

## Supplementary data

- Immunosuppressive drugs recorded: any chemotherapy, alkylating agents, anthracyclines, tumour necrosis factor inhibitors, methotrexate, rituximab, anti-metabolites, leflonamide, hydroxyurea, sulfasalazine, mycophenolate, calcineurin inhibitor, immunotherapy, Tyrosine kinase inhibitors, mammalian target of rapamycin (mTOR) inhibitors
- Autoimmune diseases recorded: collagenous colitis, rheumatoid arthritis, dermatomyositis, lichen planus, membranous glomerulonephritis, ulcerative colitis, microscopic polyangiitis, inflammatory myopathy, lupus, giant cell arteritis, bullous pemphigoid, paraneoplastic pemphigus, autoimmune haemophilia
- Data set

Definite infection		Sex	Age	Deceased D>30	Clinical and laboratory parameters													Non-infective	Ground glass	Reticular opacities	Nodules	Consolidation	Other contributing pathology	Sample type	qPCR	
					Haem. cancer	Non-haem. cancer	Solid organ transplant	Chronic lung disease	Haemo-dialysis	Diabetes	Chronic liver disease	Autoimmune disease	Immunosuppressive drug prescribed	> 2 wks >15mg/day	Prophylax	Fever	Dyspnoea	Cough	Hypoxia (< 95%)	Bacterial	Viral	Other infective				
M	63	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0	0	1	BAL 1.2x10 <sup>4</sup>	
M	69	0	0	1	0	0	0	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0	0	0	BAL 7.7x10 <sup>4</sup>	
M	56	0	1	0	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	1	0	0	BAL 3.5x10 <sup>4</sup>	
M	37	0	1	0	0	0	0	0	0	0	0	1	0	1	1	1	1	1	0	0	0	0	1	0	BAL 1.4x10 <sup>4</sup>	
M	57	0	1	0	0	1	0	0	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	BAL 3.2x10 <sup>4</sup>	
F	51	1	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	1	BAL 1.7x10 <sup>4</sup>
F	38	0	0	0	0	0	0	0	1	0	1	0	1	0	1	1	1	1	0	0	0	0	0	1	1	BAL 1.9x10 <sup>4</sup>
F	47	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	BAL 8.2x10 <sup>3</sup>	
F	53	0	0	1	0	0	0	0	0	0	0	1	1	0	1	0	0	0	0	0	1	0	0	1	BAL 4.8x10 <sup>4</sup>	
M	63	1	1	0	0	0	0	1	0	1	1	1	0	0	1	1	1	1	0	0	0	0	0	1	0	Sputum 3.6x10 <sup>4</sup>
F	76	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0	1	0	0	Sputum 3.4x10 <sup>4</sup>	
M	76	1	1	0	0	1	0	0	0	0	0	1	0	0	1	1	1	1	0	0	0	1	1	0	Sputum 2.5x10 <sup>4</sup>	
F	44	0	0	0	0	1	0	0	0	1	0	0	0	1	1	1	1	1	0	0	0	1	0	1	Sputum 2.0x10 <sup>4</sup>	
M	56	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	1	1	1	0	0	0	1	1	Sputum 1.0x10 <sup>5</sup>	
M	64	0	1	0	0	0	0	0	0	0	1	0	0	1	1	0	1	0	0	0	0	1	0	1	Sputum 1.0x10 <sup>5</sup>	
F	70	0	1	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	Sputum 1.0x10 <sup>5</sup>	
M	68	1	0	0	0	0	1	0	0	0	1	1	0	0	1	1	1	1	0	0	0	1	1	1	Sputum 2.5x10 <sup>4</sup>	
F	53	0	1	0	0	0	0	0	0	0	0	1	0	0	1	1	1	1	0	0	0	1	0	1	Sputum 4.6x10 <sup>4</sup>	
F	18	0	1	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	1	0	0	0	Sputum 6.9x10 <sup>4</sup>	
F	61	0	0	1	0	1	0	0	0	0	0	1	0	0	1	0	1	0	0	0	0	1	0	0	Sputum 1.5x10 <sup>5</sup>	
F	66	0	0	1	0	1	0	0	0	0	1	0	0	0	1	1	1	1	0	0	0	1	0	1	Sputum 9.0x10 <sup>4</sup>	
M	63	1	0	1	0	0	0	1	0	1	1	0	0	0	1	1	1	1	0	0	0	0	0	1	Sputum 1.9x10 <sup>4</sup>	
M	75	0	0	1	0	0	0	0	0	0	1	0	0	1	0	1	1	1	0	0	0	1	0	1	Sputum 2.4x10 <sup>5</sup>	
