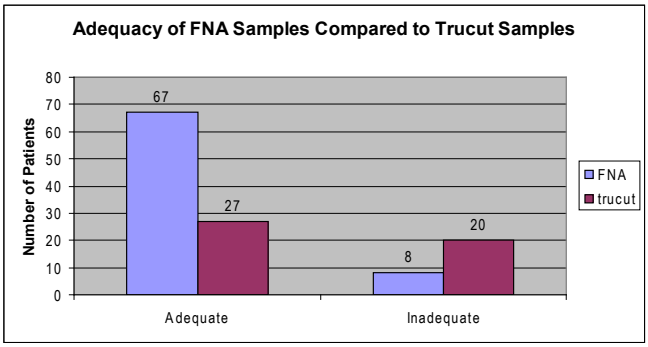

Abstract P72 Figure 1

no data was available and therefore was excluded from analysis. Of the remaining 76 patients, 46 had trucut and FNA sampling, 29 FNA alone and 1 trucut alone.

Comparison of the subgroups having FNA plus trucut and FNA alone, via Fisher's exact test, showed no statistically significant difference in the diagnostic information acquired (p=1.0000).

There was no difference in the immediate complication rates or level of patient comfort during procedure (both p=1.0000).

Trucut did provide additional information in 5 patients but this was not statistically significant. A large number of trucut specimens received were inadequate for histological analysis (20/47) compared with FNA (8/67). This was statistically significant with p=0.0001.

Conclusions EUS-guided trucut biopsy provided additional diagnostic information in some patients and is well tolerated, with no reports of immediate complications. This retrospective study performed in a single NHS hospital trust was unable to provide statistically significant data to confirm the benefits of trucut sampling however it did confirm its safety and tolerability of EUS-trucut. It may be beneficial to repeat this study in multiple centres with a larger sample size and multiple operators.

References Initial experience with EUS-guided trucut needle biopsies of perigastric organs. Wiersema et al. Gastrointestinal Endoscopy 56 (2) 2002.

P73 IMPACT OF EBUS-TBNA ON MODALITIES FOR TISSUE ACQUISITION IN PATIENTS WITH LUNG CANCER: A STUDY OF 407 PATIENTS

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RJ José, M Taylor, A Ahmed, P Shaw, J Brown, G Hardavella, DR Lawrence, PJ George, SM Janes, N Navani. *University College Hospital, London, United Kingdom*

Introduction NICE guidance for the diagnosis and treatment of lung cancer recommends choosing "investigations that give the most information about diagnosis and staging with the least risk to the patient".[1] EBUS-TBNA is expanding as an important diagnostic modality in lung cancer and provides simultaneous information on lung cancer phenotype, genotype and nodal staging. The impact of the introduction of EBUS-TBNA on the use of diagnostic modalities for tissue acquisition in patients with lung cancer is unknown.

Methods A retrospective review of 407 consecutive patients diagnosed with lung cancer at a university teaching hospital in 2007, 2009 and 2011. Data were collected on age, gender, FEV1, performance status, diagnostic modality, and pathological subtype. Patients where only a clinical diagnosis was made (n=21) were excluded.

Data were analysed using the SPSS version 17 (Chicago, IL, USA). For comparison between categorical variables, Chi-square or Fisher's exact test were used as appropriate. All reported *p*-values are two-tailed, and are considered statistically significant when $p<0.05$.

Abstract 73 Table 1 Modalities for the diagnosis of lung cancer and patient and tumour characteristics

		Year of diagnosis		
		2007	2009	2011
		n=95 (%)	n=173 (%)	n=118 (%)
Diagnostic modality	Standard bronchoscopy	43.16	17.92	14.41
	CT guided biopsy	36.84	30.64	16.10
	Endobronchial ultrasound	0.00	21.39	25.42
	Extra-thoracic biopsy	0.00	0.00	5.08
	Liver biopsy	0.00	0.00	2.54
	Mediastinoscopy	4.21	3.47	0.00
	Pleural aspirate or biopsy	0.00	0.00	3.39
	Sputum cytology	1.05	0.00	0.00
	Supraclavicular LN biopsy	0.00	0.00	7.63
	Thoracotomy	6.32	16.76	22.03
	VATS excision biopsy	8.42	9.83	3.39
Performance Status	Unknown	0	5.20	5.10
	0	20	28.90	42.40
	1	43.20	41.60	40.7
	2	20.00	15.60	7.60
	3	15.80	7.50	4.20
	4	1.10	1.20	0.00
Histological subtype	Adenocarcinoma	51.58	54.91	52.54
	Squamous Cell	27.37	24.28	31.36
	Small Cell	8.42	6.36	12.71
	Other	0.00	0.00	2.54
	Adenosquamous	0.00	0.00	0.85
	NOS	11.58	5.2	0.00
	Large Cell	1.05	9.25	0.00
Staging	Unknown	0.00	0.00	1.61
NSCLC	I	40.82	35.79	19.36
	II	16.32	22.11	17.75
	III	16.32	11.58	19.36
	IV	26.53	30.53	41.94
SCLC	Limited	25.00	54.55	26.67
	Extensive	75.00	45.45	73.33

