On-line Table 1: Dementia diagnoses and related ICD codes for the diagnostic groups[a]

Diagnosis (*N* = 1504)	ICD Code	Patients Scanned with 3T; SWI (%)
Subjective cognitive impairment (*n* = 385)	Z03.2A, Z03.3, and R41.8A	3T: 25%, SWI: 21%
Alcohol-related dementia (*n* = 20)	F10.6, F10.7a	3T: 10%, SWI: 25%
Alzheimer disease (*n* = 423)	F00.0 (early-onset, *n* = 176), F00.1 (late-onset, *n* = 146), F00.2 (atypical disease with vascular components, *n* = 96), F00.9 (unspecified Alzheimer disease, *n* = 5)	3T: 19%, SWI: 15%
Asymptomatic hereditary dementia (*n* = 45)	Z31.5	3T: 73%, SWI: 78%
Frontotemporal lobe dementia (*n* = 30)	F0.70, F02.0	3T: 20%, SWI: 27%
Mild cognitive impairment (*n* = 418)	F06.7	3T: 28%, SWI: 21%
Parkinson dementia (*n* = 21)	F02.3, G31.8a	3T: 38%, SWI: 5%
Unspecified dementia (*n* = 55)	F03.9	3T: 26%, SWI: 31%
Vascular dementia (*n* = 54)	F01.1, F01.2, F01.3, F01.9, and CADASIL (4 patients) based on I63.8	3T: 16%, SWI: 26%
Other disorders (*n* = 53)	Depression, hallucination, delirium, other reactions to severe stress, psychosis, bipolar disease, amnesia, systemic lupus erythematosus, encephalopathy, dysphasia, degenerative diseases in the basal ganglia, hydrocephalus, narcolepsia, Creutzfeldt-Jakob disease, supratentorial epidermoid tumor, cerebral infarctions, anemia, hereditary ataxia, multiple system degeneration and progressive supranuclear palsy	3T: 11%, SWI: 30%

[a] ICD codes not given for other disorders. The percentage of patients scanned with 3T/SWI in the patient groups are shown.

On-line Table 2: Baseline data[a]

Patient Characteristics	Total, Patients (*N* = 1504)	Subjective Cognitive Impairment (*n* = 385)	Alcohol-Related Dementia (*n* = 20)	Alzheimer Disease (*n* = 423)	Asymptomatic Hereditary Dementia (*n* = 45)	Fronto-temporal Lobe Dementia (*n* = 30)	Mild Cognitive Impairment (*n* = 418)	Other Disorders (*n* = 53)	Parkinson Dementia (*n* = 21)	Unspecified Dementia (*n* = 55)	Vascular Dementia (*n* = 54)
Age (mean) (SD)	63 (±10)	57 (±9)	60 (±6)	68 (±8)	52 (±15)	65 (±9)	63 (±9)	64 (±10)	68 (±8)	66 (±10)	66 (±11)
Female (%) (No.)	53 (796)	66 (253)	40 (8)	55 (232)	44 (20)	43 (13)	44 (184)	57 (30)	29 (6)	44 (24)	46 (25)
MMSE (mean) (SD)	25 (±5)	28 (±3)	23 (±6)	22 (±5)	29 (±1)	24 (±6)	26 (±4)	23 (±6)	22 (±3)	22 (±5)	21 (±5)
Diabetes (%) (No.)	10 (148)	8 (31)	10 (2)	6 (27)	2 (1)	7 (2)	12 (50)	17 (9)	0 (0)	18 (10)	30 (16)
Hyperlipidemia (%) (No.)	19 (289)	15 (56)	10 (2)	22 (94)	18 (8)	13 (4)	20 (85)	17 (9)	10 (2)	18 (10)	35 (19)
Hypertension (%) (No.)	36 (543)	23 (90)	55 (11)	36 (151)	33 (15)	27 (8)	43 (180)	38 (20)	24 (5)	46 (25)	70 (38)
CMB prevalence (%) (No.)	22 (332)	11 (41)	40 (8)	28 (118)	13 (6)	17 (5)	21 (89)	19 (10)	24 (5)	33 (18)	59 (32)
Multiple CMBs (%) (No.)	12 (186)	4 (14)	20 (4)	16 (67)	4 (2)	3 (1)	13 (53)	13 (7)	9 (2)	15 (8)	52 (28)
Odds ratio for CMBs (95% CI)		1.0 (ref.)	5.5 (2.1–14.2)[b]	3.2 (2.2–4.7)[b]	1.3 (0.5–3.2)	1.6 (0.6–4.5)	2.2 (1.5–3.3)[b]	2.1 (0.9–4.4)	2.6 (0.9–7.4)	3.1 (1.7–6.0)[b]	10.9 (6.0–19.7)[b]
Adjusted odds ratio for CMBs (95% CI)		1.0 (ref.)	4.0 (1.4–11.2)[c]	2.0 (1.2–3.1)[c]	1.5 (0.5–4.1)	1.2 (0.4–3.4)	1.5 (0.9–2.3)	1.2 (0.5–2.8)	1.7 (0.5–5.7)	2.2 (1.0–4.4)[b]	8.7 (4.1–18.6)[b]

