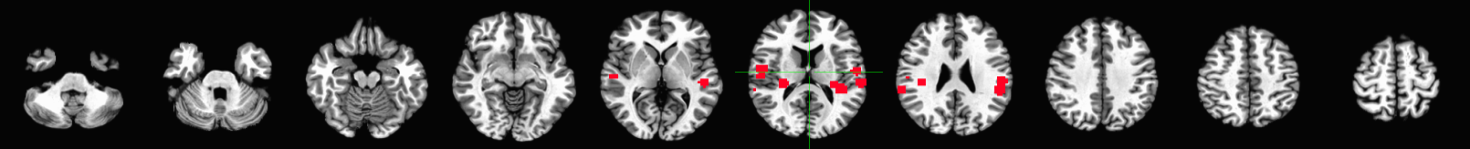
**Supplementary materials**

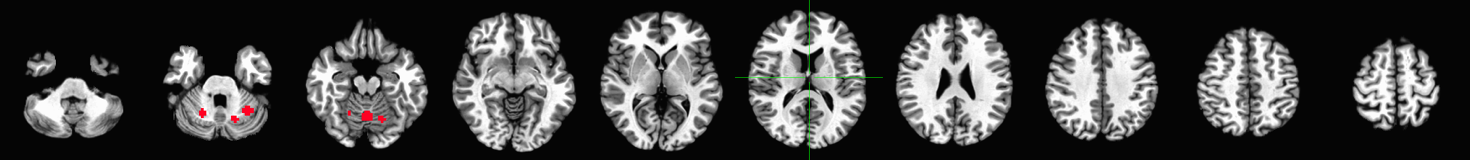
**Table S1. Network ROI analysis**

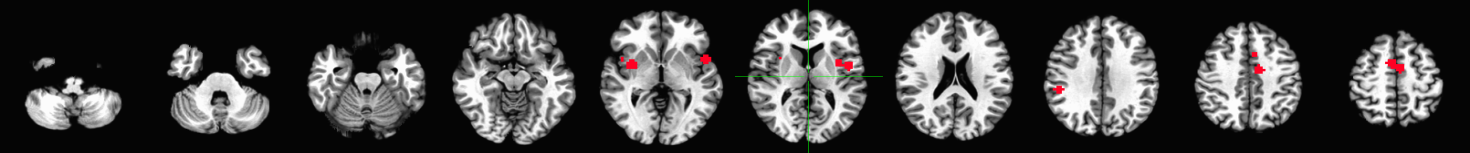
|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **AN (25)** | **BN (16)** | **CN (17)** | **F** | **p** | **Post hoc** |
| **SS** | -0.362 ± 0.090 | -0.351 ± 0.046 | -0.347 ± 0.073 | 0.257 | .774 |  |
| **Sal** | -0.399 ± 0.063 | -0.396 ± 0.584 | -0.448 ± 0.042 | 4.839 | **.012** | AN, BN < CN |
| **DMN** | -0.237 ± 0.047 | -0.247 ± 0.051 | -0.228 ± 0.046 | 0.621 | .541 |  |
| **Audi** | -0.445 ± 0.044 | -0.463 ± 0.052 | -0.478 ± 0.039 | 2.808 | .069 |  |
| **VA** | -0.372 ± 0.047 | -0.380 ± 0.049 | -0.425 ± 0.038 | 7.311 | **.002** | AN, BN < CN |
| **MR** | -0.277 ± 0.111 | -0.314 ± 0.081 | -0.311 ± 0.105 | 0.872 | .424 |  |
| **DA** | -0.418 ± 0.050 | -0.392 ± 0.059 | -0.411 ± 0.056 | 1.156 | .322 |  |
| **Sub** | -0.353 ± 0.076 | -0.362 ± 0.085 | -0.407 ± 0.070 | 2.660 | .079 |  |
| **FPTC** | -0.351 ± 0.055 | -0.343 ± 0.047 | -0.383 ± 0.048 | 2.930 | .062 |  |
| **COTC** | -0.395 ± 0.048 | -0.385 ± 0.068 | -0.436 ± 0.053 | 4.190 | **.020** | BN < CN |
| **CB** | -0.479 ± 0.058 | -0.469 ± 0.074 | -0.509 ± 0.049 | 1.993 | .146 |  |

