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Supplementary Data

Using *Alzgene*-Like Approaches to Investigate Susceptibility Genes for Vascular Cognitive Impairment

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Supplementary Table 1
Details of papers meeting the inclusion criteria, with diagnostic criteria and associated demographic information

Author reference	Ethnicity	Polymorphisms	Case subgroup	Criteria for VaD or VCI	Selection characteristics of cases
[8]	Asian	ACE rs1799752	VaD	NINDS-AIREN	$n = 41$, 74.3 y ± 7.2, no gender split provided
[25]	Asian	ACE rs1799752	VaD	NINDS-AIREN	$n = 207$, 66.7 y ± 10.4, 46.4% female
[28]	Caucasian	ACE rs1799752	VaD	DSM-IV	$n = 155$, 74.0 y ± 8.6, 58.7% female
[32]	Asian	ACE rs1799752	VaD	NINDS-AIREN	$n = 62$, 74.7 y ± 7.1, 29.0% female
[33]	Asian	ACE rs1799752	VaD	DSM-IV	$n = 94$, 65.3 y ± 8.1, 37.2% female
[45]	Caucasian	ACE rs1799752	VaD	NINDS-AIREN	$n = 12$, 71 y ± 14, 58.3% female
[48]	Asian	ACE rs1799752	VaD	NINDS-AIREN	$n = 80$, 64.16 y ± 10.02, no gender split provided
[54]	Caucasian	ACE rs1799752	VaD	NINDS-AIREN	$n = 53$, 77.3% female
[69]	Caucasian	ACE rs1799752	VaD	NINDS-AIREN	$n = 60$, 81.1 y ± 0.8, 54% female
[27]	Caucasian	ACT rs4934	Post stroke	DSM-IV	$n = 26$, 73.6 y ± 9.9, 42.3% female
[51]	Caucasian	ACT rs4934	VaD	DSM-III-R	$n = 68$, 69.1% female
[51]	Caucasian	ACT rs4934	Mixed	DSM-III-R	$n = 18$, 50.0% female
[1]	Asian	APOE rs429358	VaD	Not given	$n = 53$, 73.3 y ± 7.54, 45.0% female
[2]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 68$, 74 y ± 8, 47.1% female
[2]	Asian	APOE rs429358	Mixed	NINDS-AIREN	$n = 18$, 81 y ± 5, 61.1% female
[3]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 144$, 78.0 y ± 8.7, 61.1% female
[4]	Asian	APOE rs429358	VCI	MMSE <24	$n = 51$, 74.6 y ± 10.1, 66.7% female
[5]	Caucasian	APOE rs429358	VaD	DSM-III-R, HIS	$n = 8$, 75–97, 50% female
[5]	Caucasian	APOE rs429358	Mixed	DSM-III-R, HIS	$n = 3$, 75–97, 100% female
[6]	Asian	APOE rs429358	Mixed and VaD	ICD-10	$n = 31$, 68.5 ± 9.7, 39% female
[7]	Asian	APOE rs429358	VaD	DSM-IV	$n = 7$, No age or gender split provided
[7]	Asian	APOE rs429358	Mixed	DSM-IV	$n = 3$, No age or gender split provided
[8]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 41$, 74.3 y ± 7.2, no gender split provided
[10]	Caucasian	APOE rs429358	VaD	NINDS-AIREN	$n = 89$, males 71.9 y ± 7.3, females 74.0 y ± 7.6, 48% female
[11]	Caucasian	APOE rs429358	VaD	ICD-10, NINDS-AIREN	$n = 96$, 75.3 ± 9.8, 61% female
[12]	Caucasian	APOE rs429358	VaD	Autopsy confirmed	$n = 12$, 78.9 y ± 9.4, 50% female
[14]	Caucasian	APOE rs429358	VaD	DSM-III-R	$n = 29$, 76 y ± 5, 59% female
[15]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 55$, 78 y ± 8, 63.6% female
[15]	Asian	APOE rs429358	Binswanger disease	NINDS-AIREN	$n = 16$, 77 y ± 7, 50.0% female
[16]	Caucasian	APOE rs429358	VaD	ICD-10	$n = 60$, 75.6 y, 56.7% female
[17]	Asian	APOE rs429358	VaD	DSM-IV	$n = 70$, 74.7 y ± 7.5, no gender split provided
[17]	Asian	APOE rs429358	Mixed	DSM-IV and CT	$n = 27$, 77.1 y ± 7.6, no gender split provided
[18]	Asian	APOE rs429358	VaD	DSM-IV	$n = 20$, 75.9 y ± 6.9, 75% female
[19]	Asian	APOE rs429358	VaD	DSM-III-R	$n = 19$, 74.3 y ± 7.1, gender split not provided
[20]	Caucasian	APOE rs429358	VaD	NINDS-AIREN	$n = 55$, 72.9 y ± 10.8, 58.2% female

