

Online supplement

TABLE S1. Characteristics of the subjects

| No. | Operation | Diagnoses | Smoking history | Quit smoking before surgery | Gender | Age, yr | Pre-BD FEV ₁ %pred | Pre-BD FVC %pred | Pre-BD FEV ₁ :FVC | Post-BD FEV ₁ %pred | Post-BD FVC %pred | Post-BD FEV ₁ :FVC | Drug therapy | Experiments |
|-----------------|-----------|-----------|-----------------|-----------------------------|--------|---------|-------------------------------|------------------|------------------------------|--------------------------------|-------------------|-------------------------------|---|---------------------------|
| non-COPD | | | | | | | | | | | | | | |
| 1 | R | NSSCa | Ex-smoker | NA | Male | 61 | 75 | 77 | 0.77 | | | | Lipitor, vit d, glucocamin | 1,2,3,5,11,14 |
| 2 | R | NSSCa | 32.5 pack years | 26 years | Male | 72 | 87 | 81 | 0.86 | | | | Micardis 80mg, pariet 20mg, ezetrol 10mg, co-plavix 75/100mg | 1,2,3,4,5,11,14,15,16,17 |
| 3 | R | NSSCa | 40 pack years | 1 week | Male | 65 | 92 | 93 | 0.78 | 126 | 132 | 0.72 | Candesartan 16mg daily oral, celebrex 200mg daily oral, durosic 25mcg/hr q3rd day topical, alprazolam 1mg bd oral, omeprazole 20mg daily oral, dothiepin 75mg daily oral, pindolol 15mg daily oral, simvastatin 40mg nocte oral | 1,2,3,5,10,11,12,14,16,17 |
| 4 | R | NSSCa | 62.5 pack years | 1 week | Male | 66 | 102 | 106 | 0.72 | 102 | 110 | 0.7 | | 1,2,3,5,10,11,14,15,17 |
| 5 | R | NSSCa | Non-smoker | NA | Female | 69 | NA | NA | 0.86 | | | | Micardis 80mg, aropax 10mg, norvasc 2.5mg, flaxseed oil, magnesium, b complex, vit d | 1 |
| 6 | R | NSSCa | 28 pack years | 30 years | Female | 73 | 100 | 113 | 0.74 | | | | Karvea 75mg, minax 50mg, cartia, vytorim 10mg/80mg, vit c, glucosamine, magnesium, krill oil | 1,2,3,4,8,14,15,16,17 |
| 7 | R | NSSCa | 24 pack years | | Male | 72 | 83 | 89 | 0.72 | | | | | 1,2,3,4,12,13,14,15,17 |
| 8 | R | NSSCa | Ex- | | Male | 67 | 81 | 79 | 0.91 | | | | Diaformin 1000mg, | 7,8 |

| | | | | | | | | | | | | | | |
|----|---|------------------------|--------------------|----------|--------|----|-----|-----|------|--|--|--|---|---------------------|
| | | | smoker | | | | | | | | | | gliclazide, lipitor, panadiene forte | |
| 9 | R | LCCa | 45 pack years | 7 years | Male | 59 | 76 | 73 | 0.78 | | | | Seretide 2 puffs BD, Ventolin (salbutmol) 4 puffs QiD, prednisone 10mg daily, ciprofloxacin 1 BD | 7,12,13 |
| 10 | R | NSCCa | 25 pack years | 1 month | Male | 54 | 114 | 113 | 0.84 | | | | Panamax, Neurofen plus, Oxycap(norm) smg | 7 |
| 11 | R | NSCLCa adenoca stage I | 125 pack years | 6 months | Male | 63 | 71 | 63 | 0.85 | | | | Amlodipine/atorvastatin 10mg/40mg daily, Telmisartan/HCT 80mg/12.5mg daily, Prazosin 1mg BD, Esomeprazole 40mg daily, Clopidogrel 75mg daily, Pulmicort 400mcg 2 puffs BD, Spiriva 10mcg 1 puff daily | 2,4,5,9,12,13,14,16 |
| 12 | R | Adeno Ca | 30/day | NA | Male | 61 | 88 | 90 | 0.74 | | | | Telmesartan | 7 |
| 13 | R | Ca | Ex-smoker | | Female | 78 | 88 | 95 | 0.76 | | | | Diabex 500mg, diamicon 60mg, avapro 300mg, norvasc 5mg, lantus insulin 9units, pariet 20 mg, lipitor 40mg, caltrate 600mg | 1,2,4,5,9,14,15 |
| 14 | R | Ca | 105-150 pack years | | Male | 61 | 101 | 107 | 0.75 | | | | | 7,8,10,12,13 |
| 15 | T | Pulmonary hypertension | Non-smoker | NA | Male | 20 | 86 | 87 | 0.83 | | | | Bosentan,Sildenafil, Spironolactone, Ubidecarenone - Alpha tocopherol, Warfarin, Frusemide, Epoprostenol sodium, Potassium chloride | 1,2,3,5,6,11,14 |
| 16 | T | Acute interstitia | Non-smoker | | Male | 38 | NA | NA | NA | | | | Ciclesonide, Tiotropium, Indacaterol, Escitalopram, | 1,2,5,11,14 |

