Check for updates

OPEN ACCESS

EDITED AND REVIEWED BY Stefan Borgwardt, University of Lübeck, Germany

*CORRESPONDENCE Nicholas T. Trapp Micholas-trapp@uiowa.edu

RECEIVED 20 March 2024 ACCEPTED 22 March 2024 PUBLISHED 05 April 2024

CITATION

Spitz NA, Pace BD, Ten Eyck P and Trapp NT (2024) Corrigendum: Early improvement predicts clinical outcomes similarly in 10 Hz rTMS and iTBS therapy for depression. *Front. Psychiatry* 15:1404381. doi: 10.3389/fpsyt.2024.1404381

COPYRIGHT

© 2024 Spitz, Pace, Eyck and Trapp. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

Corrigendum: Early improvement predicts clinical outcomes similarly in 10 Hz rTMS and iTBS therapy for depression

Nathen A. Spitz¹, Benjamin D. Pace¹, Patrick Ten Eyck² and Nicholas T. Trapp^{1,3*}

¹Department of Psychiatry, University of Iowa, Iowa City, IA, United States, ²Institute for Clinical and Translational Science, University of Iowa, Iowa City, IA, United States, ³Iowa Neuroscience Institute, University of Iowa, Iowa City, IA, United States

KEYWORDS

depression, transcranial magnetic stimulation, theta-burst, clinical practice, observational study, prediction

A corrigendum on

Early improvement predicts clinical outcomes similarly in 10 Hz rTMS and iTBS therapy for depression

by Spitz NA, Pace BD, Ten Eyck P and Trapp NT (2022). Front. Psychiatry 13:863225. doi: 10.3389/fpsyt.2022.863225

In the published article, there was an error in Table 2 as published. The data was incorrectly transposed into the table. The corrected Table 2 and its caption appear below.

In the published article, there were text errors related to the mislabeled results in Table 2 described above.

A correction has been made to the Abstract Results. This sentence previously stated:

"Results: For both modalities, the NPV related to degree of improvement at t10. NPV for 10 Hz was 80%, 63% and 46% at t10 in those who failed to improve >20, >10, and >0% respectively; while iTBS NPV rates were 65, 50, and 35%. There were not significant differences between protocols at any t10 cut-off assessed, whether research defined 50% improvement as response or data driven kernel density estimates (p = 0.22-0.44)."

The corrected sentence appears below:

"Results: For both modalities, the NPV related to degree of improvement at t10. NPV for 10 Hz was 74%, 82% and 73% at t10 in those who failed to improve >20, >10, and >0% respectively; while iTBS NPV rates were 65, 71, and 60%. There were not significant differences between protocols at any t10 cut-off assessed, whether research defined 50% improvement as response or data driven kernel density estimates (p = 0.46-0.79)."

A correction has been made to the **Abstract**, *Conclusion*. This sentence previously stated:

"Conclusion: Patients who fail to achieve >20% improvement by t10 with both 10Hz rTMS and iTBS therapies have ~70% chance of non-response to treatment."

TABLE 2 Early improvement confusion matrices determining final treatment predictive capacity differences between 10 Hz rTMS and iTBS.