Note:—ref. indicates reference.

[a] Logistic regression analysis was performed with CMBs (dichotomous variable: present/absent) as a dependent variable and diagnosis, with subjective cognitive impairment as a reference, as an independent variable. The model was adjusted for hypertension, hyperlipidemia, diabetes, sex, age, MRI field strength, and CMB sequence. All significance levels presented have been post hoc Bonferroni-corrected.

[b] $P < .001$.

[c] $P < .01$.

On-line Table 3: The distribution of patients with CMBs in the different topographies[a]

Topography of CMBs	Whole Cohort (*n* = 332)	Subjective Cognitive Impairment (*n* = 41)	Alcohol-Related Dementia (*n* = 8)	Alzheimer Disease (*n* = 118)	Asymptomatic Hereditary Dementia (*n* = 6)	Fronto-temporal Lobe Dementia (*n* = 5)	Mild Cognitive Impairment (*n* = 89)	Other Disorders (*n* = 10)	Parkinson Dementia (*n* = 5)	Unspecified Dementia (*n* = 18)	Vascular Dementia (*n* = 32)
Infratentorial (%) (No.)	30 (100)	22 (9)	25 (2)	28 (33)	17 (1)	20 (1)	33 (29)	20 (2)	20 (1)	33 (6)	50 (16)
Deep (%) (No.)	27 (91)	20 (8)	25 (2)	23 (27)	17 (1)	20 (1)	29 (26)	30 (3)	20 (1)	28 (5)	53 (17)
Strictly deep and/or infratentorial (%) (No.)	16 (52)	22 (9)	13 (1)	15 (18)	33 (2)	20 (1)	15 (13)	0 (0)	0 (0)	28 (5)	9 (3)
Lobar (%) (No.)	84 (280)	78 (32)	88 (7)	83 (98)	67 (4)	80 (4)	87 (77)	100 (10)	100 (5)	78 (14)	91 (29)
Strictly lobar (%) (No.)	56 (185)	63 (26)	50 (4)	57 (67)	67 (4)	60 (3)	51 (45)	70 (7)	60 (3)	56 (10)	34 (11)
Cerebellum (%) (No.)	26 (87)	17 (7)	25 (2)	24 (28)	17 (1)	20 (1)	28 (25)	30 (3)	0 (0)	33 (6)	44 (14)
Brain stem (%) (No.)	8 (28)	7 (3)	25 (2)	3 (4)	0 (0)	0 (0)	12 (11)	0 (0)	20 (1)	0 (0)	22 (7)
Frontal lobe (%) (No.)	39 (130)	27 (11)	25 (2)	38 (45)	0 (0)	40 (2)	38 (34)	50 (5)	40 (2)	44 (8)	66 (21)
Temporal lobe (%) (No.)	30 (100)	17 (7)	25 (2)	31 (37)	0 (0)	0 (0)	31 (28)	30 (3)	20 (1)	17 (3)	59 (19)
Occipital lobe (%) (No.)	43 (143)	29 (12)	63 (5)	46 (54)	67 (4)	40 (2)	37 (33)	50 (5)	0 (0)	44 (8)	63 (20)
Parietal lobe (%) (No.)	40 (132)	27 (11)	25 (2)	44 (52)	17 (1)	0 (0)	37 (33)	50 (5)	40 (2)	33 (6)	63 (20)

