The Journal of Prevention of Alzheimer's Disease 12 (2025) 100026

Contents lists available at ScienceDirect

The Journal of Prevention of Alzheimer's Disease

journal homepage: www.elsevier.com/locate/tjpad

Corrigendum

Corrigendum to "Multiomics Blood-Based Biomarkers Predict Alzheimer's Predementia with High Specificity in a Multicentric Cohort Study" [The Journal of Prevention of Alzheimer's Disease 2024;11(3):567–581]

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The authors regret the following error in their article published in the Journal of Prevention of Alzheimer's Disease (JPAD):

In Figs. 3j and 4c, the column titles for "Specificity" and "Sensitivity" were mistakenly inverted. This mislabeling could lead to confusion in interpreting the data presented.

The corrected figures, with the accurate column titles, are provided below to rectify this oversight.

The authors sincerely apologize for any inconvenience caused by this error and appreciate the readers' understanding.

DOI of original article: 10.14283/jpad.2024.34

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https://doi.org/10.1016/j.tjpad.2024.100026

Available online 9 January 2025

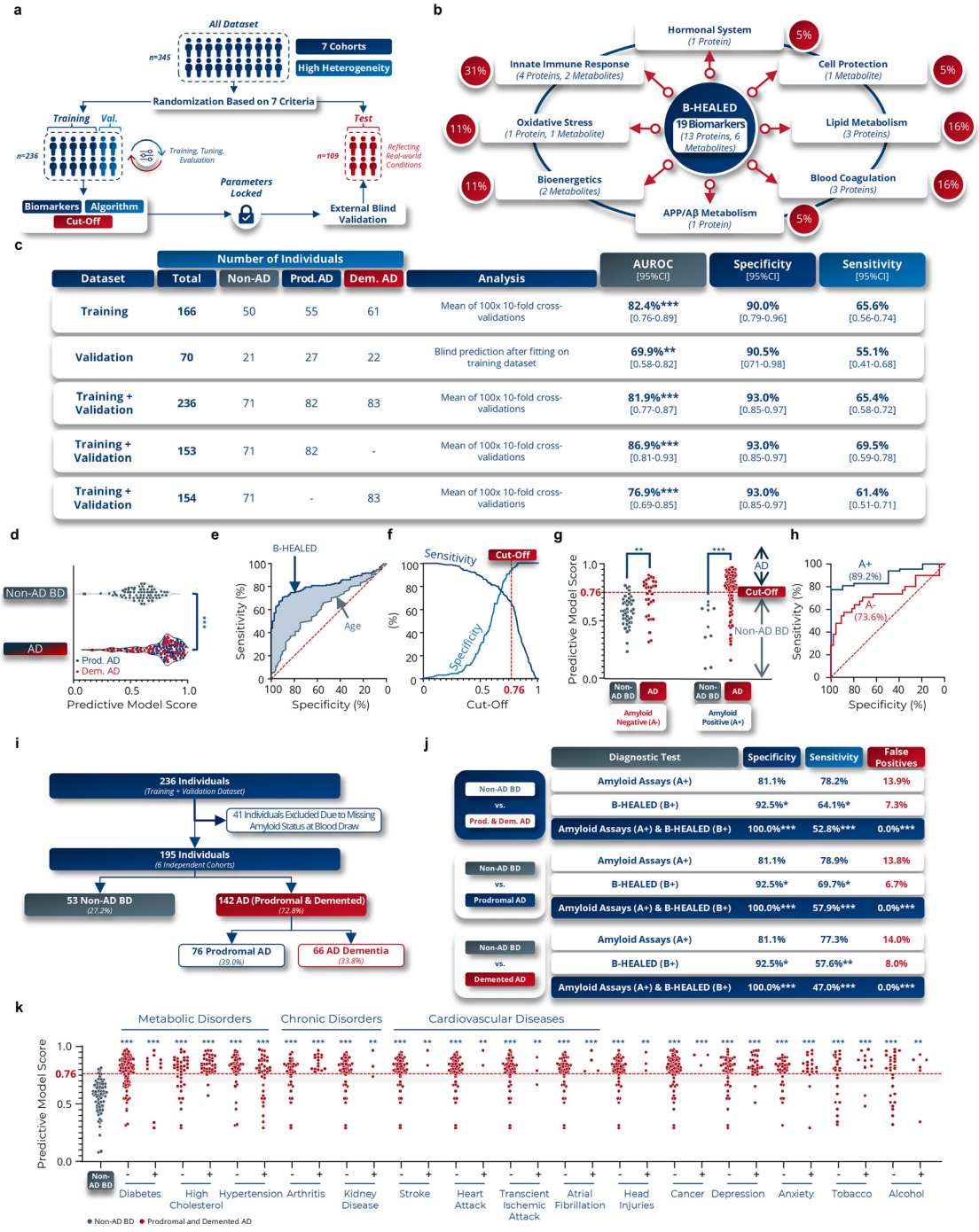
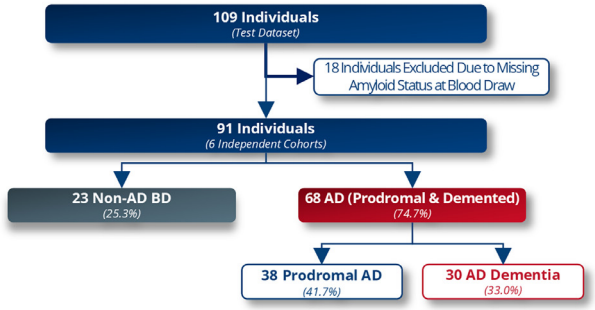