Sclasically defineSingrovement bueSensitivinyG69.7SingrovementSpecificityG76.7SingrovementPPVG73.7G63.0G0.2PVG75.0G2.2G0.7StandarcarcyG75.0G0.2G0.7SensitivinyG62.9G0.3G0.7SpecificityG76.9G0.3G0.3PVG83.3G5.5G0.3PVG75.0G0.2G0.3PVG75.0G0.3G0.3SpecificityG73.0G74.0G0.3PVG73.3G74.0G0.3SpecificityG73.3G10.0G0.3PVG73.3G10.0G0.3PVG73.3G10.0G0.3SpecificityG73.0G1.3G0.3PVG73.3G1.3G1.3SpecificityG73.0G1.3G0.3PVG73.3G1.3G1.3PVG73.0G1.3G1.3SpecificityG7.3G1.3G1.3SpecificityG7.3G1.3G1.3SpecificityG7.3G1.3G1.3SpecificityG7.3G1.3G1.3SpecificityG7.3G1.3G1.3SpecificityG7.3G1.3G1.3SpecificityG7.3G1.3G1.3SpecificityG7.3G1.3G1.3SpecificityG7.3G1.3G1.3SpecificityG7.3G1		10 Hz rTMS (n = 68)	iTBS (n = 37)	p value	
Sensitivity669.758.80.44Specificity80.0065.000.22PPV76.758.80.20PV73.765.000.49Total Accuracy75.0062.200.17Sensitivity84.876.500.47Specificity62.950.000.35PPV68.356.500.35PPV68.371.400.46Total Accuracy73.5062.200.23PV68.1071.400.46Specificity87.9088.200.28PV13.4015.000.18Specificity31.4015.000.18Specificity63.7088.200.98Specificity63.7088.200.18PV54.7086.400.10Specificity63.7064.600.10Specificity63.8064.600.21Specificity63.9064.700.13Specificity63.9164.700.22Specificity63.9164.700.22Specificity63.8164.700.22Specificity63.8164.900.22Specificity63.8164.900.22Specificity63.8164.900.22Specificity63.9164.900.22Specificity63.9164.900.22Specificity63.8164.900.22Specificity73.8164.900.22	Classically defined	> 50% improveme	nt		
Specificity180.065.09.22PV76.78.8.80.20PV73.765.00.49Total Accuracy75.06.2.20.17Sensitivity84.876.50.47Specificity84.876.50.33PV68.356.50.33PV68.356.50.33PV68.36.62.00.34Specificity73.56.62.00.23PV88.788.20.93Specificity31.415.00.18Specificity31.415.00.18PV63.36.0.30.18Specificity97.388.20.93PV58.848.60.32PV58.848.60.32PV58.848.60.32Specificity67.410.130.44PV58.848.60.32PV67.364.10.42PV58.848.60.20PV67.416.10.21Specificity67.416.10.21PV68.364.70.21PV68.364.70.22Specificity67.726.40.22PV68.465.00.22PV67.477.80.22Specificity67.756.40.22PV75.674.40.22Specificity67.756.40.22PV67	>20% improvement by treatment 10				
PPV176.758.80.20PPV77.758.80.42NPV75.062.20.17Sensitiva75.062.20.17Sensitivin98.8.376.50.47Specificity62.935.00.33PPV68.3.055.50.35PPV73.562.20.32Sensitivin97.3.562.20.33PV98.1.50.42.10.43PV98.1.50.42.20.33Specificity98.788.20.28Specificity87.988.20.98Specificity97.388.20.98PV63.1146.90.48PV98.848.60.32Specificity97.384.60.32PV98.848.60.32Specificity97.384.60.32PV98.848.60.32Specificity96.796.896.8Specificity96.796.996.9Specificity96.896.996.9Specificity96.896.996.9Specificity97.596.996.9Specificity97.896.996.9Specificity97.997.997.9Specificity97.997.997.9Specificity97.997.997.9Specificity97.997.997.9Specificity97.997.997.9Spec	Sensitivity	69.7	58.8	0.44	