*AN= Anorectic Patients; BN= Bulimic Patients; CN= Healthy Controls. CB= Cerebellum Network; COTC= Cingular Operculum Task Control Network; FPTC= Frontal Parietal Temporal Network; SUB= Subcortical Network; DA= Dorsal Attention Network; MR= Medial Regional Network; (MR), VAN= Ventral Attention Network; AUD= Auditory Network; DMN= Default Mode Network; SAL= Salience Network; SS = Somato Sensitive Network.*

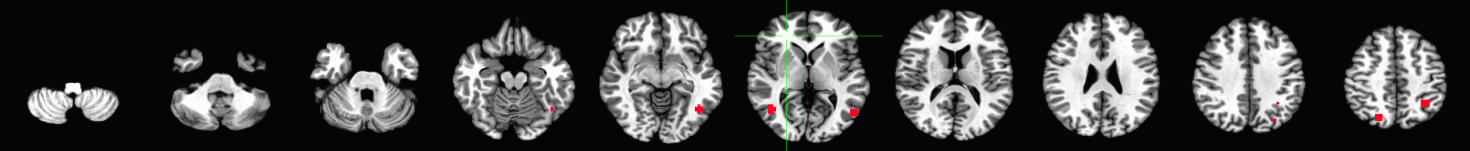
**Figure S1. Regions of interest (ROI) of the sample.**