Results 386 patients were included in the analysis. The mean (SD) age (years) and FEV1 (L/min) were 69 (12) and 1.81 (0.80) for 2007, 67 (10) and 1.81 (0.79) for 2009 and 68 (12) and 2.07 (0.68) for 2011 respectively. In 2007, 2009 and 2011 57.9%, 51.4% and 62.7% were males. The results on diagnostic modalities, performance status, histological subtype and staging are listed in Table 1. Comparing 2007 to 2011 there has been a significant reduction in standard bronchoscopy (P=0.0001), CT guided biopsy of peripheral lesions (P=0.0008) and mediastinoscopy (P=0.0382). The proportion of cases diagnosed by EBUS-TBNA significantly increased from 0% in 2007 to 21.4% in 2009 and 25.4% in 2011 (P<0.0001). There has been a significant increase in the proportion of patients going straight to surgery without pathological confirmation (p=0.002).

Conclusions The use of diagnostic modalities that provide information on diagnosis and staging in a single intervention are increasing. At our hospital, the use of EBUS-TBNA has led to a significant

reduction in CT guided biopsies, standard bronchoscopies and mediastinoscopies. These changes in practise have implications for future service provision, training and commissioning.

Reference

1. NICE Lung cancer. 2011.http://publications.nice.org.uk/lung-cancer-cg121/key-priorities-for-implementation.

Symptoms, quality of life and exercise in COPD

P74 A NOVEL MEASURE OF PHYSICAL EXERCISE CAPACITY IN COPD

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AM Albarrati, NG Gale, J Duckers, S Enright, I Munnery, M Munnery, JR Cockcroft, DJ Shale. *Cardiff University, Cardiff, UK*

Introduction Chronic obstructive pulmonary disease (COPD) is associated with progressive impairment of physical performance. However, determination of physical performance in routine clinical practise is difficult due to limited resources. This study compared the timed up and go (TUG) test and a range of assessments of physical performance, easily applied in the routine care of COPD, with the 6 minute walk test (6MWT).

Method As part of a longitudinal study of comorbidities in COPD, sub-maximal physical performance was examined in 300 patients and 50 comparators using the 6MWT. The TUG test, spirometry, COPD assessment test (CAT), St George's Respiratory Questionnaire (SGRQ) and gait speed were also determined. Gait speed was determined by dividing 6MWTd istance by time.

Results Patients and comparators were similar in age, BMI and gender. There were between group differences in 6MWT, TUG and gait speed (Table 1), ANOVA showed a difference between comparators and the GOLD stages of COPD for all these variables (all $p<0.01$). The TUG time differed across BMI categories in COPD but not comparators (ANOVA $p=0.007$ and $p=0.195$ respectively). The TUG time was inversely related to 6MWT ($r=0.64$, $p<0.0001$), gait speed ($r=0.63$, $p<0.0001$)and lung function ($r=0.15$, $p<0.01$), and directly to the activity ($r=0.35$, $p<0.0001$)and total SGRQ scores ($r=0.35$, $p<0.0001$) and CAT ($r=0.39$, $p<0.0001$). Stepwise regression analysis, adjusted for age and BMI, indicated that TUG time, SGRQ activity score and CAT score explained 73% of variance in 6MWT in patients, with lung function excluded from the analysis.

Conclusions The TUG time identified the difference in physical performance between patients and comparators and also across GOLD categories. In the elderly the TUG test has been used as an indicator of physical performance, being an integrated measure of gait speed, balance and functional capacity. It appears to apply in the same way to the physical deficits in COPD and also to link to health related quality of life. The application of TUG test and validated questionnaires may be a useful measure of physical performance, which because of its rapidity and ease of application could be used in assessments in clinical practise.

