Supplementary material

Assessing the extent and timing of chemosensory impairments during COVID-19 pandemic

Cinzia Cecchetto¹, Antonella Di Pizio², Federica Genovese³, Orietta Calcinoni⁴, Alberto Macchi⁵, Andreas Dunkel², Kathrin Ohla⁶, Sara Spinelli⁷, Michael C. Farruggia⁸, Paule V. Joseph^{9,10,11}, Anna Menini¹², Elena Cantone¹³, Caterina Dinnella⁷, Maria Paola Cecchini¹⁴, Anna D'Errico¹⁵, Carla Mucignat-Caretta¹⁶, Valentina Parma^{3,17}, Michael Dibattista¹⁸

¹Department of General Psychology, University of Padova, Italy; ²Leibniz-Institute for Food Systems Biology at the Technical University of Munich, Germany; ³Department of Physiology, Monell Chemical Senses Center, USA; ⁴Private practice VMPCT, Milan, Italy; ⁵ENT department, Italian Academy Of Rhinology - ASST sette laghi Varese; ⁶ Helmut-Schmidt-University/University of the Federal Armed Forces Hamburg, Experimental Psychology Unit, Hamburg, Germany; ⁷Department of Agriculture, Food, Environment and Forestry (DAGRI), University of Florence, Italy; ⁸Interdepartmental Neuroscience Program, Yale University, USA; ⁹National Institutes of Nursing Research, ¹⁰National Institute of Alcohol Abuse and Alcoholism, ¹¹National Institutes of Health, ¹²Neurobiology Section, SISSA, International School for Advanced Studies, Italy; ¹³Department of Neuroscience, ENT section, Federico II University of Naples, Italy; ¹⁴Department of Neurosciences, Biomedicine and Movement Sciences, Anatomy and Histology Section, University of Verona, Italy; ¹⁵Department of Neurobiology, Goethe Universität Frankfurt, Germany; ¹⁶Department of Molecular Medicine, University of Padova, Italy; ¹⁷Department of Psychology, Temple University, USA; ¹⁸Department of Basic Medical Sciences, University of Bari A. Moro

Corresponding Author:

Michele Dibattista, PhD

Department of Basic Medical Sciences,

Neuroscience and Sense Organs,

University of Bari A. Moro,

Piazza Giulio Cesare n.11, 70125 Bari, Italy.

e-mail: michele.dibattista@uniba.it

Table 1s. Frequency table of the pattern of chemosensory loss and recovery clusters in relation to days between the date of onset and completion of the questionnaire. Chemosensory loss clusters: 1 = moderate smell/taste loss and preserved chemesthesis; 2 = substantial smell, taste, and chemesthesis loss; 3 = substantial smell and taste loss, but preserved chemesthesis.

Chemosensory loss	Time intervals	Chemosensory recovery	Frequency
1	<30 days	Partial	30
1	<30 days	Substantial	5
1	>90 days	Partial	5
1	31 - 60 days	Partial	73
1	31 - 60 days	Substantial	10
1	61 - 90 days	Partial	9
2	<30 days	Partial	45
2	<30 days	Substantial	67
2	>90 days	Partial	6
2	>90 days	Substantial	5
2	31 - 60 days	Partial	117
2	31 - 60 days	Substantial	256
2	61 - 90 days	Partial	8
2	61 - 90 days	Substantial	12
3	<30 days	Partial	26
3	<30 days	Substantial	27
3	>90 days	Partial	11
3	>90 days	Substantial	1
3	31 - 60 days	Partial	127
3	31 - 60 days	Substantial	113
3	61 - 90 days	Partial	14
3	61 - 90 days	Substantial	7