M	78	0	0	1	0	1	0	1	0	1	0	1	0	1	1	1	1	1	0	0	0	1	0	1	Sputum 5.3x10 <sup>4</sup>	
M	87	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	1	1	1	0	0	1	Sputum 6.9x10 <sup>4</sup>	
M	74	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	Sputum 3.1x10 <sup>4</sup>	
M	77	0	1	1	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	1	Sputum 2.6x10 <sup>4</sup>	
M	74	0	1	0	1	0	1	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	Sputum 2.7x10 <sup>4</sup>	
Possible infection		Sex	Age	Deceased D>30	Clinical and laboratory parameters													Non-infective	Ground glass	Reticular opacities	Nodules	Consolidation	Other contributing pathology	Sample type	qPCR	
					Haem. cancer	Non-haem. cancer	Solid organ transplant	Chronic lung disease	Haemo-dialysis	Diabetes	Chronic liver disease	Autoimmune disease	Immunosuppressive drug prescribed	> 2 wks >15mg/day	Prophylax	Fever	Dyspnoea	Cough	Hypoxia (< 95%)	Bacterial	Viral	Other infective				
F	30	1	1	0	0	0	0	0	0	0	0	0	1	1	1	0	1	1	1	0	0	0	1	1	BAL 3.0x10 <sup>4</sup>	
M	65	1	1	0	0	1	0	1	0	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	BAL 3.7x10 <sup>4</sup>	
M	62	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	1	0	0	BAL 5.4x10 <sup>3</sup>	
M	42	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	1	1	BAL 2.5x10 <sup>4</sup>	
M	69	1	0	0	0	0	1	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	1	BAL 8.9x10 <sup>3</sup>	
M	54	0	1	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0	1	0	BAL 1.2x10 <sup>4</sup>	
F	58	0	1	0	0	0	0	0	1	0	0	0	1	0	0	1	1	1	0	0	0	0	0	1	Sputum 1.5x10 <sup>4</sup>	
M	77	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	0	0	1	Sputum 4.5x10 <sup>4</sup>	
M	73	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	1	Sputum 5.4x10 <sup>4</sup>	
M	62	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	0	0	0	0	1	Sputum 2.8x10 <sup>4</sup>	
M	60	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	1	0	0	0	0	0	1	Sputum 1.8x10 <sup>4</sup>	
M	69	0	1	0	0	0	0	0	0	1	1	1	0	1	0	1	0	1	0	0	0	0	0	1	Sputum 2.1x10 <sup>4</sup>	
M	68	0	1	0	1	0	0	0	0	1	1	0	0	0	1	1	1	1	0	0	0	0	0	1	Sputum 3.1x10 <sup>4</sup>	
F	71	0	0	1	0	1	0	0	0	1	1	0	0	1	1	1	1	1	0	0	0	0	0	1	Sputum 1.6x10 <sup>4</sup>	
F	79	0	0	1	0	1	0	0	0	0	1	0	0	0	0	1	0	0	1	0	0	0	0	0	Sputum 1.8x10 <sup>4</sup>	
F	52	0	0	1	0	0	0	0	0	0	1	1	0	0	0	1	1	0	0	0	0	0	0	0	Sputum 3.5x10 <sup>4</sup>	
F	61	0	0	1	0	0	0	0	0	0	1	0	0	0	0	0	1	1	1	0	0	0	0	0	Sputum 4.3x10 <sup>4</sup>	
F	67	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	1	1	1	0	0	0	0	0	Sputum 9.3x10 <sup>4</sup>	
M	66	1	0	1	0	0	0	1	0	0	0	0	0	1	1	1	1	1	0	0	0	0	0	0	Sputum 1.1x10 <sup>5</sup>	
M	62	0	1	0	1	0	0	0	0	1	0	0	0	1	0	1	1	1	0	0	0	0	0	0	Sputum 1.2x10 <sup>5</sup>	
F	75	0	1	0	0	0	0	1	0	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0	Sputum 1.4x10 <sup>5</sup>	
M	76	1	0	0	0	1	0	0	0	1	1	0	0	0	0	0	1	1	1	0	0	0	0	0	Sputum 1.7x10 <sup>5</sup>	
F	72	0	0	0	0	0	0	0	0	0	1	1	0	0	0	1	1	1	0	0	0	0	0	0	Sputum 2.9x10 <sup>4</sup>	
M	65	1	0	1	0	0	0	0	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	Sputum 5.7x10 <sup>4</sup>	
M	73	0	0	1	0	0	1	0	0	0	0	1	0	0	0	1	1	1	1	0	0	0	0	0	Sputum 9.9x1	