Supplementary Table 1
(*Continued*)

Author reference	Ethnicity	Polymorphisms	Case subgroup	Criteria for VaD or VCI	Selection characteristics of cases
[21]	Asian	APOE rs429358	VaD	DSM-III-R	$n = 87$, 75.5 y ± 8.0, no gender split provided
[22]	Caucasian	APOE rs429358	VaD	NINDS-AIREN	$n = 34$, 73.5 y ± 7.41, 61.8% female
[23]	Asian	APOE rs429358	VaD	DSM-III	$n = 27$, 66.7% female
[23]	Asian	APOE rs429358	Mixed	DSM-III	$n = 72$, 68.1% female
[24]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 19$, 74.5 y ± 6.9, no gender split
[26]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 100$, 73.55 y ± 7.64, 45% female
[29]	Caucasian	APOE rs429358	Mixed	ICD-10	$n = 62$, No age or gender split provided
[30]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 30$, 66.2 y ± 8.2, 33% female
[31]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 49$, 68.67 y ± 7.60, 28.6% female
[34]	Asian	APOE rs429358	VaD	NINDS-AIREN	n=25, 65.3 y ± 9.0, gender split not provided
[35]	Asian	APOE rs429358	VaD	DSM-IV, NINDS-AIREN	$n = 46$, 66.1 y ± 8.8, 26% female
[37]	Other/Mixed	APOE rs429358	VaD	DSM-IV	$n = 49$, 84.5 y ± 7.3, 75.5% female
[39]	Caucasian	APOE rs429358	VaD	NINDS-AIREN	$n = 78$, 77.3 y ± 9.3, 67% female
[40]	Other/Mixed	APOE rs429358	VaD	ADDTC	$n = 34$, 77.2 y ± 8.5, 64.7% female
[41]	Other/Mixed	APOE rs429358	Dementia with stroke	DSM-IIIR, NINDS-AIREN	$n = 61$, 75.9 y ± 6.9, 74% female
[42]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 45$, 75.4 y ± 8.0, 51.1% female
[43]	Asian	APOE rs429358	Mixed	DSM-III-R	$n = 8$, 75.5 y ± 9.96, no gender split provided
[43]	Asian	APOE rs429358	VaD	DSM-III-R	$n = 35$, 81.3 y ± 6.41, no gender split provided
[44]	Caucasian	APOE rs429358	VaD	NINDS-AIREN	$n = 12$, 71 y ± 14, 58% female
[46]	Asian	APOE rs429358	VaD	DSM-IV	$n = 55$, 63.56 y ± 9.35, 20% female
[47]	Asian	APOE rs429358	VaD	DSM-IV	$n = 70$, no gender split provided
[48]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 80$, 64.16 y ± 10.02, no gender split provided
[49]	Caucasian	APOE rs429358	VaD	NINDS-AIREN	$n = 40$, 76.1 y ± 12.4, 68% female
[51]	Caucasian	APOE rs429358	VaD	DSM-III-R	$n = 68$, 69.1% female
[51]	Caucasian	APOE rs429358	Mixed	DSM-III-R	$n = 18$, 50% female
[52]	Asian	APOE rs429358	Subcortical vascular dementia (Binswanger type and lacunar type)	DSM-IV, Erkinjuntti 2000 modified NINDS-AIREN	$n = 61$, 75.05 ± 5.46, 72% female
[53]	Asian	APOE rs429358	VaD	DSM-III-R	$n = 96$, 78.6 y ± 8.2
[55]	Caucasian	APOE rs429358	VCI	DSM-III-R	$n = 44$, 85 y, no gender split provided
[56]	Other/Mixed	APOE rs429358	VaD	DSM-IIIR, ICD-10, NINDS-AIREN	$n = 90$, 79.1 ± 8.1, 68% female
[56]	Other/Mixed	APOE rs429358	Dementia with stroke	DSM-IIIR, ICD-10	$n = 187$, 80.1 ± 7.6, 73% female
[56]	Other/Mixed	APOE rs429358	Mixed AD and CVD	DSM-IIIR, ICD-10, NINCDS-ADRDA	$n = 70$, 80.2 ± 7.1, 77% female
[57]	Caucasian	APOE rs429358	VaD	DSM-III-R	$n = 13$, 70 to 89 y, 0% female
[58]	Caucasian	APOE rs429358	VaD	NINDS-AIREN	$n = 48$, 89.1 y ± 3.2, 87.5% female
[60]	Caucasian	APOE rs429358	White Matter	CT and MRI	$n = 315$, 68.8 y ± 14.2, 45.4% female
[61]	Caucasian	APOE rs429358	VaD	DSM-IV and NINDS-AIREN	$n = 45$, 81.1 y ± 6.2, 62.2% female
[61]	Caucasian	APOE rs429358	Mixed	NINCDS-ADRDA and CT/MRI	$n = 62$, 82.2 y ± 6.2, 77.4% female