NY10.0 10.0 10.010.0 10.0NPV73.765.00.49Total Accuracy75.062.20.17Sensitivity84.876.50.47Specificity66.355.00.35PPV68.356.50.35NPV81.571.40.46Total Accuracy73.562.20.23Specificity87.988.20.98Specificity87.988.20.98Specificity91.415.00.18Specificity87.988.20.98Specificity87.988.20.98Specificity87.988.20.98Specificity87.988.20.98Specificity87.988.20.98Specificity87.988.20.98Specificity87.988.20.98Specificity87.984.60.13Specificity87.984.60.32Specificity96.79.020.27Specificity96.89.64.90.27Specificity97.59.020.27Specificity98.364.90.27Specificity98.39.64.90.27Specificity98.39.64.90.27Specificity98.39.64.90.27Specificity98.39.64.90.22Specificity98.39.64.90.22Specificity97.59.64.90.22 </th <th>Specificity</th> <th>80.0</th> <th>65.0</th> <th>0.22</th>	Specificity	80.0	65.0	0.22	
InitialInitialInitialTotal Accuracy75.062.20.17>Initial75.062.20.17Sensitivity84.876.50.47Specificity66.355.00.35PPV68.356.50.35PPV81.571.40.46Total Accuracy73.562.20.23Specificity87.988.20.98Specificity31.415.00.18PPV54.746.90.18PPV73.360.00.58Total Accuracy58.848.60.23PPV58.848.60.23Specificity67.661.10.64Specificity67.661.10.64Specificity68.364.70.15Specificity68.465.00.27PPV68.465.00.27Specificity68.465.00.27PPV68.465.00.27Specificity68.455.00.27Specificity67.752.60.29PPV75.660.90.22Specificity67.752.60.29Specificity67.752.60.29Specificity67.752.60.29Specificity75.660.90.22Specificity75.660.90.22Specificity75.660.90.23Specificity75.660.90.23 <th>PPV</th> <th>76.7</th> <th>58.8</th> <th>0.20</th>	PPV	76.7	58.8	0.20	
Image: constraint of the set	NPV	73.7	65.0	0.49	
Sensitivity84.876.50.47Specificity62.950.00.35PPV68.356.50.35NPV73.562.20.23Jotal Accuracy73.562.20.23>boximprovement butternt Dutternt10.80.98Sensitivity87.988.20.98Specificity31.415.00.48PPV54.746.90.48NPV73.360.00.58Total Accuracy73.360.00.58Sensitivity67.664.90.23Specificity83.964.10.64Specificity67.664.90.23PV68.465.00.27Sensitivity75.064.90.27Specificity83.877.80.59PV75.652.60.29Specificity67.70.630.29PV75.660.90.22Sensitivity67.70.64.90.29Specificity67.70.61.90.29PV75.660.90.29Specificity67.70.64.90.20Specificity67.70.64.90.20Specificity67.70.64.90.20Specificity67.70.64.90.20Specificity67.70.64.90.20Specificity67.80.61.90.20Specificity67.80.64.90.20Specificity67.8<	Total Accuracy	75.0	62.2	0.17	
Number of the set	>10% improvement by treatment 10				