| | | | | | | | | | | | | | | | |
|-------------|---|-------------------------------------|------------------|--------------|--------|----|----|----|----------|----|----|------|--|---|--------------------------------------|
| | | I pneumon ia | | | | | | | | | | | | Prednisolone, Alprazolam, Allopurinol, Nifedipine | |
| 17 | T | Subarach noid haemorr hage | NA | | Male | 52 | NA | NA | NA | | | | | | 6 |
| 18 | T | Donor | Non- smoker | | Male | 58 | NA | NA | NA | | | | | | 6 |
| 19 | T | Donor | NA | | Male | 16 | NA | NA | NA | | | | | | 6 |
| 20 | T | Donor | NA | | Male | 30 | NA | NA | NA | | | | | | 6 |
| 21 | T | Donor | NA | | NA | NA | NA | NA | NA | | | | | | 6 |
| COPD | | | | | | | | | | | | | | | |
| 1 | T | Emphyse ma | 50 pack years | 1.5 years | Male | 64 | 20 | 83 | 0.1 9 | | | | | Ciclesonide, Tiotropium, Indacaterol, Escitalopram, Prednisolone, Alprazolam, Allopurinol, Nifedipine | 1,2,3,5,11,1 4,15 |
| 2 | T | Emphyse ma | 34 pack years | | Female | 51 | 22 | 67 | 0.2 7 | | | | | | 1,2,3,5,10,1 1,12,14,15,1 6,17 |
| 3 | T | Emphyse ma | 50 pack years | | Male | 54 | 14 | 44 | 0.2 6 | | | | | | 1,2,4,6,7,14 |
| 4 | T | Emphyse ma | 30 pack years | | Male | 53 | 23 | 55 | 0.3 4 | | | | | | 1,2,5,6,10,1 1,12,14,16,1 7 |
| 5 | T | Emphyse ma | 25 pack years | | Female | 45 | 21 | 69 | 0.2 4 | | | | | | 1,3,4,6,7,12, 13,14,16 |
| 6 | T | Emphyse ma | 30 pack years | | Female | 57 | 24 | 59 | 0.3 3 | | | | | | 1,2,4,5,9,14, 15 |
| 7 | T | Emphyse ma | 60 pack years | | Male | 60 | 9 | 30 | 0.2 5 | | | | | | 1,2,4,5,6,9,1 4,15,16 |
| 8 | T | Emphyse ma | 20 pack years | 15 years | Female | 62 | 19 | 50 | 0.3 2 | 20 | 68 | 0.29 | | Oxycodone, Temazepam, Fluticasone - Salmeterol, Tiotropium bromide, Prednisone, Salbutamol, Panadol | 8 |
| 9 | T | Emphyse | 60 pack | | Female | 62 | 19 | 75 | 0.2 | | | | | | 7,8,13 |

| | | | | | | | | | | | | | | |
|----|---|------------|---------------|----------|--------|----|----|-----|------|----|----|------|--|---------------------------|
| | | ma | years | | | | | | | | | | | |
| 10 | T | Emphysema | 35 pack years | | Female | 51 | 18 | 57 | 0.25 | | | | | 6,7,8 |
| 11 | T | Emphysema | 40 pack years | | Female | 57 | 27 | 81 | 0.26 | | | | | 6 |
| 12 | T | Emphysema | 40 pack years | NA | Male | 53 | 16 | 54 | 0.24 | | | | | 6 |
| 13 | T | Emphysema | 30 pack years | | Male | 67 | 13 | 44 | 0.24 | | | | | 6 |
| 14 | T | Emphysema | 30 pack years | 10 years | Female | 56 | 20 | 69 | 0.25 | 20 | 72 | 0.23 | Prednisolone, Augmentin, Tiotropium bromide, Aspirin, Doxycycline, Perindopril, Fluticasone - Salmeterol | 6 |
| 15 | T | COPD | 40 pack years | NA | Female | 62 | 31 | 110 | 0.22 | | | | | 1,2,3,5,11,14,17 |
| 16 | T | COPD | 60 pack years | 30 years | Male | 58 | 18 | 78 | 0.18 | 19 | 87 | 0.17 | Alendronic acid, Tiotropium, Fluticasone - Salmeterol, Salbutamol, Atorvastatin, Prednisolone | 1,2,3,5,11,14,15,17 |
| 17 | T | COPD | 40 pack years | 11 years | Female | 62 | 20 | 52 | 0.32 | | | | Tiotropium, Fluticasone - Salmeterol, Salbutamol, Vit D, Calcium - Cholecalciferol, Prednisolone | 3,6 |
| 18 | T | COPD | 30 pack years | 5 years | Male | 55 | 12 | 56 | 0.16 | 15 | 68 | 0.15 | | 3 |
| 19 | R | SCCa/COPD | 75 pack years | 6 months | Male | 71 | 44 | 64 | 0.55 | | | | | 2,3,4,7,10,12,13,14,16,17 |
| 20 | R | NSCCa/COPD | 40 pack years | | Male | 64 | 56 | 73 | 0.6 | | | | | 12,13 |

T: transplant; R: resection; B: bronchoscopy; Ca: carcinoma; NSCCa: non-small cell carcinoma; NSCLC: non-small cell lung carcinoma; LCCa: Large cell carcinoma; COPD: chronic obstructive pulmonary disease; FEV1: forced expiratory volume in 1 s; FVC: forced vital capacity; %pred: % predicted; NA: not available.

Experiments 1: CXCL-8 ELISA; 2: CXCL-1 ELISA; 3: MMP-1, 2, 3 and 10 ELISA; 4: Active MMP-1 ELISA; 5: COL8A1 ECM ELISA; 6: COL8A1 tissue staining; 7: Cell attachment; 8: Wound healing; 9: MTT and LDH release test; 10: Real time PCR array; 11: COL5 ECM ELISA; 12: Fibronectin ECM ELISA;

13: Perlecan ECM ELISA; 14: CCL-2, CCL-5 and CXCL-10 ELISA; 15: NF- κ B and AP-1 TransAM assay; 16: Supernatant FN western blots; 17: Supernatant COL1 western blots.