[a] This table represents the number of patients with CMBs in the different topographies. Values are given for first the crude topographies in the Microbleed Anatomical Rating Scale and then more detailed topographies. "Strictly lobar" CMBs denote CMBs in only lobar regions. "Strictly deep and/or infratentorial" CMBs denote CMBs only in deep and/or infratentorial regions. $n = 332$ represents all patients with CMBs in the cohort.

On-line Table 4: Impact of risk factors on CMB prevalence in the different dementia diagnoses[a]

	Clinical Parameters	Whole Cohort (*n* = 1504)	Subjective Cognitive Impairment (*n* = 385)	Alcohol-Related Dementia (*n* = 20)	Alzheimer Disease (*n* = 423)	Asymptomatic Hereditary Dementia (*n* = 45)	Fronto-temporal Lobe Dementia (*n* = 30)	Mild Cognitive Impairment (*n* = 418)	Other Disorders (*n* = 53)	Parkinson Dementia (*n* = 21)	Unspecified Dementia (*n* = 55)	Vascular Dementia (*n* = 54)
Prevalence of CMBs (%) (No.)	Hypertension +	29 (156)[b]	19 (17)[c]	46 (5)	29 (44)	13 (2)	25 (2)	27 (48)[d]	25 (5)	20 (1)	40 (10)	58 (22)
	Hypertension −	18 (175)[b]	8 (24)[c]	33 (3)	27 (73)	14 (4)	14 (3)	17 (41)[d]	15 (5)	25 (4)	27 (8)	63 (10)
Prevalence of CMBs (%) (No.)	Hyperlipidemia +	27 (79)[d]	18 (10)	50 (1)	27 (25)	0 (0)	25 (1)	32 (27)[c]	22 (2)	0 (0)	40 (4)	47 (9)
	Hyperlipidemia −	21 (252)[d]	9 (31)	39 (7)	28 (92)	17 (6)	15 (5)	19 (62)[c]	18 (8)	26 (5)	31 (14)	66 (23)
Prevalence of CMBs (%) (No.)	Diabetes +	28 (41)	13 (4)	50 (1)	33 (9)	0 (0)	0 (0)	24 (12)	22 (2)	5 (24)	50 (5)	50 (8)
	Diabetes −	21 (290)	11 (37)	39 (7)	27 (108)	14 (6)	18 (5)	21 (77)	18 (8)	0 (0)	29 (13)	63 (24)
Prevalence of CMBs (%) (No.)	Male +	29 (204)[b]	12 (16)	58 (7)	35 (66)[c]	20 (5)	17 (3)	27 (63)[c]	26 (6)	27 (4)	39 (12)	76 (22)[c]
	Male −	16 (128)[b]	10 (25)	13 (1)	22 (52)[c]	5 (1)	15 (2)	14 (26)[c]	13 (4)	17 (1)	25 (6)	40 (10)[c]
Prevalence of CMBs (%) (No.)	Age ≥65	30 (172)[b]	12 (7)	0 (0)	33 (86)[c]	11 (1)	31 (5)[c]	29 (44)[c]	21 (5)	25 (3)	35 (8)	59 (13)
	Age <65	17 (160)[b]	11 (34)	42 (0)	20 (32)[c]	14 (5)	0 (0)[c]	17 (45)[c]	17 (5)	22 (2)	31 (10)	59 (19)
Prevalence of CMBs (%) (No.)	MMSE ≥ 21	22 (258)	11 (38)	36 (5)	30 (81)	12 (4)	17 (3)	22 (81)	27 (8)	33 (5)	41 (14)	61 (19)
	MMSE < 21	23 (56)	9 (1)	40 (2)	24 (32)	0 (0)	20 (1)	14 (4)	11 (2)	0 (0)	19 (3)	61 (11)

Note:—+ indicates presence of clinical parameter; −, absence of clinical parameter.