Prv68.356.50.35PPV68.356.50.35NPV81.571.40.46Total Accuracy73.562.20.23>O% improvement bt88.20.98Sensitivity87.988.20.98Specificity31.415.00.18PPV73.360.00.58NPV73.360.00.58Total Accuracy78.848.60.32Specificity67.661.10.64Specificity67.661.10.64Specificity68.364.70.15PV68.465.00.79PV68.465.00.79Specificity67.764.90.20PV83.877.80.59Specificity67.752.60.29PV75.660.90.22PV75.660.90.22PV75.660.90.22PV77.871.40.65PV77.871.40.65PV77.871.40.65PV76.588.90.80PV76.588.90.80PV76.588.90.80PV76.588.90.80PV76.588.90.80PV86.588.90.80PV86.588.90.80PV86.588.90.80PV86.588.90.80<	Sensitivity	84.8	76.5	0.47	
NPVA 81.5A 71.4A 6.46Total Accuracy73.562.20.23>0% improvement y87.988.20.98Sensitivity87.988.20.98Specificity31.415.00.18PPV73.360.00.58NPV73.360.00.58Total Accuracy58.848.60.32Sensitivity58.848.60.32Specificity67.661.10.64Specificity83.968.40.20Specificity68.460.00.21Specificity68.364.70.15PV75.064.90.22Specificity83.877.80.59Specificity67.752.60.22PV75.660.90.22PV77.871.40.65PV77.864.90.22Specificity67.752.60.22Specificity67.764.90.22PV77.871.40.65PV77.871.40.65Specificity86.588.90.80Specificity86.588.90.80Specificity86.588.90.80Specificity86.588.90.80Specificity86.588.90.80Specificity86.588.90.80Specificity86.588.90.80Specificity86.588.9<	Specificity	62.9	50.0	0.35	
InitialInitialInitialTotal Accuracy73.562.20.23>0% improvement by =87.988.20.98Specificity31.415.00.18PPV54.746.90.48NPV73.360.00.58Total Accuracy58.848.60.32KDE defined improvement (>40% 102.50.32Specificity67.661.10.64Specificity67.661.10.64Specificity68.364.70.15NPV68.465.00.79PPV68.465.00.27Specificity75.064.90.27Sensitivity67.752.60.29PPV75.660.90.22PPV75.660.90.22Specificity76.560.90.22PPV75.660.90.22PPV75.660.90.22PPV75.660.90.22PPV75.660.90.22Specificity76.564.90.20PPV75.660.90.22PPV75.660.90.22Specificity76.564.90.20Specificity76.564.90.20PPV86.588.90.80Specificity86.588.90.80Specificity76.558.90.80Specificity86.588.90.80Specificity <th>PPV</th> <th>68.3</th> <th>56.5</th> <th>0.35</th>	PPV	68.3	56.5	0.35	
Join of the second se	NPV	81.5	71.4	0.46	
Sensitivity87.988.20.98Specificity31.415.00.18PPV54.746.90.48NPV73.360.00.58Total Accuracy58.848.60.32KDE defined improvement (>40% to U->>45% iTBS)>20% improvement V>C>40% to U->>45% iTBSSensitivity67.661.10.64Specificity67.661.10.64Specificity68.364.70.15NPV68.465.00.27Total Accuracy75.064.90.27Sensitivity67.752.60.29Specificity67.752.60.29PPV75.660.90.22NPV75.664.90.20Specificity76.564.90.20Specificity88.588.90.80Specificity86.588.90.80	Total Accuracy	73.5	62.2	0.23	
