATIVE LYMPH NODE SAMPLING DURING SURGICAL RESECTION OF NSCLC: INFLUENCING FACTORS AND ITS RELATIONSHIP TO SURVIVAL

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**Background** Adequate intra-operative lymph node sampling is a fundamental part of lung cancer surgery but adherence to standards, particularly in the United Kingdom is not well known. The

International Association for the Study of Lung Cancer (IASLC) has defined adequate lymph node sampling as: at least 3 mediastinal lymph node stations, station 7 in all cases, station 5/6 with left upper lobe tumours and station 9 with lower lobe tumours; the sampling of at least 3 hilar lymph node stations is also recommended. This study sought to measure the adequacy of intra-operative lymph node sampling at a regional Lung Cancer Centre, the factors which may influence this and impact on survival.

**Methods** A retrospective review of the pathological reports for all patients who underwent surgical resection for NSCLC at the University Hospital of South Manchester between 2011 and 2014 ( $n = 1407$ ) was performed. Lung cancer resection specimens are reported in line with the minimum dataset defined by the Royal College of Pathology and contain a record of all lymph node stations sampled intra-operatively and the histological findings from these lymph nodes. The influence of clinical variables on adequacy of lymph node sampling was investigated and survival data was obtained from national death registries.

**Results** Adequate intra-operative lymph node sampling increased significantly from 13% (23/173) in 2011 to 51% (224/437) in 2014 coinciding with a dramatic increase in the volume of lung cancer surgery (Table 1). Secondary analysis also revealed that patients with a low or high T-stage, undergoing sublobar resections and undergoing left sided resections have significantly higher rates of inadequate lymph node sampling. Overall, there was no statistically significant difference in survival between patients with adequate and inadequate intra-operative lymph node sampling.

**Conclusion** This study provides a much-needed benchmark of current thoracic surgical practice in lung cancer in the UK and provides important granularity to facilitate changes to improve adequacy of staging. Further improvement is needed to meet the standards as defined by the IASLC, however, what constitutes an “acceptable” level of adequacy is yet to be defined and this impact on survival is not clear.

**Abstract S62 Table 1** Intra-operative nodal sampling during resection of NSCLC at UHSM (2011–14)

Measure		Year of surgery				2011/12 vs 2013/14
		2011	2012	2013	2014	
Total number of NSCLC resections	n	173	333	464	437	
Overall proportion of adequate nodal sampling	%	13%	22%	38%	51%	<0.0001
	(n)	(23)	(73)	(174)	(224)	
≥3 mediastinal LN stations sampled	%	17%	31%	47%	60%	<0.0001
	(n)	(30)	(103)	(220)	(262)	
Station 7 sampled	%	36%	46%	63%	56%	<0.0001
	(n)	(63)	(154)	(290)	(244)	
Station 5/6 in LUL tumours	%	72%	73%	76%	84%	<0.15
	(n)	(42)	(72)	(104)	(95)	
Station 9 in lower lobe tumours	%	49%	52%	60%	65%	0.008
	(n)	(37)	(66)	(124)	(114)	
Proportion of multi-station N2	%	5%	4%	5%	4%	
	(n)	(8)	(12)	(25)	(17)	