

Supplementary Material

Table S1. Read codes for connective tissue disease, extrinsic allergic alveolitis, sarcoidosis, pneumoconiosis, or asbestosis.

Read code	Description
M210000	Unspecified circumscribed scleroderma
PGz4.00	Unspecified anomaly of connective tissue
N001.12	Systemic sclerosis
N000400	Systemic lupus erythematosus with pericarditis
N000300	Systemic lupus erythematosus with organ or sys involv
N000z00	Systemic lupus erythematosus NOS
N000.00	Systemic lupus erythematosus
M154700	Subacute cutaneous lupus erythematosus
N002.00	Sicca (Sjogren's) syndrome
N04X.00	Seropositive rheumatoid arthritis, unspecified
N047.00	Seropositive erosive rheumatoid arthritis
N040P00	Seronegative rheumatoid arthritis
N04y111	Seronegative polyarthritis
N04y100	Seronegative arthritis
N001.00	Scleroderma
M210500	Sclerodactyly
N040N00	Rheumatoid vasculitis
N040R00	Rheumatoid nodule
N042200	Rheumatoid nodule
G5y8.00	Rheumatoid myocarditis

Read code	Description
N042100	Rheumatoid lung disease
H570.00	Rheumatoid lung
N04y000	Rheumatoid lung
43F1.00	Rheumatoid factor positive
G5yA.00	Rheumatoid carditis
N040Q00	Rheumatoid bursitis
N042z00	Rheumatoid arthropathy + visceral/systemic involvement NOS
N040700	Rheumatoid arthritis of wrist
N040H00	Rheumatoid arthritis of talonavicular joint
N040G00	Rheumatoid arthritis of subtalar joint
N040200	Rheumatoid arthritis of shoulder
N040C00	Rheumatoid arthritis of sacroiliac joint
N040900	Rheumatoid arthritis of PIP joint of finger
N040J00	Rheumatoid arthritis of other tarsal joint
N040800	Rheumatoid arthritis of MCP joint
N040L00	Rheumatoid arthritis of lesser MTP joint
N040D00	Rheumatoid arthritis of knee
N040B00	Rheumatoid arthritis of hip
N040500	Rheumatoid arthritis of elbow
N040600	Rheumatoid arthritis of distal radio-ulnar joint
N040A00	Rheumatoid arthritis of DIP joint of finger
N040000	Rheumatoid arthritis of cervical spine

Read code	Description
N040F00	Rheumatoid arthritis of ankle
N040400	Rheumatoid arthritis of acromioclavicular joint
N040K00	Rheumatoid arthritis of 1st MTP joint
66HB000	Rheumatoid arthritis annual review
N04..00	Rheumatoid arthritis and other inflammatory polyarthropathy
N040S00	Rheumatoid arthritis - multiple joint
N040.00	Rheumatoid arthritis
66H..13	Rheumatoid arthrit. monitoring
N042000	Rheumatic carditis
N04y300	Remitting seronegative symmetrical synovitis pitting edema
N001000	Progressive systemic sclerosis
F371200	Polyneuropathy in rheumatoid arthritis
F371000	Polyneuropathy in disseminated lupus erythematosus
N231400	Polymyositis ossificans
N004.00	Polymyositis
N003.11	Poikilodermatomyositis
N045600	Pauciarticular onset juvenile chronic arthritis
N043200	Pauciarticular juvenile rheumatoid arthritis
N04yz00	Other specified inflammatory polyarthropathy NOS
N04y.00	Other specified inflammatory polyarthropathy
N00y.00	Other specified diffuse collagen diseases
N042.00	Other rheumatoid arthropathy + visceral/systemic

Read code	Description
	involvement
N040100	Other rheumatoid arthritis of spine
N045.00	Other juvenile arthritis
2G27.00	O/E-hands-rheumatoid spindling
N044.12	Nodular fibrositis of chronic rheumatic disease
K01x400	Nephrotic syndrome in systemic lupus erythematosus
N000500	Neonatal lupus erythematosus
F396600	Myopathy due to scleroderma
F396400	Myopathy due to rheumatoid arthritis
Ny...00	Musculoskeletal or connective tissue diseases OS
Nz...00	Musculoskeletal and connective tissue diseases NOS
N....00	Musculoskeletal and connective tissue diseases
M210300	Morphoea
N043300	Monarticular juvenile rheumatoid arthritis
AD53000	Lupus pernio
K01x411	Lupus nephritis
M154600	Lupus erythematosus unguium mutilans
M154500	Lupus erythematosus tumidus
M154400	Lupus erythematosus profundus
M154z00	Lupus erythematosus NOS
M154300	Lupus erythematosus nodularis
M154200	Lupus erythematosus migrans
M154000	Lupus erythematosus chronicus