1. Auditory Network

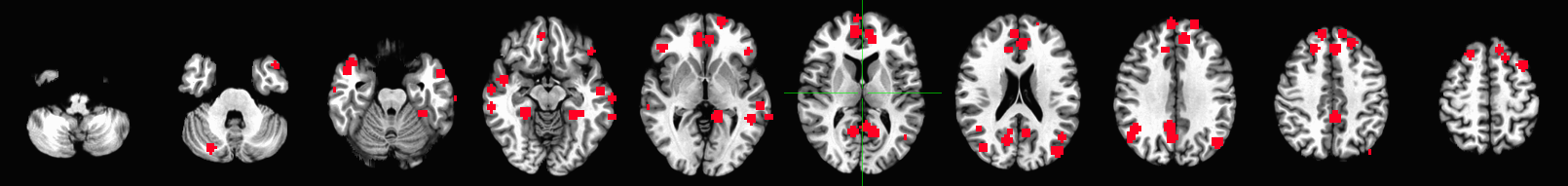
2. Cerebellum Network

3.Cingular Operculum Task Control Network

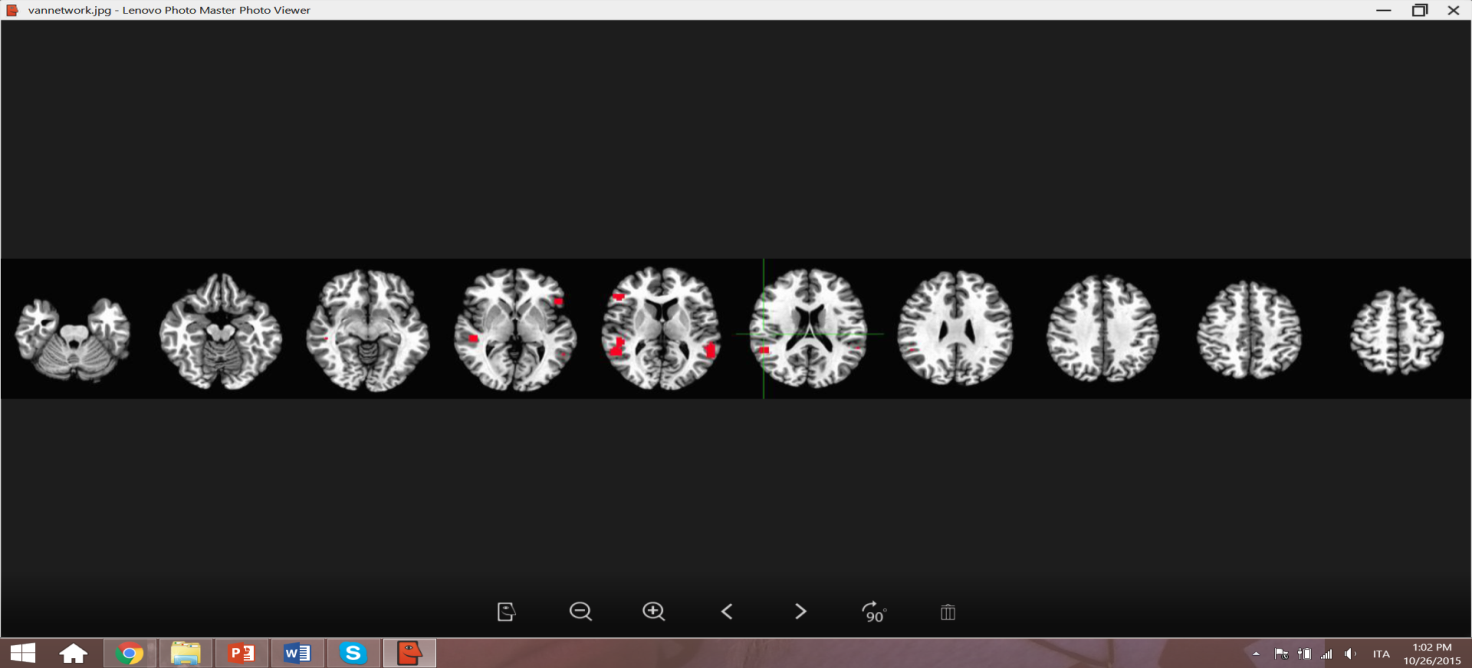
4. Dorsal Attention Network



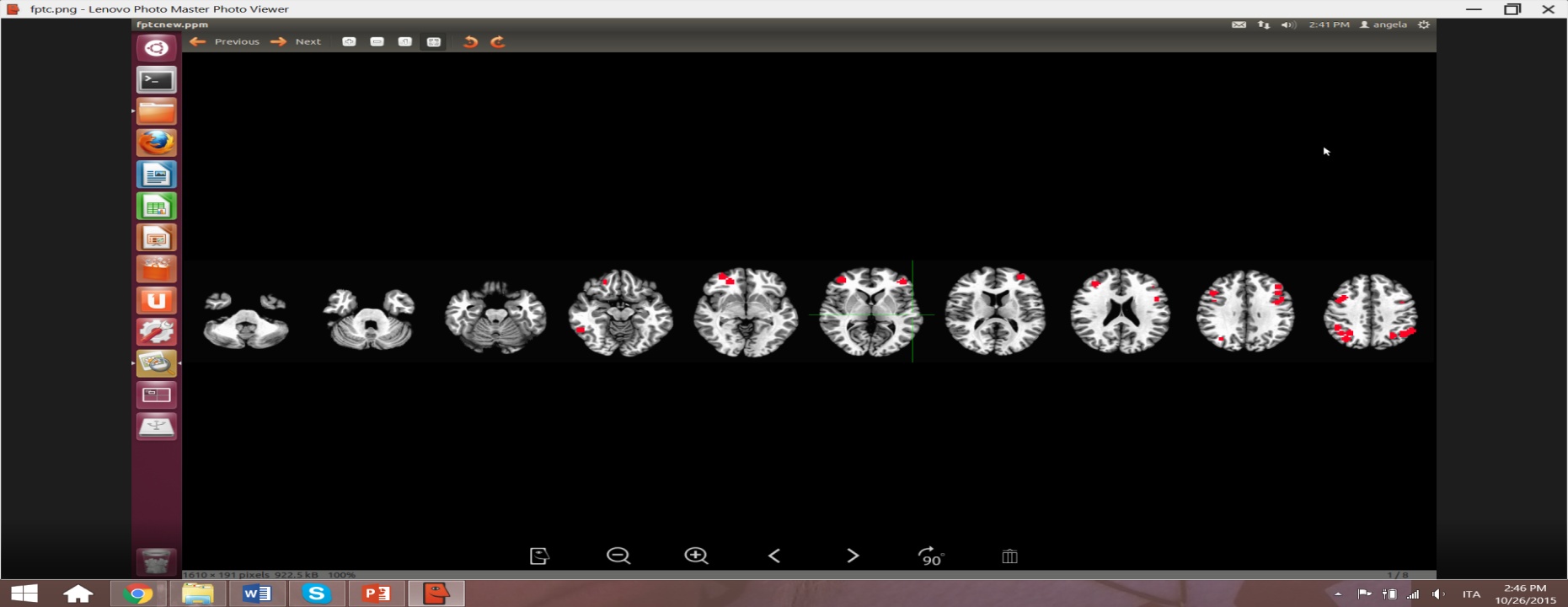
5. Default Mode Network