Supplementary Table 1
(*Continued*)

Author reference	Ethnicity	Polymorphisms	Case subgroup	Criteria for VaD or VCI	Selection characteristics of cases
[62]	Asian	APOE rs429358	VaD	DSM-III-R	$n = 74$, 72 y ± 8, 24% female
[63]	Asian	APOE rs429358	VaD	Not given	$n = 60$, No age or gender split provided
[66]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 124$, 71.0 y ± 9.0, no gender split
[68]	Asian	APOE rs429358	VaD	NINDS-AIREN	$n = 60$, 72.8 y ± 7.1, 81.7% female
[8]	Asian	MTHFR rs1801133	VaD	NINDS-AIREN	$n = 41$, 74.3 y ± 7.2, no gender split provided
[36]	Asian	MTHFR rs1801133	VaD	NINDS-AIREN VaD	$n = 50$, 65.4 y ± 9.1, 26% female
[39]	Caucasian	MTHFR rs1801133	VaD	NINDS-AIREN	$n = 76$, 77.3 y ± 9.3, 67% female
[43]	Asian	MTHFR rs1801133	VaD	DSM-III-R	$n = 35$, 81.3 y ± 6.41, no gender split provided
[43]	Asian	MTHFR rs1801133	Mixed	DSM-III-R	$n = 8$, 75.5 y ± 9.96, no gender split provided
[48]	Asian	MTHFR rs1801133	VaD	NINDS-AIREN	$n = 80$, 64.16 y ± 10.02, no gender split provided
[50]	Asian	MTHFR rs1801133	VaD	DSM-IV	$n = 85$,84 y ± 6.3, 61.2% female
[59]	Asian	MTHFR rs1801133	VaD	NINDS-AIREN and ADDTC	$n = 52$, 68.41 y ± 9.82, 47% female
[65]	Asian	MTHFR rs1801133	VaD	ICD-10	$n = 29$, 80.38 y ± 10.06, 28% female
[67]	Asian	MTHFR rs1801133	VaD	NINDS-AIREN	$n = 143$, 75.6 y ± 8.6, 62% female
[69]	Caucasian	MTHFR rs1801133	VaD	NINDS-AIREN	$n = 60$, 81.1 y ± 0.8, 54% female
[4]	Asian	PON1 rs662	VCI	MMSE	$n = 51$, 74.6 y ± 10.1, 66.7% female
[9]	Caucasian	PON1 rs662	VaD	DSM-IV, NINDS-AIREN	$n = 27$, 79.8 ± 6.6, 59% female
[13]	Caucasian	PON1 rs662	VaD	DSM-III-R, ICD-9	$n = 24$, 85 ± 8, 81.1% female
[13]	Caucasian	PON1 rs662	Mixed and VaD	DSM-III-R, ICD-9	$n = 90$, Not given
[69]	Caucasian	PON1 rs662	VaD	NINDS-AIREN	$n = 60$, 81.1 y ± 0.8, 54% female
[38]	Asian	PSEN-1 rs165932	VaD	NINDS-AIREN	$n = 87$, 78 y, no gender split provided
[46]	Asian	PSEN-1 rs165932	VaD	DSM-IV	$n = 55$, 63.56 y ± 9.35, 20% female
[51]	Caucasian	PSEN-1 rs165932	VaD	DSM-III-R	$n = 68$, 69.1% female
[51]	Caucasian	PSEN-1 rs165932	Mixed	DSM-III-R	$n = 18$, 50% female
[64]	Asian	PSEN-1 rs165932	Multi-infarct	DSM-III-R	$n = 50$, 69.2 y ± 8.6, no gender split provided

ADDTC, State of California's AD Diagnostic and Treatment Centers for VaD; CT, computed tomography; CVD, cerebrovascular disease; DSM, Diagnostic and Statistical Manual of Mental Disorders; HIS, Hachinski Ischemic Score; ICD, International Statistical Classification of Diseases and Related Health Problems; MMSE, Mini-Mental Status Exam; MRI, magnetic resonance imaging; NINDS-AIREN, National Institute of Neurological Disorders and Stroke-Association Internationale pour la Recherche et l'Enseignement en Neurosciences; VaD, vascular dementia; VCI, vascular cognitive impairment; y, year.

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