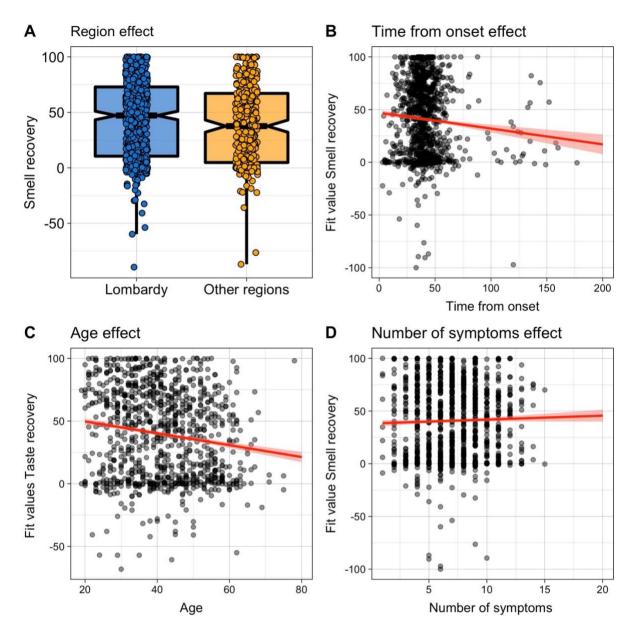
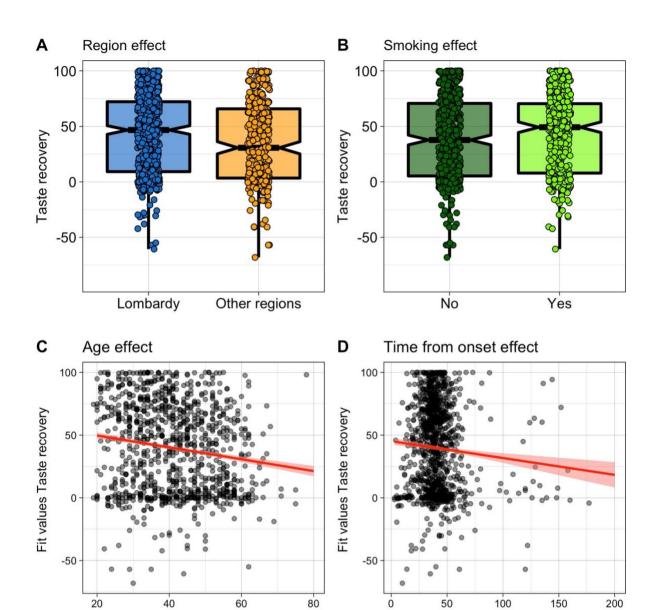


Figure 1s. Significant main effect predictors of smell recovery. A) Data distribution by region. Boxplots depict the median (horizontal black line) and quartile ranges of the distribution, whiskers indicate maximum and minimum values, colored dots represent data distribution. B) C), and D) Main effect of time from the onset, age, and number of the symptoms, with data distribution as black and grey dots and fitted lines in red.



Time from the onset

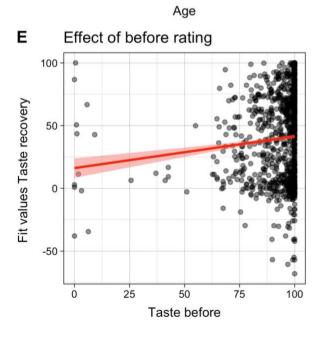


Figure 2s. Significant main effect predictors of taste recovery. A) and B) Data distribution by region and by smoking. Boxplots depict the median (horizontal black line) and quartile ranges of the distribution, whiskers indicate maximum and minimum values, colored dots represent data distribution. C), D), E) Main effect of age, time from onset, and before rating, with data distribution as black and grey dots and fitted lines in red.

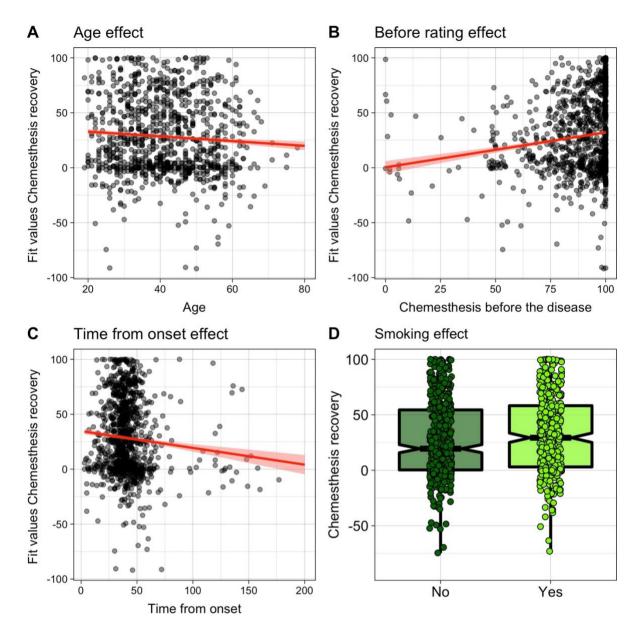


Figure 3s. Significant main effect predictors of chemesthesis recovery. A), B), and C) Main effect of age, before rating, and time from the onset of the disease with data distribution as black and grey dots and fitted lines in red. D) Data distribution by smoking. Boxplots depict the median (horizontal black line) and quartile ranges of the distribution, whiskers indicate maximum and minimum values, colored dots represent data distribution.