

Validation study of algorithms to identify malignant tumors and serious infections in a Japanese administrative healthcare database

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SUPPLEMENTARY INFORMATION

Additional file 1

Supplementary Table S1 ICD-10 codes for identification of “all possible cases” of malignant tumor

Supplementary Table S2 ICD-10 codes for identification of “all possible cases” of serious infection

Supplementary Table S1 ICD-10 codes for identification of “all possible cases” of malignant tumor

Disease/Procedure	ICD-10 code(s) Version 2013	Exceptions
HIV disease resulting in Kaposi sarcoma	B21.0	
HIV disease resulting in Burkitt lymphoma	B21.1	
HIV disease resulting in other types of non-Hodgkin lymphoma	B21.2	
Malignant neoplasms of lip, oral cavity and pharynx	C00-C14	C00.5, C02.3, C02.4, C02.8, C04.8, C05.8, C06.8, C08.8, C09.8, C10.8, C11.8, C13.8, C14.2, C14.8
Malignant neoplasms of digestive organs	C15-C26	C16.8, C17.3, C17.8, C18.8, C21.2, C21.8, C24.8, C26.0, C26.8
Malignant neoplasms of respiratory and intrathoracic organs	C30-C39	C31.8, C32.8, C38.8, C39
Malignant neoplasms of bone and articular cartilage	C40-C41	C40.8, C40.9, C41.8
Melanoma and other malignant neoplasms of skin	C43-C44	C44.8
Malignant neoplasms of mesothelial and soft tissue	C45-C49	C45.7, C46.0-C46.8, C47.8, C48.8, C49.8
Malignant neoplasm of breast	C50	
Malignant neoplasms of female genital organs	C51-C58	C51.8, C54.8, C57.1-C57.8
Malignant neoplasms of male genital organs	C60-C63	C60.8, C63.8
Malignant neoplasms of urinary tract	C64-C68	C67.8, C68.1, C68.8, C68.9
Malignant neoplasms of eye, brain and other parts of CNS	C69-C72	C69.5, C69.8, C69.9, C71.8, C72.2, C72.8
Malignant neoplasms of thyroid and other endocrine glands	C73-C75	C75.8, C75.9
Malignant neoplasms of ill-defined, secondary and unspecified sites	C76-C80	C76.7, C76.8
Malignant neoplasms, stated or presumed to be primary, of lymphoid, hematopoietic and related tissue	C81-C96	C82.5, C84.9, C85.7, C86.4, C88.7, C88.9, C92.6, C92.8, C93.7, C95.7, C96.7, C96.9
In situ neoplasms	D00-D09	D01.5, D01.7, D02.4, D03.2, D03.4, D03.5, D04.8, D05.7, D06.7, D07.6, D09.1, D09.3, D09.7
Neoplasms of uncertain or unknown behaviour	D37-D48	D38.6, D39.9, D40.9, D41.7, D41.9, D43.7, D43.9, D44.2, D44.6, D46.0, D46.7, D47.9
Other histiocytosis syndromes	D76.3	
Other chronic pain	R52.2	
Poisoning by antineoplastic and immunosuppressive drugs	T451	

CNS central nervous system, *HIV* human immunodeficiency virus, *ICD-10* International Statistical Classification of Diseases and Related Health Problems 10th revision

Supplementary Table S2 ICD-10 codes for identification of “all possible cases” of serious infection