[a] The prevalence of CMBs in the different diagnoses and for the different risk factors was analyzed with χ^2 and Fischer exact tests. Values are given as prevalence of CMBs (number of patients) (%, No.) for the presence and absence of each risk factor. Significance levels before and after Bonferroni correction are given.

[b] $P < .001$, significant after Bonferroni correction.

[c] $P < .05$, significant after Bonferroni correction.

[d] $P < .05$, significant before Bonferroni correction.

On-line Table 5: Number of CMBs and risk factors[a]

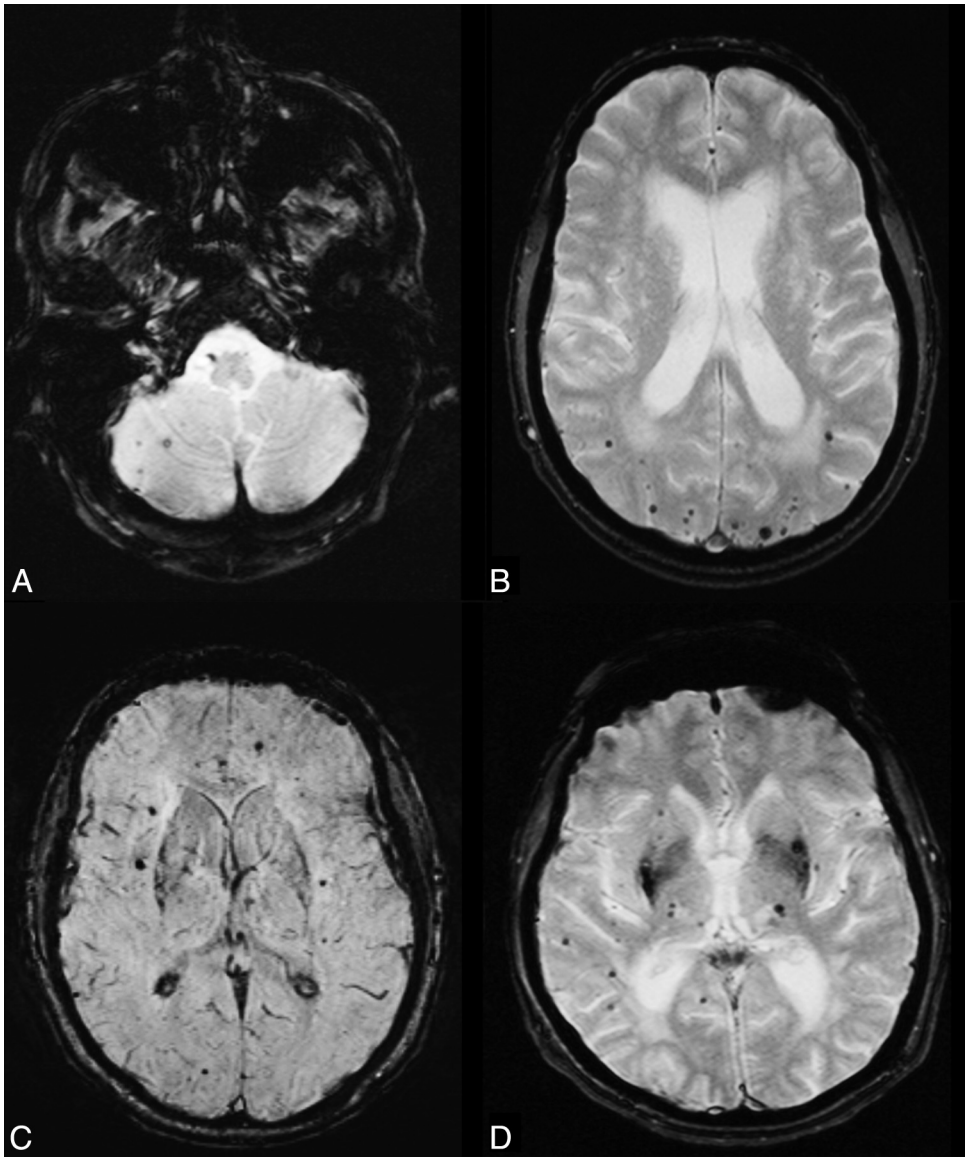
Clinical Parameters	Topography	Total, All Patients (*n* = 1504)	Subjective Cognitive Impairment (*n* = 385)	Alzheimer Disease (*n* = 423)	Mild Cognitive Impairment (*n* = 418)	Vascular Dementia (*n* = 54)
Hypertension	–	1.01 (0.9–1.2)[b]	1.4 (0.9–1.9)[b]	0.13 (−0.2–0.4)	0.20 (−0.9–0.4)	0.76 (0.0–1.5)
Hyperlipidemia	–	−0.37 (−0.5 to −0.2)[b]	−0.30 (−1.0–0.4)	0.13 (−0.2–0.5)	0.66 (0.3–1.0)[b]	−1.54 (−2.3 to −0.8)[b]
Diabetes	–	−0.93 (−1.2 to −0.7)[b]	−0.86 (−1.8–0.1)[b]	−0.26 (−0.8–0.3)[a]	−2.05 (−2.6 to −1.5)[b]	−1.20 (−2.0 to −0.3)[c]
Male sex	–	1.32 (1.1–1.5)[b]	0.14 (−0.3–0.6)	1.52 (1.3–1.8)[b]	1.67 (1.4–2.0)[b]	1.82 (1.0–2.6)[b]
Age (yr)	–	0.04 (0.0–0.1)[b]	−0.25 (−0.3–0.0)	0.05 (0.0–0.1)[b]	0.05 (0.0–0.1)[b]	−0.01 (−0.4–0.0)