Specificity31.415.00.18PPV54.746.90.48NPV73.360.00.58Total Accuracy58.848.60.32KDE defined improvement (>40% t0 U-X, >45% iTBS)20%Sensitivity67.661.10.64Specificity83.968.40.20PPV83.364.70.15NPV68.465.00.79Total Accuracy75.064.90.27Sensitivity67.752.60.29PPV83.877.80.59Specificity67.752.60.29PPV75.664.90.22PPV77.871.40.65Specificity76.564.90.20PPV75.664.90.20PPV75.864.90.20Specificity76.564.90.20PPV85.588.90.80Specificity86.588.90.80	>0% improvement by treatment 10				
Prv of y16.1 cm16.1 cmPPV54.746.90.48NPV73.360.00.58Total Accuracy58.848.60.32KDE defined improvement (>40% 10 X > >45% iTBS)>20% improvement V > V > 45% iTBS>20% improvement V67.661.10.64Specificity68.40.200.20PPV83.364.70.15NPV68.465.00.79Total Accuracy75.064.90.27Sensitivity67.752.60.29Specificity67.752.60.29PPV75.660.90.22NPV77.871.40.65Total Accuracy76.564.90.20PPV75.660.90.22NPV77.871.40.65Specificity86.588.90.80Specificity86.588.90.80	Sensitivity	87.9	88.2	0.98	
NPVImage: Additional and the sector of the sect	Specificity	31.4	15.0	0.18	
Image: Analysis of the state of th	PPV	54.7	46.9	0.48	
KDE defined improvement (>40% 10 Hz, >45% iTBS) >20% improvement by >20% improvement l0 Sensitivity 67.6 61.1 0.64 Specificity 83.9 68.4 0.20 PPV 83.3 64.7 0.15 NPV 68.4 65.0 0.79 Total Accuracy 75.0 64.9 0.27 >10% improvement by 83.8 77.8 0.59 Specificity 83.8 77.8 0.59 Specificity 67.7 52.6 0.29 PPV 75.6 60.9 0.22 NPV 75.6 60.9 0.20 PPV 75.6 60.9 0.20 NPV 77.8 71.4 0.65 NPV 76.5 64.9 0.20 >0% improvement by 76.5 88.9 0.80 Sensitivity 86.5 88.9 0.80	NPV	73.3	60.0	0.58	
>20% improvement by treatment 10 Sensitivity 67.6 61.1 0.64 Specificity 83.9 68.4 0.20 PPV 83.3 64.7 0.15 NPV 68.4 65.0 0.79 Total Accuracy 75.0 64.9 0.27 >10% improvement by treatment 10 0.27 0.59 Sensitivity 83.8 77.8 0.59 Specificity 67.7 52.6 0.29 PPV 75.6 60.9 0.22 NPV 77.8 71.4 0.65 Total Accuracy 76.5 64.9 0.20 PPV 75.6 60.9 0.22 NPV 77.8 71.4 0.65 Total Accuracy 76.5 64.9 0.20 PW 76.5 88.9 0.80 Sensitivity 86.5 88.9 0.80	Total Accuracy	58.8	48.6	0.32	
Sensitivity 67.6 61.1 0.64 Specificity 83.9 68.4 0.20 PPV 83.3 64.7 0.15 NPV 68.4 65.0 0.79 Total Accuracy 75.0 64.9 0.27 >10% improvement by treatment 10 52.6 0.29 Specificity 67.7 52.6 0.29 PPV 75.6 60.9 0.22 NPV 77.8 71.4 0.65 NPV 76.5 64.9 0.20 PPV 75.6 0.9 0.22 NPV 76.5 64.9 0.20 Specificity 76.5 64.9 0.20 >0% improvement by treatment 10 0.20 0.20 Sensitivity 86.5 88.9 0.80 Specificity 32.3 15.8 0.20	KDE defined improvement (>40% 10 Hz, >45% iTBS)				
