2. Pre-operative PET scans play an undoubted role in selecting patients for surgery but thus far in our service, they don't appear to be associated with significantly less RD because of the problem of microscopic metastases.

Abstract P195 Table 1 Temporal trends and distribution of recurrent disease following lung cancer surgery

Site	N=58	Range (months)	Mean
Lung	24	1–44	19.8
Brain	10	2–23	12.3
Bone	8	1–44	23.0
Liver	2	14–34	24.0
Mediastinum	3	6–44	29.7
Lymph nodes	4	12–18	14.8
Skin	2	3–32	16.5

P196 CRYO-RECANALISATION VIA DAY-CASE FLEXIBLE BRONCHOSCOPY FOR CENTRAL AIRWAY OBSTRUCTION

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Introduction and Objectives The use of a flexible cryoprobe to effect bronchial recanalisation inpatients with central airway obstruction (CAO) has previously been described, in patients under general anaesthesia undergoing rigid bronchoscopy (C Schumann *et al. J Thorac Cardiovasc Surg* 2010;**139**:997–1000). Few data on flexible bronchoscopic cryorecanalization have been published.

Methods All flexible interventional bronchoscopic procedures were recorded prospectively in adatabase, and data extracted on all procedures in which cryo-recanalisation (Erbokryo, ERBE UK Ltd) was attempted. Data collected included demographics, diagnosis, indication for procedure and site of tracheobronchial abnormality, techniques used, complications and the following data pre- and post-procedure: performance status, FEV_1, patient location. The procedure duration, defined as the time in minutes between initial bronchoscope insertion and final bronchoscope withdrawal, was recorded in 23 cases. Bronchoscopies were performed in Oxford and Papworth by, or under the direct supervision of, a single operator (MS).

Results Between May 2006 and July 2010, 54 procedures were performed in 46 patients (13 female, 33male). The median age was 69 (range 24–94). The underlying diagnosis was lung cancer in 39 procedures, endobronchial metastases in 13 and benign disease in 2 (post tracheostomy granulation tissue in 1, thrombus in 1). All patients had CAO affecting a lobar or more proximal bronchus. There was a mean improvement in FEV1 of 0.28L (mean (SD) FEV_1 pre-procedure 1.56L (0.71L), mean (SD) FEV1 post procedure 1.84L (0.80), p=0.001, paired t-test). Median performance status was 1 both before and after the procedure. In 49/54 procedures (91%) the patients were treated as day-cases, and 5/54 (9%) as inpatients. Bleeding complications occurred in two patients. In both cases bleeding of >50 mls occurred, which was controlled using epinephrine via the bronchoscope. The median procedure duration was 20 (range 7–58) min.

Conclusions Day-case cryorecanalization via flexible bronchoscopy appears to offer effective improvement in lung function in patients with CAO owing to endobronchial lesions. Procedure duration is short, and complication rates appear acceptable. We believe that cryo-recanalisation using flexible cryoprobes deserves more widespread use in centres specialising in interventional bronchoscopy.

Clinical studies in obstructive sleep apnoea

P197 THE EFFECT OF CPAP THERAPY ON INSULIN SENSITIVITY AND CV RISK FACTORS IN PATIENTS WITH OSA

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In a prospective study, we assessed the effect of CPAP therapy on the insulin sensitivity and CV risk factors such as blood pressure (BP), glycaemia status, and lipid profile in patients with obstructive sleep apnoea (OSA).

Only patients with confirmed presence of cardinal features and diagnostic apnoea/hypopnoea index (AHI) for OSA were enrolled in the study. All patients were studied before the initiation of CPAP therapy. Following an initial screening visit before CPAP treatment, patients were then studied at 6 and 12 weeks following the initiation of CPAP.

We studied 41 patients with confirmed OSA, aged 56 ± 13 (mean ± SD) years, 33 male and 8 female, who had their weight, BP and fasting blood samples checked in a screening visit and two study visits, at least 6 weeks apart. The fasting blood samples were used to assess fasting plasma glucose, HbA_{1c}, fasting insulin, lipid profile, and CRP.

Following CPAP treatment baseline systolic BP had significantly improved compared to BP following CPAP therapy (135 ± 17 vs 123 ± 12 mm Hg, p=0.001) and so did diastolic BP (83 ± 9 vs 77 ± 9 mm Hg, p=0.01). There were also improvement in fasting plasma glucose (5.6 ± 1.7 vs 4.9 ± 2.0 mmol/l, p>0.05) and HbA_{1c} (5.8 ± 1.3 vs 5.4 ± 1.7%, p>0.05), but that was not statistically significant. There had been non-significant improvement of fasting insulin level (17.9 ± 25 vs 12.7 ± 15.5 pmol/l, p>0.05), but no improvement on insulin sensitivity. Lipid profile had also improved, as total cholesterol was decreased (5.2 ± 2.0 vs 4.8 ± 1.9 mmol/l, p>0.05), and so did triglycerides (2.7 ± 4.4 vs 2.0 ± 2.0 mmol/l, p>0.05), but these changes were not statistically significant. CRP had also improved but that was not statistically significant (4.5 ± 10 vs 2.4 ± 2.0 mg/l, p>0.05).

In conclusion, this study demonstrates that CPAP therapy in patients with OSA can result in significant improvement in systolic and diastolic BP, as well as non-significant improvement in lipid profile and glycaemia status.

P198 EFFECTS OF OXYGEN THERAPY ON CENTRAL SLEEP-DISORDERED BREATHING IN INFANTS WITH PRADER–WILLI SYNDROME

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Background Children with Prader–Willi syndrome (PWS) are known to have sleep-disordered breathing. In addition to hypersomnolence and obstructive sleep apnoea, central respiratory control abnormalities may be present from infancy. The aims of this study were to describe breathing patterns in infants with PWS, and the effects of supplemental oxygen in this group.

Methods Children with PWS attending a tertiary sleep clinic underwent full polysomnographic studies either to investigate persisting neonatal oxygen requirement, or as screening for sleep-disordered breathing. Continuous oxygen saturations (SpO_2) and transcutaneous carbon dioxide ($tcCO_2$) were recorded. Central and obstructive events were defined in accordance with the American Academy of Sleep Medicine (AASM) 2007 scoring rules. Children who had significant hypoxia associated with central events were started on supplemental oxygen during sleep and followed at 3-monthly intervals with split-night studies (periods in both air and supplemental oxygen). Paired *t*-tests were used to compare sleep data in air and oxygen arms for our subject cohort.