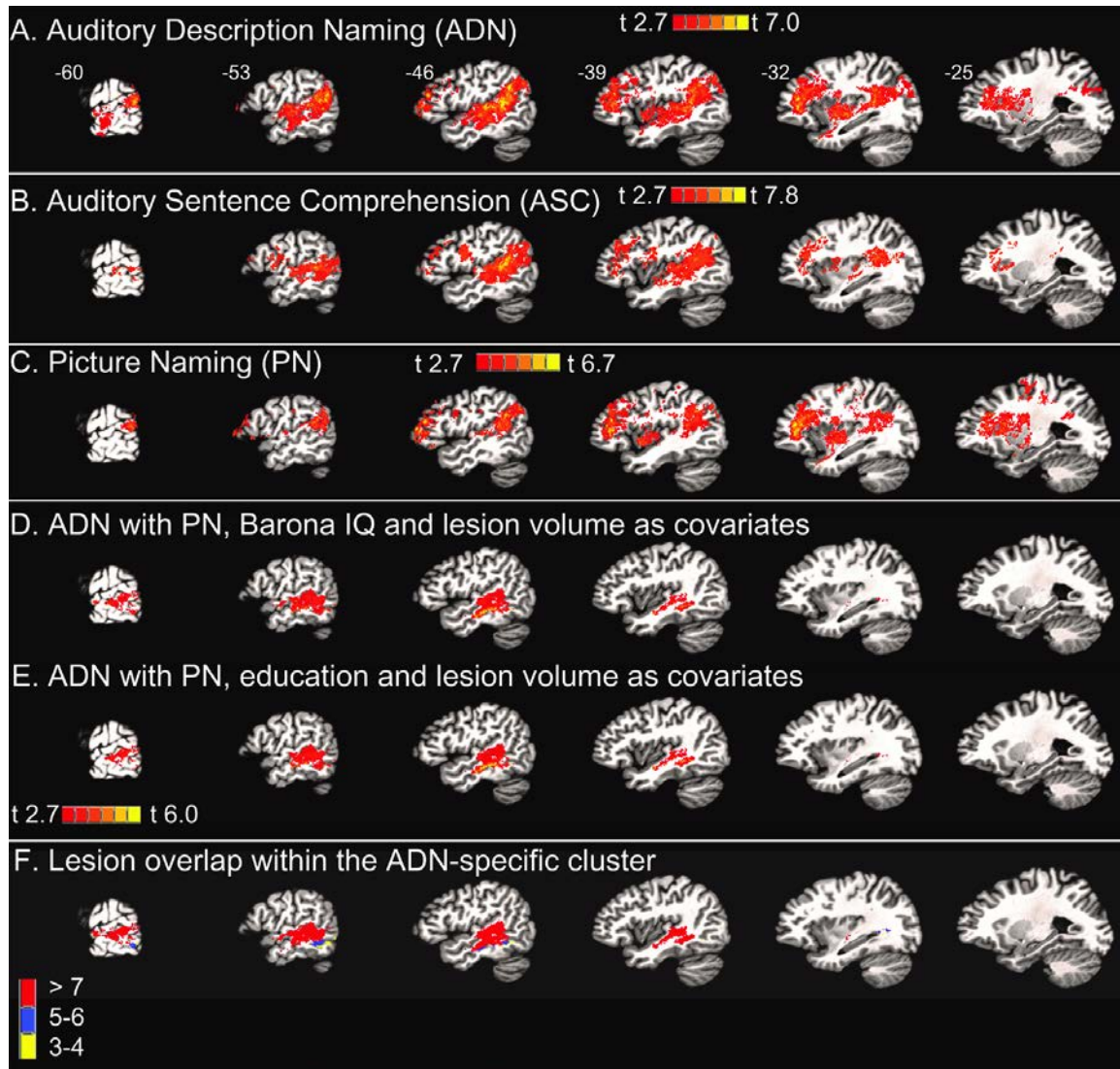


Supplementary Figure e-1. VLSM analysis



Subscript numbers indicate the x-axis location of the slice in standard space. The same locations are used for the other sagittal series. (A) VLSM analysis using Auditory Description Naming (ADN) accuracy as the dependent measure with no covariates in the model. (B) VLSM analysis using Auditory Sentence Comprehension (ASC) accuracy as the dependent measure with no covariates in the model. Colors indicate *t*-scores. (C) VLSM analysis using Picture Naming (PN) as the dependent measure with no covariates in the model. (D) VLSM analysis using ADN accuracy as the dependent measure with

