

SUPPLEMENTARY TABLES

Table S1. Clinical, general cognitive and olfactory function data for all groups

	HC n = 32	PCA n = 15	tAD n = 10	P value (tAD vs PCA)
Demographic data				
Gender (F:M)	19:13	10:5	3:7	0.082
Age (years)	68.2 (7.3)	62.6 (6.6)	69.6 (6.3)	0.014
Education (years)	14.2 (2.7)	12.1 (2.2)	12.6 (2.4)	0.951
Symptom duration (years)	N/A	5.84 (2.39)	7.5 (3.74)	0.187
General cognitive functions				
MMSE (/30)	29.88 (0.34)	19.07 (4.48)	22.9 (5.86)	0.077
SRMT (words) (/25)	24 (1.05)	20.27 (3.67)	16.8 (3.55)	0.028
SRMT (faces) (/25)	21.41 (2.60)	18.87 (4.53)	17.75 (3.66)	0.521
GNT (/30)	25.07 (3.45)	16.36 (6.15)	16.6 (7.99)	0.939
VOSP Object decision (/20)	18.07 (3.25)	10.6 (4.64)	16.9 (1.73)	<0.001
WASI Vocabulary (/80)	70.25 (5.29)	47.36 (17.04)	55.6 (16.63)	0.277
WASI matrices (/32)	24.54 (2.82)	7.64 (8.12)	19.5 (8.17)	0.003
Olfactory functions				
Identification score: raw (/40)	32.94 (4.98)	24.33 (7.51)	19.10 (6.97)	0.093
Identification score: percentile	51.81 (23.71)	14.47 (9.56)	12.3 (10.87)	0.604
Identification score: corrected* (/40)	30.58 (6.64)	19.11 (10.01)	12.13 (9.29)	0.093
Categorisation score: raw (/40)	31.91 (3.73)	27.27 (4.28)	25.9 (4.46)	0.450
Categorisation score: corrected* (/40)	23.81 (7.45)	14.53 (8.57)	11.8 (8.92)	0.450

Mean (standard deviation) values are shown. Significant differences ($p < 0.05$) between patient groups are shown in bold. For olfactory function, p-values of unadjusted analyses are shown. Scores on all general cognitive and olfactory functions of the healthy control group were significantly different from those of each patient group. Twelve patients in the PCA group (80%) and 9 patients in the tAD group (90%) were taking a cholinesterase inhibitor at the time of testing.

Key: GNT, Graded Naming Test; HC, Healthy control; MMSE, Mini-mental state examination; n, Number; N/A, not applicable; PCA, posterior cortical atrophy; SRMT, Shorter Recognition Memory Test; tAD, typical Alzheimer's disease; VOSP, Visual Object and Space Perception Battery; WASI, Wechsler Abbreviated Scale of Intelligence. *Corrected identification and categorisation scores were transformed from the raw scores to correct for guessing.

Table S2. Edibility classification of individual UPSIT items

No	Target	Responses				Edibility
		1	2	3	4	
1	Pizza	Petrol	Pizza	Peanuts	Lilac	E
2	Bubblegum	Chutney	Bubblegum	Liniment	Watermelon	E
3	Menthol	Tomato	Baby powder	Strawberry	Menthol	I
4	Cherry	Whiskey	Honey	Lime	Cherry	E
5	Motor oil	Grass	Pizza	Motor oil	Pineapple	I
6	Mint	Dog	Mint	Peach	Cola	E
7	Banana	Banana	Garlic	Cherry	Motor oil	E
8	Clove	Baby powder	Clove	Spaghetti	Banana	E
9	Leather	Clove	Lilac	Leather	Apple	I
10	Coconut	Dog	Coconut	Cedar	Honey	E
11	Onion	Chocolate	Banana	Onion	Peach	E
12	Grapefruit	Soap	Grapefruit	Menthol	Nutmeg	E
13	Baby powder	Baby powder	Pineapple	Cheddar cheese	Cherry	I
14	Coffee	Paint thinner	Cherry	Coconut	Coffee	E
15	Cinnamon	Cola	Cinnamon	Pine	Coconut	E
16	Petrol	Rose	Lemon	Peach	Petrol	I
17	Strawberry	Strawberry	Chutney	Chocolate	Cedar	E
18	Cedar	Cedar	Petrol	Lemon	Liquorice	I
19	Chocolate	Lemon	Chocolate	Liquorice	Black pepper	E
20	Apple	Menthol	Gingerbread	Apple	Cheddar cheese	E
21	Lilac	Lilac	Spaghetti	Coconut	Whiskey	I
22	Turpentine	Turpentine	Soap	Dog	Spaghetti	I
23	Peach	Chocolate	Peach	Leather	Pizza	E
24	Liquorice	Liquorice	Watermelon	Banana	Smoke	E
25	Chutney	Pineapple	Chutney	Liquorice	Rose	E
26	Pineapple	Smoke	Whiskey	Pineapple	Onion	E
27	Lime	Musk	Garlic	Turpentine	Lime	E
28	Orange	Cheddar cheese	Orange	Bubblegum	Turpentine	E
29	Rubber tyre	Lime	Rubber tyre	Nutmeg	Leather	I
30	Watermelon	Spaghetti	Menthol	Orange	Watermelon	E
31	Paint thinner	Watermelon	Peanuts	Rose	Paint thinner	I
32	Grass	Mint	Gingerbread	Grass	Strawberry	I
33	Smoke	Chutney	Grass	Smoke	Peach	I
34	Pine	Pineapple	Smoke	Peanuts	Orange	I
35	Raspberry	Pizza	Turpentine	Clove	Raspberry	E
36	Lemon	Motor oil	Nutmeg	Rose	Lemon	E
37	Soap	Soap	Black pepper	Baby powder	Peanuts	I
38	Natural gas	Orange	Musk	Cola	Natural gas	I
39	Rose	Lime	Rose	Mint	Bubblegum	I
40	Peanuts	Peanuts	Lemon	Apple	Liquorice	E

Key: E, Edible; I, Inedible; No, Number

Table S3. Summary of anatomical regions associated with odour identification performance in the combined patient cohort and in the PCA subgroup

Anatomical region	Cluster size (voxels)	Peak MNI coordinates (mm)			T score
		x	y	z	
Combined patient group					
Right parahippocampal gyrus	44	21	-22	-21	5.17*
Right entorhinal cortex	129	22	8	-24	4.71*
Right temporo-parieto-occipital junction	707	58	-52	6	5.56
Right posterior cingulate cortex	156	4	-57	7	5.40
Right posterior inferior temporal gyrus	224	56	-58	-20	4.48
Right premotor cortex	41	51	3	39	4.48
Right hippocampus	71	15	-9	-17	4.30
Right posterior superior temporal sulcus	154	68	-25	-9	4.20
Left hippocampus	55	-32	-9	-20	4.18
PCA subgroup					
Right premotor cortex	499	39	27	45	9.78
Left premotor cortex	54	-9	23	63	7.70
Left planum temporale	112	-44	-28	4	5.66
Right temporo-parieto-occipital junction	76	60	-45	9	5.66
Right hippocampus	92	15	-6	-27	5.24
<p>Data have been thresholded at $p < 0.001$ uncorrected for multiple voxel-wise tests over the whole brain volume and clusters larger than 40 voxels are reported. *p value < 0.05 after family-wise error (FWE) correction for small volumes of interest.</p> <p>Key: mm, millimetres; MNI, Montreal Neurological Institute; PCA, posterior cortical atrophy</p>					