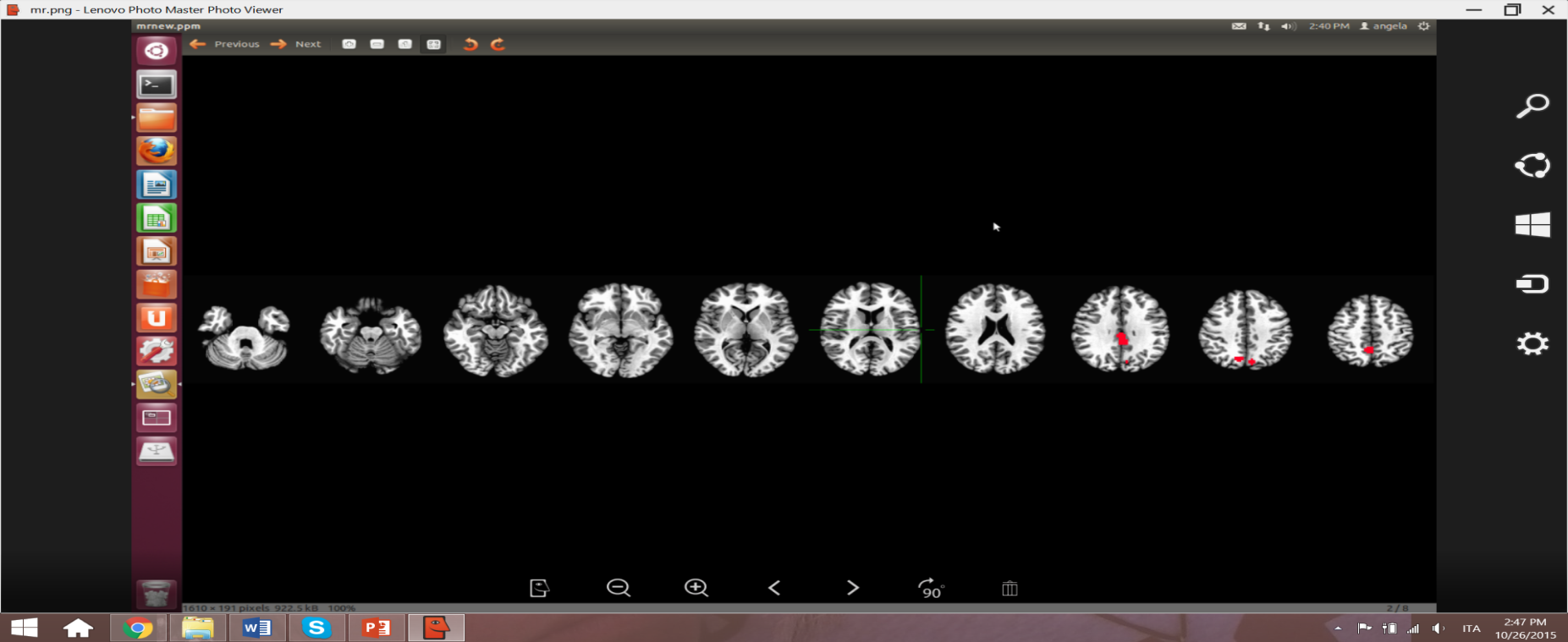
6. Ventral Attention Network



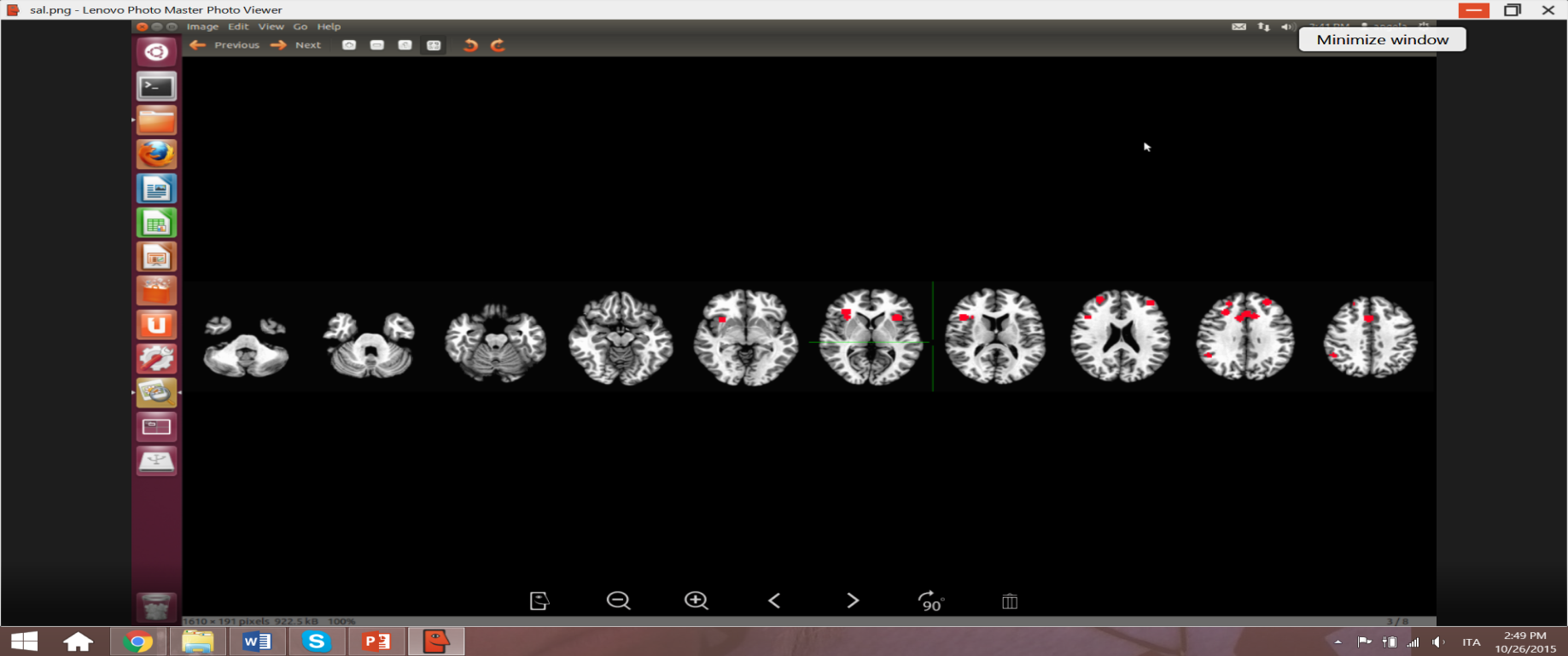
7.FPTC= Frontal Parietal Temporal Network