Disease/Procedure	ICD-10 code(s), Version 2013	Exceptions
Intestinal infectious diseases	A00-A09	A00.1, A01.2, A01.3, A02.8, A03.2, A03.8, A06.6, A07.0, A07.3
Tuberculosis	A15-A19	A15.3, A15.5, A15.7-A15.9, A16.0, A16.1, A17.1, A17.9, A19.0, A19.1, A19.8
Certain zoonotic bacterial diseases	A20-A28	A20.0-A20.3, A20.7, A20.8, A21.1, A21.7, A21.8, A22.2, A22.8, A23.0-A23.3, A23.8, A24.2-A24.4, A25.0, A26.8, A26.9, A28.9
Other bacterial diseases	A30-A49	A30.0, A30.1, A30.3, A30.8, A32.0, A34, A36.1, A36.2, A37.0, A37.1, A37.8, A39.3, A40.8, A43.8, A44.1, A44.8
Infections with a predominantly sexual mode of transmission	A50-A64	A56.2, A56.8, A60.9, A63.8
Other spirochetal diseases	A65-A69	A66.0, A66.3-A66.9, A67, A68.0, A69.8
Other diseases caused by chlamydiae	A70-A74	A71.0
Rickettsioses	A75-A79	A75.0, A75.1, A77.0, A77.3, A77.9, A79.0
Viral infections of the CNS	A80-A89	A80.0-A80.2, A80.4, A81.9, A82.1, A83.1-A83.3, A83.5, A83.6, A83.8, A83.9, A84, A87.8, A88.8, A89
Arthropod-borne viral fevers & viral hemorrhagic fevers	A90-A99	A92.1-A92.4, A93.0-A93.2, A95, A96, A98.0-A98.4, A98.8
Viral infections characterized by skin & mucous membrane lesions	B00-B09	B04, B05.3, B05.4, B08.8
Viral hepatitis	B15-B19	B16.0, B16.1, B17.0, B18.0, B18.8, B19.0
HIV disease	B20-B24	B20.1, B20.5, B20.7-B20.9, B21.3, B21.7-B21.9, B22.7, B23.1, B23.2
Other viral diseases	B25-B34	B27.8, B33.4
Mycoses	B35-B49	B35, B36.2, B36.3, B38.3, B38.4, B38.7, B38.8, B39.0, B39.3-B39.5, B40.7-B40.9, B41, B42.0, B43.1, B43.8, B45.8, B46.2, B46.8, B48.1, B48.2
Protozoal diseases	B50-B64	B50.8, B51.0, B51.8, B52.0, B52.8, B53.1, B53.8, B55.0, B55.9, B56, B57.0, B57.1, B57.3-B57.5, B60.0, B64
Helminthiases	B65-B83	B65.0, B66.2, B67.1-B67.3, B67.6, B69.0, B69.1, B69.8, B70.1, B71.0, B71.8, B72, B73, B74.1-B74.4, B76.1, B76.8, B77.0, B81.3, B81.8, B83.3, B83.4, B83.9
Pediculosis, acariasis & other infestations	B85-B89	B87.1-B87.3, B87.8, B87.9, B88.2, B88.8
Sequelae of infectious & parasitic diseases	B90-B94	B92, B94.2, B94.8, B94.9
Other infectious diseases	B99	
Hemophagocytic syndrome, infection-associated	D76.2	
Other histiocytosis syndromes	D76.3	
Immunodeficiency following hereditary defective response to Epstein-Barr virus	D82.3	
Thyroiditis	E06.0, E06.1, E06.9	
Inflammatory diseases of the CNS	G00-G06	G01, G02, G03.8, G04.1, G05
Demyelinating diseases of the CNS	G36.0, G37.0, G37.4	
Geniculate ganglionitis	G51.1	
Mononeuritis multiplex	G58.7	
Hereditary and idiopathic neuropathy, unspecified	G60.9	
Polyneuropathy, unspecified	G62.9	
Disorders of eyelid, lacrimal system and orbit	H00-H06	H00.1, H01.1, H01.8, H01.9, H02, H03, H04.1, H04.2, H04.5, H04.6, H04.8, H04.9, H05.2-H05.5, H05.8, H05.9, H06
Disorders of conjunctiva	H10.0, H10.2, H10.4	
Corneal ulcer	H16.0	
Other keratitis	H16.8	
Unspecified keratitis	H16.9	
Other iridocyclitis	H20.8	
Chorioretinal inflammation, unspecified	H30.9	
Other specified retinal disorders	H35.8	
Purulent endophthalmitis	H44.0	
Unspecified disorder of globe	H44.9	
Optic neuritis	H46	
Diseases of external ear	H60-H61	H60.4, H60.5, H60.8, H61.1-H61.3, H61.8, H61.9
Diseases of middle ear and mastoid	H65-H73	H67, H68.1, H69, H70.8, H71, H72, H73.9
Vestibular neuronitis	H81.2	

