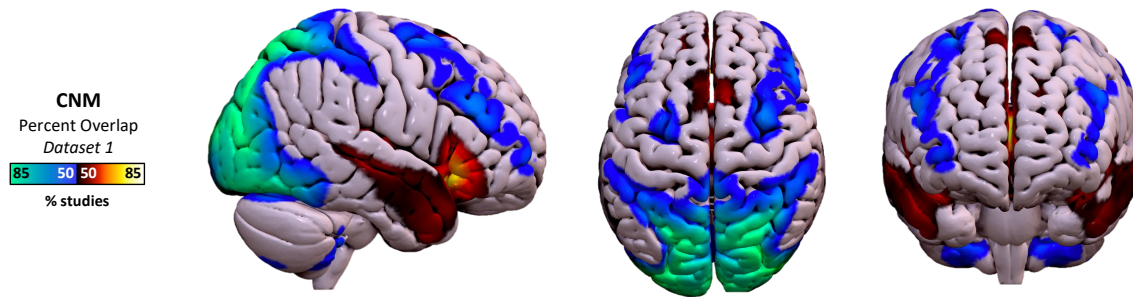


## Supplementary Information



**Supplementary Figure 1.** A surface projection of the transdiagnostic network, thresholded at 50% of studies ( $t=5$ ).