Read code	Description
M154.00	Lupus erythematosus
H572.00	Lung disease with systemic sclerosis
H57y400	Lung disease with systemic lupus erythematosus
H57y100	Lung disease with polymyositis
M2V..00	Localized connective tissue disorder, unspecified
M210100	Localised dermatosclerosis
M210400	Linear scleroderma
M210411	Linear morphoea
N000100	Libman-Sacks disease
N002.11	Keratoconjunctivitis sicca
N045100	Juvenile seronegative polyarthritis
N043000	Juvenile rheumatoid arthropathy unspecified
N043z00	Juvenile rheumatoid arthritis NOS
N043.00	Juvenile rheumatoid arthritis - Still's disease
N045500	Juvenile rheumatoid arthritis
N003000	Juvenile dermatomyositis
N045400	Juvenile arthritis in ulcerative colitis
N045200	Juvenile arthritis in psoriasis
N045300	Juvenile arthritis in Crohn's disease
N045000	Juvenile ankylosing spondylitis
N044.11	Jaccoud's syndrome
H58y700	Interstitial lung disease due to connective tissue disease

Read code	Description
N04z.00	Inflammatory polyarthropathy NOS
N04..11	Inflammatory polyarthropathy
14G1.00	H/O: rheumatoid arthritis
N040T00	Flare of rheumatoid arthritis
N04y012	Fibrosing alveolitis associated with rheumatoid arthritis
N00y.11	Fibrosclerosis - systemic
N041.00	Felty's syndrome
F4D3300	Eyelid discoid lupus erythematosus
N00y000	Eosinophilic fasciitis
N000200	Drug-induced systemic lupus erythematosus
N000000	Disseminated lupus erythematosus
38DZ000	Disease activity score 28 joint in rheumatoid arthritis
M154100	Discoid lupus erythematosus
N00..00	Diffuse diseases of connective tissue
N003X00	Dermatopolymyositis, unspecified
N003100	Dermatopolymyositis in neoplastic disease
N003.00	Dermatomyositis
N001100	CREST syndrome
N....11	Connective tissue diseases
N00..11	Collagen diseases
N00z.00	Collagen disease NOS
M210z00	Circumscribed scleroderma NOS

Read code	Description
M210.00	Circumscribed scleroderma
N044.00	Chronic post-rheumatic arthropathy
N000600	Cerebral lupus
N04y011	Caplan's syndrome
N006.00	Antiphospholipid syndrome
N04y200	Adult-onset Still's disease
N005.00	Adult Still's Disease
M210.11	Addison's keloid
N043100	Acute polyarticular juvenile rheumatoid arthritis
N001.11	Acrosclerosis
Nyu4C00	[X]Systemic disorders/connective tissue in other diseases CE
Nyu4.00	[X]Systemic connective tissue disorders
Nyu1G00	[X]Seropositive rheumatoid arthritis, unspecified
Nyu4700	[X]Other systemic diseases of connective tissue
Nyu1200	[X]Other specified rheumatoid arthritis
Myu7900	[X]Other specified localized connective tissue disorders
Nyu1100	[X]Other seropositive rheumatoid arthritis
Myu7800	[X]Other local lupus erythematosus
Nyu1500	[X]Other juvenile arthritis
Nyu4500	[X]Other forms of systemic sclerosis
Nyu4300	[X]Other forms of systemic lupus erythematosus
NyuE.00	[X]Other disord musculoskeletal system and