Specificity 83.9 68.4 0.20 PPV 83.3 64.7 0.15 NPV 68.4 65.0 0.79 Total Accuracy 75.0 64.9 0.27 >10% improvement by treatment 10 5 5 5 Specificity 83.8 77.8 0.59 Specificity 67.7 52.6 0.29 PPV 75.6 60.9 0.22 NPV 77.8 71.4 0.65 Total Accuracy 76.5 64.9 0.20 PPV 75.6 60.9 0.22 NPV 77.8 71.4 0.65 Total Accuracy 76.5 64.9 0.20 >0% improvement by treatment 10 5 5 5 5 Sensitivity 86.5 88.9 0.80 5 Specificity 32.3 15.8 0.20	>20% improvement by treatment 10				
PPV 83.3 64.7 0.15 NPV 68.4 65.0 0.79 Total Accuracy 75.0 64.9 0.27 >10% improvement by treatment 10 52.6 0.29 Specificity 67.7 52.6 0.29 PPV 75.6 60.9 0.22 NPV 77.8 71.4 0.65 Total Accuracy 76.5 64.9 0.20 PPV 75.6 0.9 0.22 NPV 76.5 64.9 0.20 Specificity 86.5 88.9 0.80 Specificity 86.5 88.9 0.80	Sensitivity	67.6	61.1	0.64	
NPV 68.4 65.0 0.79 Total Accuracy 75.0 64.9 0.27 >10% improvement by treatment 10 500 500 Sensitivity 83.8 77.8 0.59 Specificity 67.7 52.6 0.29 PPV 75.6 60.9 0.22 NPV 77.8 71.4 0.65 Total Accuracy 76.5 64.9 0.20 >0% improvement by treatment 10 0.20 0.20 0.20 Sensitivity 86.5 88.9 0.80 Specificity 32.3 15.8 0.20	Specificity	83.9	68.4	0.20	
Total Accuracy 75.0 64.9 0.27 >10% improvement by reatment 10 <th>PPV</th> <th>83.3</th> <th>64.7</th> <th>0.15</th>	PPV	83.3	64.7	0.15	
Image: Sensitivity Image:	NPV	68.4	65.0	0.79	
Sensitivity 83.8 77.8 0.59 Specificity 67.7 52.6 0.29 PPV 75.6 60.9 0.22 NPV 77.8 71.4 0.65 Total Accuracy 76.5 64.9 0.20 >0% improvement by traitment 10 58.9 0.80 Specificity 32.3 15.8 0.20	Total Accuracy	75.0	64.9	0.27	
Specificity 67.7 52.6 0.29 PPV 75.6 60.9 0.22 NPV 77.8 71.4 0.65 Total Accuracy 76.5 64.9 0.20 >0% improvement by tratment 10 56.5 88.9 0.80 Specificity 32.3 15.8 0.20	>10% improvement by treatment 10				
PPV 75.6 60.9 0.22 NPV 77.8 71.4 0.65 Total Accuracy 76.5 64.9 0.20 >0% improvement by tratment 10 5 5 5 Sensitivity 86.5 88.9 0.80 Specificity 32.3 15.8 0.20	Sensitivity	83.8	77.8	0.59	
NPV 77.8 71.4 0.65 Total Accuracy 76.5 64.9 0.20 >0% improvement by t=timent 10 588.9 0.80 Specificity 32.3 15.8 0.20	Specificity	67.7	52.6	0.29	
Total Accuracy 76.5 64.9 0.20 >0% improvement by tratment 10 <th>PPV</th> <th>75.6</th> <th>60.9</th> <th>0.22</th>	PPV	75.6	60.9	0.22	
>0% improvement by treatment 10 Sensitivity 86.5 88.9 0.80 Specificity 32.3 15.8 0.20	NPV	77.8	71.4	0.65	
Sensitivity 86.5 88.9 0.80 Specificity 32.3 15.8 0.20	Total Accuracy	76.5	64.9	0.20	
Specificity 32.3 15.8 0.20	>0% improvement by treatment 10				
	Sensitivity	86.5	88.9	0.80	
	Specificity	32.3	15.8	0.20	
PPV 60.4 50.0 0.35	PPV	60.4	50.0	0.35	