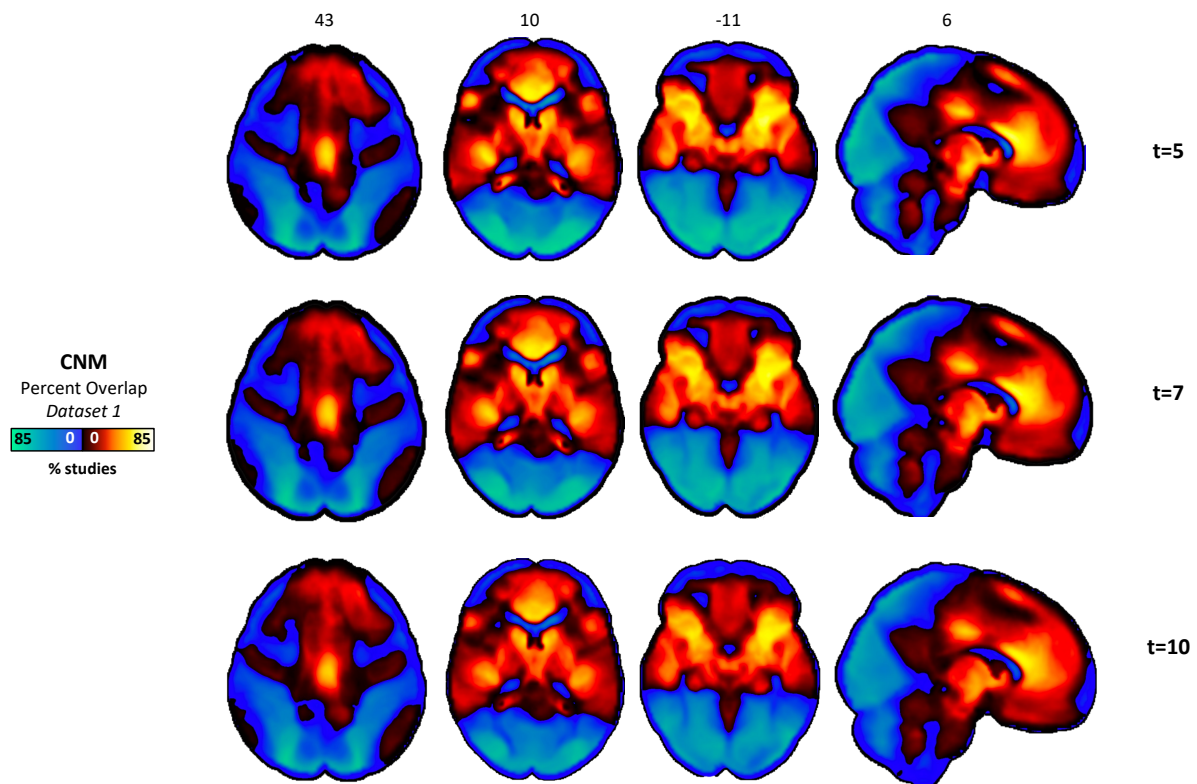
## POSITIVE CONNECTIVITY

Cluster Size	Threshold	Min Ext	Coordinates			Region
mm <sup>3</sup>	t>		x	y	z	
390	12	40	-2	22	18	Anterior Cingulate
358	12	40	-30	10	-14	L Insula
202	12	40	32	12	-14	R insula
83	12	40	-6	-14	36	Posterior Cingulate
41	12	40	-20	40	24	L frontal pole

## NEGATIVE CONNECTIVITY

Cluster Size	Threshold	Min Ext	Coordinates			Region
mm <sup>3</sup>	t>		x	y	z	
1149	12	40	58	-58	-24	R inferior temporal gyrus
843	12	40	18	-68	68	R lateral occipital cortex (superior division)
698	12	40	-18	-72	64	L lateral occipital cortex (superior division)
119	12	40	0	-48	-68	Brainstem
49	12	40	2	-78	-44	Cerebellum

**Supplementary Table 1.** Significant clusters of a composite t-map network map generated from study-level functional connectivity maps using a voxel-wise one-sample t-test, with Bonferroni correction.



**Supplementary Figure 2.** The topography of the transdiagnostic network is robust across statistical thresholds.

**A**

Spatial Correlation with Full Map		
Diagnosis Removed	CNM (+/-)	ALE
MDD	0.992	0.441
SUD	0.997	0.44
BPAD	0.997	0.437
SCZ	0.980	0.344
PANIC	0.998	0.453
OCD	0.995	0.448
PTSD	0.997	0.453

CNM (+/-) vs. ALE

7.47564E-14

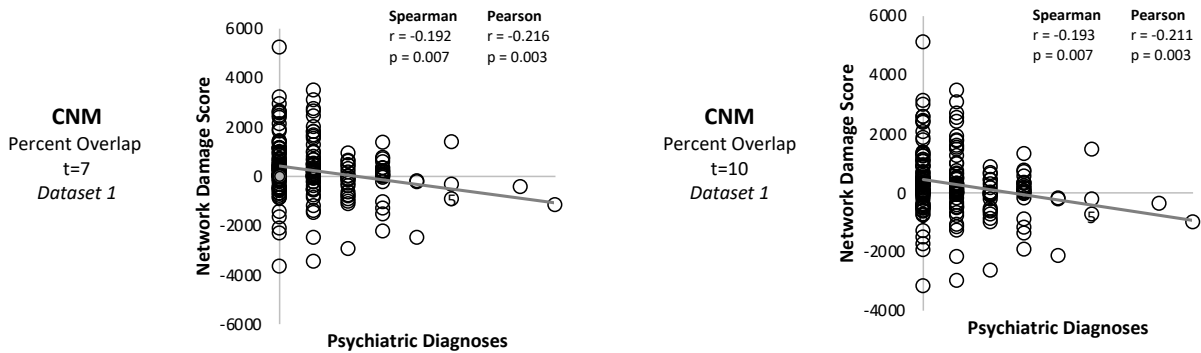
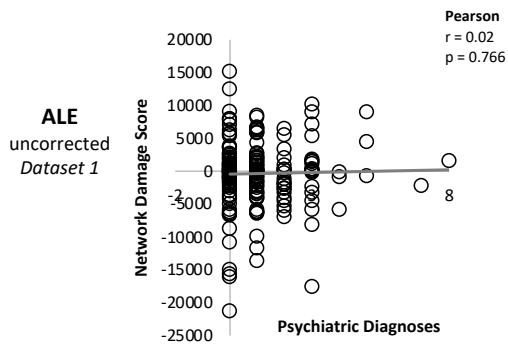
**B**