MMSE	–	0.01 (0.0–0.0)	−0.04 (−0.1–0.0)	0.06 (0.0–0.1)[b]	0.15 (0.1–0.2)[b]	−0.05 (−0.1–0.0)
Hypertension	Infratentorial and/or deep	1.17 (0.9–1.4)[b]	1.72 (0.8–2.6)	1.17 (0.7–1.7)[b]	1.7 (1.2–2.3)[b]	−0.56 (−1.6–0.5)
	Lobar	0.24 (0.1–0.4)[c]	1.00 (0.4–1.7)[c]	−0.08 (−0.4–0.2)	0.03 (−0.3–0.4)	0.9 (0.1–1.7)
Hyperlipidemia	Infratentorial and/or deep	−0.60 (−0.9–0.3)[b]	−0.64 (−2.1–0.8)	0.12 (−0.4–0.7)	−0.18 (−0.7–0.3)	−1.97 (−2.0–0.0)
	Lobar	−0.10 (−0.3–0.1)	0.10 (−0.8–1.0)	−0.00 (−0.3–0.3)	0.08 (−0.3–0.5)	−0.94 (−1.7 to −0.2)
Diabetes	Infratentorial and/or deep	−0.23 (−0.6–0.14)	−0.57 (−2.8–1.6)	−1.16 (−2.3 to −0.2)	−1.69 (−2.8 to −0.6)[c]	0.14 (−0.9–1.2)
	Lobar	−0.25 (−0.5–0.0)	0.07 (−1.0–1.2)	0.22 (−0.3–0.7)	−0.90 (−1.5–0.3)[b]	−0.60 (−1.5–0.3)
Male sex	Infratentorial and/or deep	0.57 (0.3–0.8)[ab]	0.28 (−1.3–0.7)	0.29 (−0.2–0.8)	0.81 (0.3–1.3)[c]	1.82 (0.8–2.9)[b]
	Lobar	0.90 (0.7–1.0)[b]	0.36 (−0.3–1.0)	0.97 (0.7–1.2)[b]	1.06 (0.7–1.4)[b]	0.56 (−0.2–1.3)
Age (yr)	Infratentorial and/or deep	0.04 (0.0–0.1)[b]	0.02 (−0.0–0.1)	0.01 (−.0–0.0)	0.06 (0.0–0.1)[b]	0.04 (0.0–0.1)
	Lobar	0.04 (0.0–0.1)[b]	0.06 (0.0–0.1)	0.03 (0.0–0.1)[c]	0.05 (0.0–0.1)[b]	−0.03 (−0.1–0.0)
MMSE	Infratentorial and/or deep	−0.10 (−0.4–0.1)	−0.15 (−0.3 to −0.1)	−0.00 (−0.1–0.0)	0.13 (0.0–0.2)	−0.07 (−0.2–0.1)
	Lobar	−0.01 (−0.0–0.0)	0.03 (−0.1–0.1)	0.03 (0.0–0.6)	−0.06 (−0.1–0.0)	−0.06 (−0.1–0.0)