(Continued)

TABLE 2 Continued

	10 Hz rTMS (n = 68)	iTBS (n = 37)	p value	
KDE defined improvement (>40% 10 Hz, >45% iTBS)				
NPV	66.7	60.0	0.79	
Total Accuracy	61.8	51.4	0.30	

Using PHQ-9 score percent changes at treatment 10 and the final treatment, confusion matrices were calculated for 10Hz rTMS and iTBS across an array of improvement criteria. Classically defined improvement in scores is >50% from baseline. Kernel density estimate calculations were used to determine data-driven non-responder populations to create more stringent and improvement criteria, which was determined to be >40% for 10Hz rTMS and >45% for iTBS. TTMS, repetitive transcranial magnetic stimulation; iTBS, intermittent theta burst stimulation; PPV, positive predictive value; NPV, negative predictive value; KDE, kernel density estimate.

The corrected sentence appears below:

"Conclusion: Patients who fail to achieve >10% improvement by t10 with both 10Hz rTMS and iTBS therapies have 70-80% chance of non-response to treatment."

A correction has been made to the **Results**, *Negative Predictive Analyses*, paragraph 1. This sentence previously stated:

"For participants who failed to reach >20% improvement at t10, the NPVs for 10Hz rTMS and iTBS were 80.0 and 65.0%, respectively: p = 0.22. When the improvement criterion was decreased to >10% improvement the NPV for 10Hz and iTBS decreased to 62.9 and 50.0%: p = 0.35. Lastly, at >0% improvement the NPV for 10Hz and iTBS decreased further to 45.7 and 5.0%: p = 0.44."

The corrected sentence appears below:

"For participants who failed to reach >20% improvement at t10, the NPVs for 10Hz rTMS and iTBS were 73.7 and 65.0%, respectively: p = 0.49. When the improvement criterion was decreased to >10% improvement the NPVs for 10Hz and iTBS were 81.5 and 71.4%: p = 0.46. Lastly, at >0% improvement the NPVs for 10Hz and iTBS decreased to 73.3 and 60.0%: p = 0.58."

A correction has been made to the **Results**, *Negative Predictive Analyses*, paragraph 2. The sentence previously stated:

"At >20% improvement at 110, the NPV for 10Hz rTMS and iTBS were 83.9 and 68.4%, respectively: p = 0.20. Then at >10% improvement the NPV for 10Hz and iTBS decreased to 67.7 and 52.6%: p = 0.28. Lastly, at >0% improvement the NPV for 10Hz and iTBS decreased further to 48.4 and 36.8%: p = 0.44."

The corrected sentence appears below:

"At >20% improvement at t10, the NPVs for 10Hz rTMS and iTBS were 68.4 and 65.0%, respectively: p =0.79. Then at >10% improvement the NPVs for 10Hz and iTBS were 77.8 and 71.4%: p = 0.65. Lastly, at >0% improvement the NPVs for 10Hz and iTBS decreased to 66.7 and 60.0%: p = 0.79."

A correction has been made to the **Discussion**, paragraph 1. This sentence previously stated:

"Our data demonstrated that as the early treatment improvement criterion increased, so did the NPVs of both 10Hz rTMS and iTBS, while maintaining no significant differences between the two modalities." The corrected sentence appears below:

"Our data demonstrated no significant differences between the two modalities."

A correction has been made in the **Discussion**, paragraph 3. This sentence previously stated:

"Regarding the precision of the predictive capabilities, our data was comparable with previous studies in that a 20% improvement cut-off by treatment 10 achieved the best NPV as a predictor of rTMS treatment response."

The corrected sentence appears below:

"Regarding the precision of the predictive capabilities, our data suggested that a 10% improvement cut-off by treatment 10 achieved the best NPV as a predictor of rTMS treatment response, whereas other published literature found 20% to have the highest NPV."

A correction has been made to the **Discussion**, Strengths, paragraph 2. This sentence previously stated:

"In general, our study found that non-response to iTBS or 10Hz treatment for major depressive disorder can be predicted with ~70% accuracy in patients exhibiting at least 20% improvement after 10 sessions. Our results will help inform future clinical trials designed to investigate what parameter changes may increase response rates at t10. In addition, although ~70% accuracy may not be robust enough to create stringent treatment parameters for psychiatrists across the map, this data may help guide treatment decisions by identifying patients at risk for treatment non-response at the 2-week time point so therapeutic adjustments can be made to enhance treatment response."

The corrected sentence appears below:

"In general, our study found that non-response to iTBS or 10 Hz treatment for major depressive disorder can be predicted with 70 to 80% accuracy in patients exhibiting at least 10% improvement after 10 sessions. Our results will help inform future clinical trials designed to investigate what parameter changes may increase response rates at t10. In addition, although 70 to 80% accuracy may not be robust enough to create stringent treatment parameters for psychiatrists across the map, this data may help guide treatment decisions by identifying patients at risk for treatment non-response at the 2-week time point so therapeutic adjustments can be made to enhance treatment response."

The authors apologize for these errors and state that these do not change the scientific conclusions of the article in any way. The original article has been updated.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.