

Supplementary Material

Venous Thromboembolism and Risk of Cancer in Patients with Dementia: A Danish Population-Based Cohort Study

Supplementary Table 1. ICD-8 and -10 codes for VTE, dementia, and cancer as well as VTE provoking factors. K codes for surgery are provided according to the Danish version of the NOMESCO Classification of Surgical Procedures

Diagnosis	ICD-8	ICD-10
Deep venous thrombosis	451.00	I80.1-I80.3
Pulmonary embolism	450.99	I26
Dementia	290.10, 290.09, 293.09, 293.19, 094.19, 292.09, 290.11, 290.18, 290.19	F00, G30, F01, F02, F03, F1073, F1173, F1273, F1373, F1473, F1573, F1673, F1773, F1873, F1973, G231, G310, G311, G318B, G318E, G3185
Alzheimer's disease	290.10, 290.09	F00, G30
Cancer		C00-C96 (excluding C44)
<i>VTE provoking factors</i>		
Pregnancy		O00-O99
Trauma/fracture		S00-T14
Surgery		NOMESCO classification of surgical procedures: All K codes (excluding minor procedures): KA-KQ, KX, KY

ICD-8, ICD-10, World Health Organization's International Classification of Diseases, eight and tenth revision; VTE, venous thromboembolism; NOMESCO, Nordic Medico-Statistical Committee

Supplementary Table 2. ICD-8 and -10 codes for conditions in the Charlson Comorbidity Index (CCI) and CCI scores for included conditions.

Diagnosis	ICD-8	ICD-10	Score
Myocardial infarction	410	I21, I22, I23	1
Congestive heart failure	427.09, 427.10, 427.11, 427.19, 428.99, 782.49	I50, I11.0, I13.0, I13.2	1
Peripheral vascular disease	440, 441, 442, 443, 444, 445	I70, I71, I72, I73, I74, I77	1
Cerebrovascular disease	430-438	I60-I69, G45, G46	1
Chronic pulmonary disease	490-493, 515-518	J40-J47, J60-J67, J68.4, J70.1, J70.3, J84.1, J92.0, J96.1, J98.2, J98.3	1
Connective tissue disease	712, 716, 734, 446, 135.99	M05, M06, M08, M09, M30, M31, M32, M33, M34, M35, M36, D86	1
Ulcer disease	530.91, 530.98, 531-534	K22.1, K25-K28	1
Mild liver disease	571, 573.01, 573.04	B18, K70.0-K70.3, K70.9, K71, K73, K74, K76.0	1
Diabetes type 1	249.00, 249.06, 249.07, 249.09, 250.00, 250.06,	E10.0, E10.1, E10.9	1
Diabetes type 2	250.07, 250.09	E11.0, E11.1, E11.9	
Hemiplegia	344	G81, G82	2
Moderate to severe renal disease	403, 404, 580-583, 584, 590.09, 593.19, 753.10-753.19, 792	I12, I13, N00-N05, N07, N11, N14, N17-19, Q61	2
Diabetes with end-organ damage	249.01-249.05, 249.08, 250.01-250.05, 250.08	E10.2-E10.8, E11.2-E11.8	2
Moderate to severe liver disease	070.00, 070.02, 070.04, 070.06, 0	B15.0, B16.0, B16.2, B19.0, K70.4, K72, K76.6, I85	3
AIDS	079.83	B21-B24	6

ICD-8, ICD-10, World Health Organization's International Classification of Diseases, eight and tenth revision

Supplementary Table 3. Classification of cancers as localized, non-localized, and unknown based on Danish Cancer Registry Codes for tumor staging.

Before 2004		2004-			
	DCR code	TNM stage	DCR code - T	DCR code - N	DCR code - M
Localized	0, 1, 2, 5	T1-4,x N0 M0	AZCD13-19	AZCD30	AZCD40
		T1-2 N0 Mx	AZCD13-14	AZCD30	AZCD49
		T1 Nx M0,x	AZCD13-13	AZCD39	AZCD40,49
Non-localized	3, 4, 6, 7	T1-4,x N1-3 M0-1,x	AZCD13-19	AZCD31-33	AZCD40,41,49
		T1-4,x N0 M1	AZCD13-19	AZCD30	AZCD41
		T1-4,x Nx M1	AZCD13-19	AZCD39	AZCD41
Unknown	A, B, 9	T2-4,x Nx M0,x	AZCD14-19	AZCD39	AZCD40, 49
		T3-4,x N0 Mx	AZCD15-19	AZCD30	AZCD49
		T0,a, is, N0-3,x M0-1,x	AZCD10-12	AZCD30-39	AZCD40-41,49

DCR, Danish Cancer Registry; TNM, Union for International Cancer Control Tumor, Nodes and Metastases classification system

Supplementary Figure 1. Construction of study cohort of patients with a first-time venous thromboembolism (VTE) and dementia

Patients with a first-time venous thromboembolism (VTE)

N = 196,241 (111,992 deep vein thrombosis (DVT) and 84,249 pulmonary embolism (PE))

First-time VTE patients diagnosed during study period (1 April 1996 and 31 December 2017)

N = 126,122 (73,755 DVT and 52,367 PE)

First-time VTE patients during study period with dementia

N = 4,374 (2,534 DVT and 1,840 PE)

First-time VTE patients during study period with dementia, with consistent registry track, and cancer-free before index date/study enrolment*

N = 3,552 (2,096 DVT and 1,456 PE)

Of these 1,346 died within first year of follow-up

In total, 2,731 died and less than five emigrated before follow-up ended

*In total, we excluded 772 dementia patients with a cancer diagnosis prior to the VTE. Of these 486 had a cancer diagnosis during the study period, whereas the remaining were excluded due to a cancer diagnosis prior to the study period