PN, Barona IQ, and lesion volume as covariates. (E) VLSM analysis using ADN accuracy as the dependent measure with PN, Barona IQ, and lesion volume as covariates. (F) VLSM analysis using ADN accuracy as the dependent measure with PN and lesion volume as covariates shown with lesion voxel overlap threshold. Yellow shows voxels with lesion overlap of 3-4, which comprise a single small cluster in the posterior inferior temporal gyrus. These are the only voxels that would be removed from the results using a lesion overlap threshold of 5 rather than 3. Blue shows voxels with lesion overlap of 5-6, and red shows voxels with lesion overlap > 7 .

Supplemental Table e-1
Individual subject behavioral data

Subj #	Age	Sex	Educ.	B-IQ	HQ	Sinis.	DPO	No. of Lesioned Voxels	% Accuracy		
									ADN	PN	Auditory Sentence Comp.
1	80	M	17	123	100	N	657.8	46,937	65.0	73.8	83.9
2	28	F	14	103	83	N	961.3	85,388	73.3	95.0	69.6
3	48	F	14	106	100	-	252.5	68,407	13.3	18.8	55.4
4	55	F	12	103	83	Y	3052.8	87,201	0.0	65.0	48.2
5	49	F	14	100	100	Y	254.8	24,230	83.3	95.0	-
6	52	F	24	129	83	Y	210	10,416	96.7	93.8	-
7	66	F	12	105	83	N	838.8	56,517	15.0	17.5	-
8	61	F	19	125	79	N	726	32,580	95.0	100.0	94.6
9	66	F	16	118	100	Y	3527.7	26,131	98.3	100.0	92.9
10	55	M	14	113	100	Y	1675.7	130,491	31.7	66.3	69.6
11	45	F	12	98	60	N	253	72,010	93.3	93.8	75.0
12	60	M	14	113	90	N	635.2	62,845	98.3	73.8	85.7
13	72	M	14.5	115	100	Y	251.2	23,355	26.7	27.5	-
14	62	M	14	110	100	N	449.7	71,445	51.7	80.0	60.7
15	63	F	16	116	100	N	934	33,329	35.0	58.8	92.9
16	52	M	12	101	100	N	843	74,148	36.7	46.3	78.6
17	60	M	12	107	79	N	185.2	72,811	0.0	0.0	-
18	77	M	16	118	4	Y	638.5	18,597	68.3	77.5	33.3
19	63	F	12	105	92	N	388.7	176,674	0.0	0.0	48.2
20	40	F	15.5	110	83	N	6732.3	156,674	83.3	90.0	66.1
21	57	F	12	106	83	N	2495	68,337	93.3	98.8	80.4
22	84	F	13	116	86	N	430.2	15,368	76.7	95.0	80.4
23	65	M	8	85	100	N	233	95,698	30.0	78.8	60.7
24	38	F	18	114	100	Y	1277.7	226,978	0.0	31.3	-
25	57	M	13	110	4	N	2049.3	13,816	91.7	98.8	91.1
26	51	M	11	105	100	Y	310.3	22,229	83.3	98.8	78.6
27	54	F	16	117	92	N	2733	87,289	70.0	72.5	76.8
28	66	M	16	110	100	N	222.8	51,301	6.7	7.5	51.8
29	72	F	16	119	100	N	200.7	7,723	86.7	87.5	82.1
30	42	F	13	106	83	N	272.8	38,776	76.7	96.3	91.1
31	56	M	14	104	33	N	1174.7	184,005	33.3	28.8	60.7
32	58	M	12	101	100	Y	580	27,449	86.7	87.5	87.5
33	54	M	11.5	100	81	N	822	113,329	68.3	67.5	50.0
34	78	F	14	113	100	N	585.8	112,788	0.0	0.0	51.8
35	58	M	14	107	92	Y	560	131,733	53.3	90.0	51.8
36	38	M	12	90	100	Y	329.2	113,763	76.7	76.3	91.1
37	48	M	15	104	100	Y	174.8	45,489	81.7	83.8	89.3
38	81	F	12	109	100	N	233.5	1,624	95.0	100.0	96.4
39	81	M	13	113	100	N	227.4	79,912	0.0	57.5	60.7
40	44	F	18	120	100	N	173.5	45,131	96.3	87.5	87.5
41	51	F	16	116	100	N	3463	830	98.3	98.8	96.4
42	69	M	13	106	100	N	214.3	48,220	61.7	61.3	69.6
43	54	M	14	112	81	Y	1963	25,055	98.3	97.5	83.9
44	77	M	24	132	100	N	303	7,898	100.0	97.5	89.3
45	76	M	16	120	100	N	1914	17,143	95.0	95.0	80.4
46	57	F	12	104	100	N	214	8,050	83.3	87.5	91.1
47	57	M	14	111	56	Y	615	6,711	98.3	100.0	83.9
48	74	M	12	95	100	-	205	54,389	0.0	17.5	-
49	50	F	15	109	100	N	234	848	98.3	97.5	91.1
50	63	F	15	114	100	N	235	1,008	100.0	100.0	89.3
51	56	M	12	106	70	N	433	3,576	91.7	86.3	80.4