Figure 3. B-HEALED test predicts Alzheimer's disease patients among cognitively impaired individuals.
a, Machine learning predictive models development validated with internal and external blind validations. b, Biological pathways in which the 19 selected peripheral biomarkers are involved. The red lines represent the links between Alzheimer's disease and each of the biological pathways identified, while the blue lines represent the interactions between the different biological pathways. c, Performances obtained with a cut-off value of 0.76 by the ML model trained on blood concentrations of 19 biomarkers and 1 covariate (age at blood sampling) in terms of AUROC, specificity and sensitivity on the training, validation and training-validation datasets. Means and 95% confidence intervals. *p<0.05, **p<0.01, ***p<0.001. d-f, Performances obtained with a cut-off value of 0.76 by the ML model trained on blood concentrations of 19 biomarkers and 1 covariate (age at sampling) in terms of AUROC, specificity and sensitivity. Means and 95% confidence intervals during the internal validation. d, Scores predicted by the ML model as a function of the clinical label in 100 × 10-fold cross-validations on training + validation dataset (internal validation). One-way ANOVA, ***p<0.001. e, ROC curve of 100 × 10-fold cross-validations. f, Evolution of sensitivity and specificity according to the cut-off used by the ML model to predict clinical status. g, Predictive model scores based on tested subject amyloid status and clinical label. 2-way ANOVA followed by Tukey's post hoc test. ***p<0.001. h, ROC curves according to the amyloid status of the tested subject. i-j, Comparative analysis with amyloid status during internal validation. i, Participants included in the comparative analysis with amyloid. j, Performances obtained during the comparative analysis. False positive rates were calculated considering a 60% Alzheimer's prevalence among cognitively impaired individuals. Chi-square test compared to Non-AD BD values as reference, *p<0.05, **p<0.01, ***p<0.001. k, Scores predicted by the ML model as a function of the comorbidities in AD patients. One-way ANOVA followed by Holm-Šídák's multiple comparisons post hoc test with the non-AD BD clinical group as the reference. **p<0.01, ***p<0.001.

a

Dataset	Number of Individuals				Analysis Performed	AUROC [95% CI]	Specificity [95% CI]	Sensitivity [95% CI]
	Total	Non-AD BD	Prod. AD	Dem. AD				
Test	109	25	41	43	Blind prediction after fitting on training + validation dataset	71.8%*** [0.62-0.82]	92.0% [0.75-0.99]	52.4% [0.42-0.63]
Test	66	25	41	-	Blind prediction after fitting on training + validation dataset	72.7%*** [0.61-0.85]	92.0% [0.75-0.99]	48.8% [0.32-0.61]
Test	68	25	-	43	Blind prediction after fitting on training + validation dataset	71.0%*** [0.59-0.83]	92.0% [0.75-0.99]	55.8% [0.41-0.70]

b



c

	Diagnostic Test	Specificity	Sensitivity	False Positives
Non-AD BD vs. Prod. & Dem. AD	Amyloid Assays (A+)	78.3%	75.0%	16.2%
	B-HEALED (B+)	91.3%*	54.4%*	9.6%
	Amyloid Assays (A+) & B-HEALED (B+)	100.0%***	39.7%***	0.0%***
Non-AD BD vs. Prodromal AD	Amyloid Assays (A+)	78.3%	81.6%	15.1%
	B-HEALED (B+)	91.3%*	52.6%*	9.9%
	Amyloid Assays (A+) & B-HEALED (B+)	100.0%***	44.7%***	0.0%***
Non-AD BD vs. Demented AD	Amyloid Assays (A+)	78.3%	66.7%	17.8%
	B-HEALED (B+)	91.3%*	56.7%**	9.3%
	Amyloid Assays (A+) & B-HEALED (B+)	100.0%***	33.3%***	0.0%***

Figure 4. B-HEALED test robustly predicts Alzheimer's disease patients among cognitively impaired individuals.
a, Performances obtained during the external blind validation (test set) in terms of AUROC, specificity and sensitivity. Means and 95% confidence intervals with a cut-off value of 0.76. b-c, Comparative analysis with amyloid status during external validation. b, Participants included in the comparative analysis with amyloid. c, Performances obtained during the comparative analysis. False positive rate was calculated considering a 60% Alzheimer's prevalence among cognitively impaired individuals. Chi-square test compared to amyloid tests values as reference, $^{*}p<0.05$, $^{**}p<0.01$, $^{***}p<0.001$.