Table S1 The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) Statement: guidelines for reporting observational studies.

	Item No	Recommendation	Page No
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract	Pg. 1
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found	Pg. 1-2
Introduction			
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	Pg. 2
Objectives	3	State specific objectives, including any prespecified hypotheses	Pg. 2-3
Methods			
Study design	4	Present key elements of study design early in the paper	Pg. 3-4
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Pg. 3
Participants	6	(*a*) *Cohort study*—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up *Case-control study*—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls *Cross-sectional study*—Give the eligibility criteria, and the sources and methods of selection of participants	Pg. 3 + Supplementary material Table S2
		(*b*) *Cohort study*—For matched studies, give matching criteria and number of exposed and unexposed *Case-control study*—For matched studies, give matching criteria and the number of controls per case	N/A
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	Pg. 3-4
Data sources/measurement	8*	For each variable of interest, give sources of data and details of methods of assessment	Pg. 3-4

		(measurement). Describe comparability of assessment methods if there is more than one group	
Bias	9	Describe any efforts to address potential sources of bias	Pg. 9,12
Study size	10	Explain how the study size was arrived at	
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	Pg. 4
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding	Pg. 4
		(*b*) Describe any methods used to examine subgroups and interactions	Pg. 9
		(*c*) Explain how missing data were addressed	Pg. 4
		(*d*) *Cohort study*—If applicable, explain how loss to follow-up was addressed *Case-control study*—If applicable, explain how matching of cases and controls was addressed *Cross-sectional study*—If applicable, describe analytical methods taking account of sampling strategy	N/A
		(*e*) Describe any sensitivity analyses	N/A
Results			
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed (b) Give reasons for non-participation at each stage (c) Consider use of a flow diagram	Details in Pg. 4-5
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Pg. 4-5 and Table 1
		(b) Indicate number of participants with missing data for each variable of interest	N/A
		(c) *Cohort study*—Summarise follow-up time (eg, average and total amount)	N/A
Outcome data	15*	*Cohort study*—Report numbers of outcome events or summary measures over time	Pg. 5-6
		Case-control study—Report numbers in each exposure category, or summary measures of exposure	N/A

		Cross-sectional study—Report numbers of outcome events or summary measures	N/A
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	Pg. 5-9 + Tables 2-4 + Figure 1
		(*b*) Report category boundaries when continuous variables were categorized	Pg. 5-9
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	N/A
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Pg. 5-9
Discussion			
Key results	18	Summarise key results with reference to study objectives	Pg. 9-10
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Pg. 12
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Pg. 12
Generalisability	21	Discuss the generalisability (external validity) of the study results	Pg. 12
Other information			
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Pg. 13

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Table S2 Inclusion and exclusion criteria.

Inclusion Criteria
● Subject has a history of unilateral or bilateral lung transplant performed at the Norton Thoracic Institute between June 2019 and May 2022, AND ● The subject had at least two documented bronchoalveolar lavage procedures with pepsin A measurement, AND ● The subject had at least one concomitant bronchial biopsy during any of the bronchial lavage procedures with available pathology report, AND ● The subject had a microbiological assessment for bronchoalveolar lavage procedures, AND ● The subject had post-transplant pH monitoring assessment, AND ● The subject is >18 years old.
Exclusion Criteria
● Subjects not meeting the above-mentioned inclusion criteria, OR ● Subjects with missing information related to critical variables of the study, OR ● Subjects with inadequate or incomplete data available according to the investigator's criteria.

Table S3 Classification and absolute frequency of microorganisms isolated from bronchoalveolar lavage samples (n = 116) from lung transplant recipients.

Total microbiological isolations in BAL fluid culture or molecular analysis (n = 116)	
Non-GI-related microorganisms (n = 89)	**GI-related microorganisms (n = 27)**
Bacterial: ● Corynebacterium striatum (n = 1) ● Klebsiella pneumoniae (n = 4) ● Mycobacterium simiae (n = 2) ● Pseudomonas aeruginosa (n = 15) ● Pseudomonas putida (n = 1) ● Serratia marcescens (n = 2) ● Staphylococcus aureus (MSSA) (n = 2) ● Staphylococcus aureus (MRSA) (n = 1) ● Streptococcus pneumoniae (n = 2)	**Bacterial:** ● Enterobacter cloacae (n = 4) ● Enterobacter gergoviae (n = 1) ● Enterococcus faecalis (n = 1) ● Escherichia coli (n = 4) ● Klebsiella oxytoca (n = 2)
Fungal: ● Aspergillus spp. (n = 17) ● Chrysonilia sitophila (n = 1) ● Cladosporium spp. (n = 4) ● Clitopitus spp. (n = 1) ● Fusarium spp. (n = 1) ● Penicillium spp. (n = 14) ● Rhizopus spp. (n = 2) ● Saccharomyces cerevisiae (n = 1) ● Scopulariopsis spp. (n = 1) ● Sporothrix spp. (n = 1)	**Fungal:** ● Candida albicans (n = 4) ● Candida dubliniensis (n = 1) ● Candida glabrata (n = 8) ● Candida lambica (n = 1) ● Candida tropicalis (n = 1)
Viral: ● Adenovirus (n = 2) ● Coronavirus NL63 (n = 4) ● Human metapneumovirus (n = 3) ● Influenza (type B) (n = 1) ● Parainfluenza (type 2) (n = 1) ● Rhinovirus (n = 5)	

Note: This list excludes isolations of the novel SARS-CoV-2.