B-IQ = Barona IQ estimate, HQ = Edinburgh Handedness Inventory handedness

quotient, Sinis = Sinistrality, DPO = Days post onset, ADN = Auditory Description

Naming, PN = Picture Naming

Supplemental Table e-2
Descriptive statistics for Picture and Auditory Description Naming items

Task	Letters	Log10Freq	Imageability
Picture Naming	5.36 (1.77)	1.12 (0.64)	6.08 (0.30)
Living	5.17 (1.79)	1.26 (0.65)	6.16 (0.23)
Non-living	5.58 (1.73)	0.98 (0.60)	5.97 (0.34)
Auditory Description Naming	5.23 (1.79)	0.93 (0.53)	6.05 (0.42)
Living	5.27 (1.89)	0.89 (0.54)	6.16 (0.46)
Non-living	5.20 (1.71)	0.97 (0.52)	5.94 (0.35)

Values shown are means and standard deviations in parentheses. *Letters* indicates number of letters. *Log10 Freq* indicates base-10 logarithm of orthographic word frequency per million words (Baayen, Piepenbrock, & Gulikers, 1995). *Imageability* indicates rated imageability on a scale from 1 to 7, compiled from published norms (Bird, Franklin, & Howard, 2001; Clark & Paivio, 2004; Cortese & Fugett, 2004; Wilson, 1988).

Supplemental Table e-3**Peak coordinates of sites associated with ADN and ASC**

ADN, no covariates		Coordinates		
<i>Structure</i>	<i>t-stat</i>	<i>x</i>	<i>y</i>	<i>z</i>
Supramarginal gyrus	7.030	-46	-49	26
Superior temporal gyrus	6.494	-48	-43	12
Superior temporal gyrus	6.423	-45	-27	7
Middle frontal gyrus	5.882	-31	36	18
Subinsular white matter	5.661	-33	-14	-3
Posterior temporal white matter	5.570	-35	-40	5
Inferior frontal white matter	5.401	-22	21	15
Subinsular white matter	5.400	-30	-1	8
Inferior frontal white matter	5.186	-32	34	3
ADN with PN & lesion volume as covariates		Coordinates		
<i>Structure</i>	<i>t-stat</i>	<i>x</i>	<i>y</i>	<i>z</i>
Mid-temporal white matter	6.286	-45	-25	-10
Anterior temporal white matter	5.701	-39	-9	-12
Posterior temporal white matter	5.517	-35	-46	0
ASC with PN as covariate		Coordinates		
<i>Structure</i>	<i>t-stat</i>	<i>x</i>	<i>y</i>	<i>z</i>
Middle temporal gyrus	6.536	-48	-41	7
Posterior superior temporal sulcus	5.538	-53	-42	8

*ADN = Auditory Description Naming, ASC = Auditory Sentence Comprehension,
PN = Picture Naming*