**Supplementary 1: Comorbidities by body system category**

| **Body system category** | **Comorbidities** |
| --- | --- |
| Digestive system disorder | GERD/reflux esophagitisEsophageal diverticulumEsophageal strictures, rings, and websEosinophilic esophagitisBarrett’s esophagusInfectious esophagitisGastritis or duodenitisFunctional dyspepsiaHelicobacter pylori infectionPeptic ulcer diseaseHiatal herniaParaesophageal herniaGastric volvulusNoninfective gastroenteritis and colitisIrritable bowel syndromeIntestinal pseudo-obstructionChronic constipationCirrhosisEsophageal varicesNonalcoholic fatty liver diseaseChronic viral hepatitisChronic pancreatitis |
| Musculoskeletal or connective tissue systems disorder | PsoriasisSjogren’s syndromeSicca syndromeRheumatoid arthritisVasculitisSystemic lupus erythematosusSystemic sclerosisPolymyalgia rheumaticaConnective tissue disorders, NOSSpondyloarthropathy |
| Nervous system disorder | Extrapyramidal and movement disordersMultiple sclerosisMigraineEpilepsyCerebrovascular disease, TIAs, hemorrhage, and infarctionSleep apneaCervical spine/root disorderThoracic spine/root disorderPolyneuropathyDiseases of myoneural junction and muscleCerebral palsy |
| Mood disorder | DementiaSchizophrenia, schizotypal, and delusional disordersMood, depression, and anxiety disorders |
| Circulatory system disorder | Extrinsic compression from vascular pathologyHypertensionIschemic heart diseasePulmonary hypertensionCardiomyopathy and cardiomegalyCardiac arrhythmias and conduction disordersPeripheral vascular disease |
| Neoplasms | Neoplasm of pharynxNeoplasm of esophagusNeoplasm of respiratory and intrathoracic organsNeoplasm of stomachNeoplasm of abdomen |
| Disorders of the blood, blood-forming organs, and certain disorders involving the immune mechanism | AnemiaSarcoidosisAmyloidosis |
| Endocrine system, metabolic, or nutritional disorder | Disorders of thyroid glandDiabetes mellitusMalnutrition and underweightObesityMorbid obesity |
| Respiratory system disorder | AsthmaChronic lower respiratory disorder, NOS |

GERD, gastroesophageal reflux disease; NOS, not otherwise specified; TIAs, transient ischemic attacks