Abstract 74 Table 1 Clinical characteristics of patients and comparators

Mean±SD	COPD	Comparator	P value
Age (years)	66±7	65±8	0.198
BMI (kg/m^2)	28±5.4	27.9±7	0.844
$FEV_{1\%}$ pred	54±19.6	103±14.8	<0.0001
6MWT (m)	291±111	472±80	<0.0001
TUG (sec)	11.4±3.9	8.2±1.3	<0.0001
Gait Speed (m/min)	48.5±18.5	78.6±13.4	<0.0001

P75 PHYSICAL IMPAIRMENT AND FRAILTY IN PATIENTS WITH CHRONIC OBSTRUCTION PULMONARY DISEASE (COPD)

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[1]NS Gale, [1]AM Albarrati, [1]I Munnery, [1]M Munnery, [2]R Tal-Singer, [3]R Hubbard, [1]JR Cockcroft, [1]DJ Shale. *[1]Cardiorespiratory Medicine, Cardiff University, Cardiff, UK; [2]GlaxoSmithKline, King of Prussia, USA; [3]Geriatric Medicine, University of Queensland, Brisbane, Australia*

Background COPD is a multi-system disease, which has been linked to premature physiological ageing. Recognised co-morbidities include increased risk of cardiovascular events and osteoporosis, loss of muscle mass, function and impaired quality of life (QoL). The Chronic Geriatric Assessment (CGA) has been used to measure impairments, frailty and predict outcomes in older individuals. We hypothesised that the CGA would be greater in COPD than comparator subjects, and would relate to physical function and QoL in patients with COPD.

Methods As part of the Assessment of Risk in Chronic Airways Disease Evaluation (ARCADE)* longitudinal study, 300 patients with COPD (149 male) and 50 (28 male) comparators free from respiratory disease were evaluated. In all subjects spirometry, BMI, handgrip, 6 minute walk distance (6MWD), timed up and go (TUG), and the CGA were determined. The CGA is a 20 item interviewer administered questionnaire, which quantifies, physical, functional, psychosocial and medical impairments, scored out of 61, higher scores indicate more impairment. Health-related QoL was measured in patients using the St George's Respiratory Questionnaire (SGRQ) and MRC breathless was recorded.

Results Patients and comparators were similar in age, gender and BMI, but differed in lung function, grip strength, 6MWD, TUG and all domains of the CGA (Table 1). There was no difference in gender for BMI and CGA score. In patients, the total CGA score related to FEV_1% $r=-0.187$, handgrip $r=-0.335$, 6MWD $r=-0.548$, TUG $r=0.506$, MRC breathlessness $r=0.351$ and number of exacerbations per year $r=0.313$ (all $p<0.05$) but did not relate to age. Of these, stepwise multiple regression showed that 6MWD, TUG, handgrip and number of exacerbations per year predicted the total CGA score. All of the CGA impairment categories related to all domains of the SGRQ ($p<0.001$).

Conclusion The CGA, a measure of impairment and frailty, was greater in patients with COPD than comparators. The CGA related to physical function (handgrip, TUG, 6MWD) and QoL independent of age in patients. The use of the prognostic utility of the CGA in COPD is worthy of further study which will be addressed longitudinally by the ARCADE study.

*(Funded by GlaxoSmithKline)

Abstract 75 Table 1

Mean±SD or Median (range)	Comparators	COPD	P value
Age (yrs)	65±8	66±7	0.198
FEV_1% predicted	103±15	55±20	<0.001
FEV_1/FVC (L)	0.77±0.06	0.52±0.11	<0.001
BMI (Kg/m2)	27.9±4.2	28.1±5.4	0.844
Handgrip (Kg)	32.1±11.0	26.6±9.7	<0.001
6MWD (m)	472±80	291±111	<0.001
TUG time (s)	8.2±1.3	11.4±3.9	<0.001
CGA Physical	0.0 (0.0–2.0)	0.0 (0.0–6.0)	<0.001
CGA Function	0.0 (0.0–1.0)	0.5 (0.0 –7.0)	<0.001
CGA Psychosocial	0.25 (0.0–3.25)	2.0. (0.0–6.0)	<0.001
CGA Medical	2.0 (0.0–6.0)	6.0 (0.0 –18.0)	<0.001
CGA Total Score	3.25 (0.0–8.25)	9.25 (0.0 –28.5)	<0.001