Spatial Correlation with Full Map		
Diagnosis Removed	CNM (+)	ALE
MDD	0.995	0.441
SUD	0.998	0.44
BPAD	0.997	0.437
SCZ	0.989	0.344
PANIC	0.998	0.453
OCD	0.997	0.448
PTSD	0.998	0.453

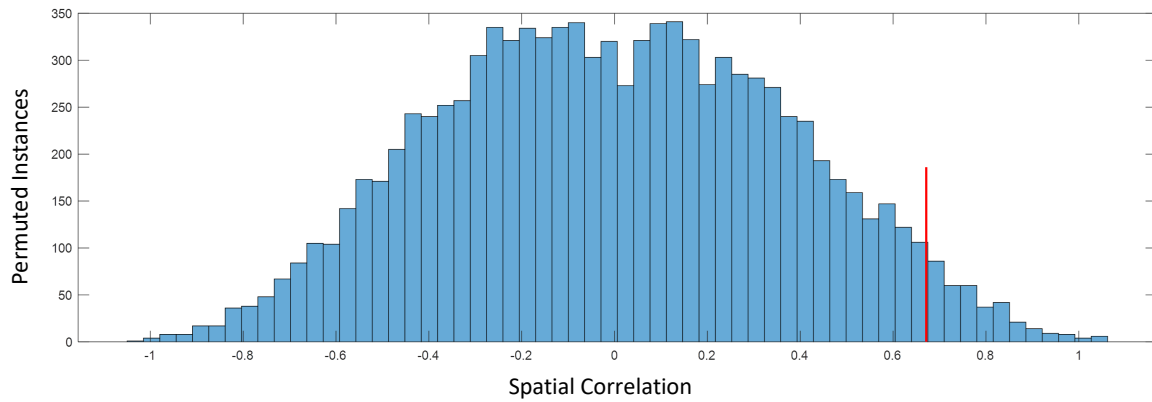
CNM (+) vs. ALE

6.31186E-14

**Supplementary Table 2.** The transdiagnostic network from coordinate network mapping was significantly more robust to leave-one-diagnosis-out analyses than the ALE map. (A) Analyses on the coordinate network map with positive and negative connectivity. (B) Analyses on the coordinate network map with only positive connectivity.

**A****B**

**Supplementary Figure 3.** (A) Lesions with positive network damage scores on the transdiagnostic map were correlated with lower psychiatric comorbidity. By contrast, lesions with negative network damage scores on the transdiagnostic map were correlated with higher psychiatric comorbidity. These results were significant at various statistical thresholds (t=7, Pearson  $r=-0.216$ ,  $p=0.003$ ; t=10, Pearson  $r=-0.211$ ,  $p=0.003$ ). (B) Lesion damage to the unthresholded ALE map was not correlated with psychiatric comorbidity (Pearson  $r=0.02$ ,  $p=0.766$ ).



**Supplementary Figure 4.** Histogram showing the spatial correlation of each randomly permuted lesion network to the transdiagnostic network. The spatial correlation of the real lesion network to the transdiagnostic network was  $r = 0.65$ .

<b>Yeo Network</b>	<b>CNM</b>	<b>LNМ</b>
Visual	0.48	0.38
Dorsal Attention	0.32	0.37
Frontoparietal	0.06	0.11
Limbic	-0.04	-0.24
Motor	-0.07	-0.18
Ventral attention	-0.14	-0.08
Default Mode	-0.34	-0.39

**Supplementary Table 3.** The transdiagnostic map may have unique elements than vary from canonical networks. No single Yeo network showed a higher spatial correlation to the transdiagnostic network or the lesion network than the two networks showed to each other ( $r=0.65$ ).