Read code	Description
	connective tissue
Nyu4400	[X]Other dermatomyositis
Nyu4F00	[X]Mixed connective tissue disease
Myu7F00	[X]Localized connective tissue disorder, unspecified
Nyu1.00	[X]Inflammatory polyarthropathies
Nyu4E00	[X]Dermatopolymyositis, unspecified
AD5..00	Sarcoidosis
AD50.00	Sarcoidosis of lung
AD51.00	Sarcoidosis of lymph nodes
AD52.00	Sarcoidosis of lung with sarcoidosis of lymph nodes
AD53.00	Sarcoidosis of skin
AD53000	Lupus pernio
AD54.00	Sarcoidosis of inferior turbinates
AD55.00	Sarcoid arthropathy
Cyu0600	[X]Sarcoidosis of other and combined sites
F013.00	Meningitis due to sarcoidosis
F326300	Multiple cranial nerve palsies in sarcoidosis
F374900	Polyneuropathy in sarcoidosis
F396500	Myopathy due to sarcoidosis
G558300	Sarcoid heart disease
G5y7.00	Sarcoid myocarditis
H35..00	Extrinsic allergic alveolitis
H35..11	Hypersensitivity pneumonitis

Read code	Description
H350.00	Farmers' lung
H351.00	Bagassosis
H352.00	Bird-fancier's lung
H352000	Budgerigar-fanciers' lung
H352100	Pigeon-fanciers' lung
H352z00	Bird-fancier's lung NOS
H353.00	Suberosis (cork-handlers' lung)
H354.00	Malt workers' lung
H355.00	Mushroom workers' lung
H356.00	Maple bark strippers' lung
H357.00	'Ventilation' pneumonitis
H35y.00	Other allergic alveolitis
H35y000	Cheese-washers' lung
H35y100	Coffee-workers' lung
H35y200	Fish-meal workers' lung
H35y500	Pituitary snuff-takers' disease
H35y600	Sequoiosis (red-cedar asthma)
H35y700	Wood asthma
H35y800	Air-conditioner and humidifier lung
H35yz00	Other allergic alveolitis NOS
H35z.00	Allergic alveolitis and pneumonitis NOS
H35z000	Allergic extrinsic alveolitis NOS
H35z100	Hypersensitivity pneumonitis NOS

Read code	Description
H35zz00	Allergic alveolitis and pneumonitis NOS
H4...00	Lung disease due to external agents
H4...11	Pneumoconioses
H4...12	Occupational lung disease
H40..00	Coal workers' pneumoconiosis
H41..00	Asbestosis
H410.00	Pleural plaque disease due to asbestosis
H410.11	Asbestos-induced pleural plaque
H41z.00	Asbestosis NOS
H42..00	Silica and silicate pneumoconiosis
H420.00	Talc pneumoconiosis
H421.00	Simple silicosis
H422.00	Complicated silicosis
H423.00	Massive silicotic fibrosis
H42z.00	Silica pneumoconiosis NOS
H43..00	Pneumoconiosis due to other inorganic dust
H431.00	Bauxite fibrosis of lung
H432.00	Berylliosis
H433.00	Graphite fibrosis of lung
H434.00	Siderosis
H435.00	Stannosis
H43z.00	Pneumoconiosis due to inorganic dust NOS
H44..00	Pneumopathy due to inhalation of other dust

Read code	Description
H440.00	Byssinosis
H441.00	Cannabinosis
H44z.00	Pneumopathy due to inhalation of other dust NOS
H45..00	Pneumoconiosis NOS
H450.00	Pneumoconiosis associated with tuberculosis
H464200	Chronic pulmonary fibrosis due to chemical fumes
H471.00	Pneumonitis due to inhalation of oil or essence
H471000	Lipoid pneumonia (exogenous)
H471z00	Pneumonitis due to inhalation of oil or essence NOS
H472.00	Asp pneumonitis due to anaesthesia during labour and deliv
H47y.00	Pneumonitis due to inhalation of other solid or liquid
H47y000	Detergent asthma
H47yz00	Pneumonitis due to inhalation of solid or liquid NOS
H47z.00	Pneumonitis due to inhalation of solid or liquid NOS
H48..00	Progressive massive fibrosis
H4y..00	Other specified lung diseases due to external agent
H4y0.00	Acute pulmonary radiation disease
H4y0000	Acute radiation pneumonitis
H4y1.00	Chronic pulmonary radiation disease
H4y1000	Chronic pulmonary fibrosis following radiation
H4y1z00	Chronic pulmonary radiation disease NOS
H4y2.00	Drug-induced interstitial lung disorders

Read code	Description
H4y2000	Acute drug-induced interstitial lung disorders
H4y2100	Chronic drug-induced interstitial lung disorders
H57y200	Pulmonary sarcoidosis
J63A.00	Hepatic granulomas in sarcoidosis
N233200	Myositis in sarcoidosis