Note:— – indicates all regions.

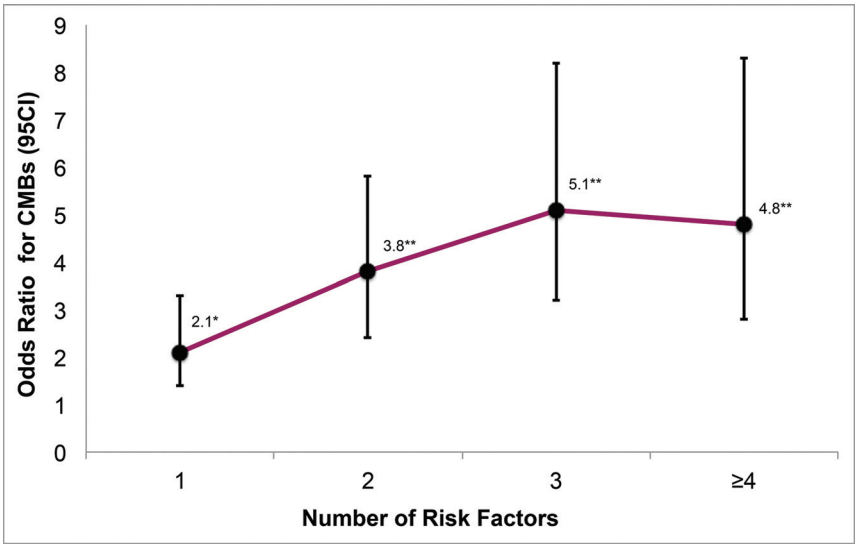
[a] A multivariate negative binomial regression analysis was constructed with number of CMBs/number of CMBs in the topographies as a dependent variable. Hypertension, hyperlipidemia, diabetes, male sex, age, and MMSE score were set as independent variables. The model was adjusted for MRI field strength and CMB sequence. All independent variables were included in the model at once (in order to adjust for covariability) except for the MMSE score, which only was entered in the model with all other independent variables when it was analyzed (in order not to lose power; ie, MMSE score available for 1416 patients). Values are given as the regression coefficient B, and 95% confidence intervals. Only the 4 largest diagnoses with the most CMBs were included in this analysis. All significance levels presented have been post hoc Bonferroni-corrected.

[b] $P < .001$.

[c] $P < .05$.



ON-LINE FIG 1. Examples of CMBs in the 4 groups with the highest CMB prevalence. The hypointense dots represent CMBs. *A*, Alcohol-related dementia, T2*. *B*, Alzheimer's disease, T2*. *C*, Unspecified dementia, SWI. *D*, Vascular dementia, T2*.



ON-LINE FIG 2. Impact of the number of risk factors on the odds ratios for developing CMBs in the whole patient group. Risk factors are the following: hypertension, hyperlipidemia, diabetes, male sex, and age 65 years and older. The model is corrected for MRI field strength (1.5/3T) and CMB sequence (T2*/SWI). Patients with zero risk factors are used as references. All patients are included in this diagram ($n = 1504$). Error bars show 95% confidence intervals. All results presented have been post hoc Bonferroni-adjusted. Asterisk indicates $P < .05$; double asterisks, $P < .001$.