

Supplementary material

Supplementary Table 1. Scanner characteristics of the retrospective POE and EC cohorts

Site and ID	Scanner type	Series Description	Field strength	Slice thickness (mm)	Repetition Time (ms)	Echo Time (ms)
<u>AH</u>						
POE 1	GE Genesis Signa	T1 SPGR	1.5T	1.5	17.70	3.36
POE 2	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	4.12
POE 3	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	3.37
POE 4	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	3.37
POE 5	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	3.37
POE 6	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	3.37
POE 7	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	3.37
POE 8	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	3.37
POE 9	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	21.60	3.03
POE 10	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	3.37
EC 1	GE Genesis Signa	T1 SPGR	1.5 T	1.5	17.80	3.39
EC 2	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	19.00	2.60
EC 3	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	21.60	3.02
EC 4	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	21.80	2.92

EC 5	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	19.00	2.60
EC 6	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	3.37
EC 7	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	3.37
EC 8	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	15.30	3.24
EC 9	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	21.60	3.03
EC 10	Siemens Avanto	T1 MPRAGE	1.5 T	1.5	22.00	2.50

RMH

POE 1	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20
POE 2	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	14.70	3.70
POE 3	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20
POE 4	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	8.90	1.82
POE 5	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	14.20	3.20
POE 6	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	13.90	3.10
POE 7	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	14.30	3.30
POE 8	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	14.50	3.70
POE 9	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.20	2.10
POE 10	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.10	2.00
POE 11	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	12.70	2.10
POE 12	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	14.70	3.70
POE 13	GE Genesis Signa	T1 FSPGR	1.5 T	1.4	9.93	4.11

EC 1	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	8.90	1.82
EC 2	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20
EC 3	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20
EC 4	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	14.10	3.50
EC 5	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.10	2.00
EC 6	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20
EC 7	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	14.50	3.50
EC 8	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20
EC 9	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20
EC 10	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20
EC 11	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20
EC 12	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20
EC 13	GE Genesis Signa	T1 FSPGR	1.5 T	1.5	11.30	2.20

SVHM

	Siemens Magnetom					
POE 1	Vision	T1 MPRAGE	1.5 T	1.0	9.70	9.70
POE 2	Siemens Avanto	T1 MPRAGE	1.5 T	1.4	15.30	3.24
	Siemens Magnetom					
POE 3	Vision	T1 MPRAGE	1.5 T	1.0	9.70	4.00
POE 4	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13

POE 5	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
POE 6	Siemens Skryra	T1 MPRAGE	3 T	1.0	22.00	2.48
POE 7	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
POE 8	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
POE 9	Siemens Avanto	T1 MPRAGE	1.5 T	1.0	21.30	2.73
POE 10	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
POE 11	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
	Siemens Magnetom					
POE 12	Vision	T1 MPRAGE	1.5 T	1.4	9.70	4.00
POE 13	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
POE 14	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
POE 15	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
	Siemens Magnetom					
EC 1	Vision	T1 MPRAGE	1.5 T	1.0	9.70	9.70
EC 2	Siemens Avanto	T1 MPRAGE	1.5 T	1.0	11.00	4.94
	Siemens Magnetom					
EC 3	Vision	T1 MPRAGE	1.5 T	1.0	9.70	4.00
EC 4	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	3.24
EC 5	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	9.70	4.00
EC 6	Siemens Skryra	T1 MPRAGE	3 T	1.0	15.30	4.13
EC 7	Siemens Symphony	T1 MPRAGE	1.5	1.4	15.30	4.13

EC 8	Siemens Symphony	T1 MPRAGE	1.5 T	1	22.00	1.97
EC 9	Siemens Avanto	T1 MPRAGE	1.5 T	1.0	21.30	2.73
EC 10	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
EC 11	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
	Siemens Magnetom					
EC 12	Vision	T1 MPRAGE	1.5 T	1.4	9.70	4.00
EC 13	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	4.13
EC 14	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	15.30	3.24
EC 15	Siemens Symphony	T1 MPRAGE	1.5 T	1.4	22.00	2.03

Note, POE = psychosis of epilepsy; EC = non-psychotic epilepsy controls; AH = Austin Health, RMH = Royal Melbourne Hospital, SVHM = St Vincent's Hospital Melbourne. MPRAGE = magnetization-prepared rapid gradient echo, SPGR = spoiled gradient echo, FSPGR = fast spoiled gradient echo.

Supplementary Table 2. Mean hippocampal body and tail volumes in TLE, ETLE, and GGE POE participants

	POE subgroup	N	Mean (mm³)	SD
Left Total	TLE	33	2866	606.63
	ETLE	9	3043	506.29
	GGE	4	2690	194.63
Left Head	TLE	33	1428	369.03
	ETLE	9	1538	356.33
	GGE	4	1362	239.35
Left Body	TLE	33	1184	238.16
	ETLE	9	1284	282.71
	GGE	4	1082	24.64
Left Tail	TLE	33	252	131.14
	ETLE	9	220	131.88
	GGE	4	246	84.39
Right Total	TLE	31	2980	538.08
	ETLE	9	3054	684.38
	GGE	4	2840	201.76
Right Head	TLE	31	1520	368.45
	ETLE	9	1582	449.82
	GGE	4	1482	269.49

	POE subgroup	N	Mean (mm³)	SD
Right Body	TLE	31	1199	233.50
	ETLE	9	1248	301.02
	GGE	4	1069	141.39
Right Tail	TLE	31	260	109.55
	ETLE	9	223	80.22
	GGE	4	288	57.13

Note, SD = standard deviation, POE = psychosis of epilepsy; TLE = temporal lobe epilepsy; ETLE = extra-temporal lobe epilepsy; GGE = genetic generalised epilepsy

Supplementary Table 3. Mean hippocampal body and tail volumes in PIP and IP participants

	POE subgroup	N	Mean (mm³)	SD
Left Total	PIP	26	2946	505.95
	IP	21	2823	625.98
Left Head	PIP	26	1448	317.74
	IP	21	1438	396.03
Left Body	PIP	26	1241	240.78
	IP	21	1148	232.92
Left Tail	PIP	26	256	127.99
	IP	21	237	124.90
Right Total	PIP	25	2989	548.00
	IP	20	3004	553.34
Right Head	PIP	25	1491	343.89
	IP	20	1596	405.12
Right Body	PIP	25	1237	234.90
	IP	20	1160	250.12
Right Tail	PIP	25	260	106.80
	IP	20	248	92.45

Note, SD = standard deviation, POE = psychosis of epilepsy; PIP = postictal psychosis; IP = interictal psychosis.