Labyrinthitis	H83.0	
Disorders of acoustic nerve	H93.3	
Acute rheumatic fever	I00-I01	I01.1, I01.8, I01.9
Other forms of heart disease	I30, I31, I33, I38, I40, I51.4, I51.8,	I31.2, I31.3
Diseases of arteries, arterioles and capillaries	I71.2, I71.4, I72.9, I74.0, I77.6	
Diseases of veins, lymphatic vessels & lymph nodes, NOC	I80.9, I88, I89.1	I88.8
Acute upper respiratory infections	J00-J06	J01.8
Influenza and pneumonia	J09-J18	J10.0, J10.8, J16.8, J17, J18.2
Other acute lower respiratory infections	J20-J22	J20.7, J21.8
Other diseases of upper respiratory tract	J30-J39	J30, J32.8, J33, J34.1-J34.3, J35.3, J35.9, J38.0- J38.6, J39.3, J39.9
Chronic lower respiratory diseases	J40-J44	J41.8, J43, J44.0, J44.1, J44.9
Suppurative & necrotic conditions of lower respiratory tract	J85-J86	
Pleural effusion, NOC	J90	
Diseases of mediastinum, NOC	J98.5	
Disorders of diaphragm	J98.6	
Diseases of oral cavity, salivary glands and jaws	K05.0-K05.3, K05.5, K06.8, K07.6, K10.2, K10.3, K11.2, K11.3, K12.0-K12.3, K13.0, K14.0, K14.2	
Diseases of oesophagus, stomach & duodenum	K20, K22.1, K29.1, K29.7-K29.9, K31.8	
Diseases of appendix	K35.3, K35.8, K36, K37	
Noninfective gastroenteritis & colitis, unspecified	K52.9	
Other diseases of the intestines	K57.1, K57.3, K57.9, K61, K62.6, K62.8	
Peritonitis	K65.0, K65.8, K65.9	
Other inflammatory liver diseases	K75.0, K75.1, K75.9	
Disorders of gallbladder, biliary tract & pancreas	K81.0, K81.1, K81.9, K83.0, K85.0, K85.9	
Other postprocedural disorders of digestive system, NOC	K91.8	
Infections of the skin and subcutaneous tissue	L00-L08	L00, L01.1, L04.1-L04.3, L04.8, L05, L08.1, L08.8
Other dermatitis	L30.3, L30.9	
Pustulosis palmaris et plantaris	L40.3	
Cicatricial alopecia [scarring hair loss]	L66.3, L66.4	
Other follicular disorders	L73.1, L73.2, L73.9	
Other eccrine sweat disorders	L74.8	
Other disorders of the skin and subcutaneous tissue	L89.9, L98.0	
Pyogenic arthritis	M00	M00.8
Spondylopathies	M46.2, M46.3, M46.5, M46.9, M47.2	
Infective myositis	M60.0	
Other soft tissue disorders	M71.1, M72.6, M72.8	
Osteomyelitis	M86	M86.4
Glomerular diseases	N00.9, N01.7, N01.9, N05.9	
Renal tubulo-interstitial diseases	N10, N12, N15.1, N15.9	
Other specified disorders of kidney and ureter	N28.8	
Other diseases of urinary system	N30.2, N30.3, N30.8, N30.9, N32.3, N34.0-N34.2, N36.1, N39.0	
Diseases of male genital organs	N41.0-N41.2, N41.9, N45.0, N45.9, N48.1, N48.2, N49.1, N49.2, N50.0	
Inflammatory disorders of breast	N61	
Inflammatory diseases of female pelvic organs	N70-N77	N73.6, N73.8, N73.9, N74, N75.0, N75.9, N76.8

Infections of genitourinary tract in pregnancy	O23	O23.3
Maternal care for (suspected) damage to fetus from viral disease in mother	O35.3	
Infection of amniotic sac and membranes	O41.1	
Complications predominantly related to the puerperium	O85, O86, O91	O86.8
Other obstetric conditions, NOC	O98.3, O99.5	
Gangrene, NOC	R02	
Pleurisy	R09.1	
Post-traumatic wound infection, NOC	T79.3	
Complications of surgical and medical care, NOC	T81.4, T82.6, T82.7, T83.5, T84.5, T84.6, T84.7, T85.7	

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