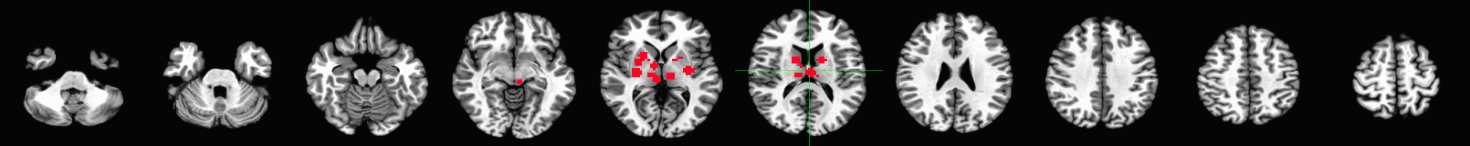
8. Medial Region Network



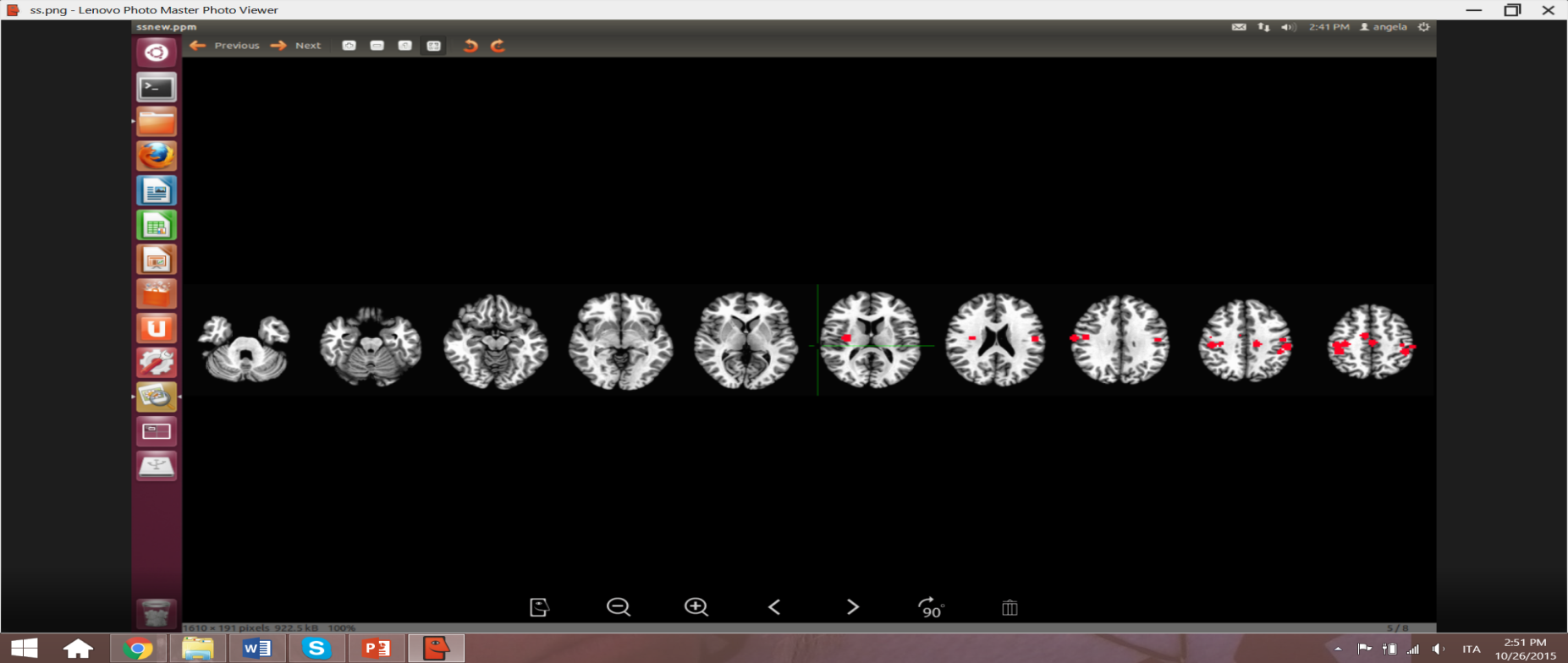
9. Salience Network



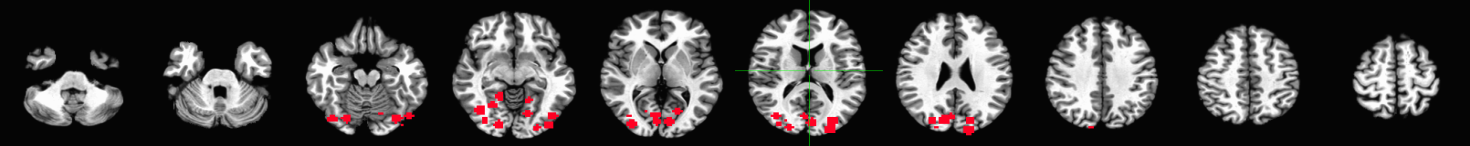
10. Subcortical Network



11. Somato Sensitive Network



12. Visual network



*fMRI analysis on the whole sample by the extraction of signal from 11 specified regions of interest (ROI) and their characteristics.*

**Table S2. Comparison of neuronal variability of Slow 5 and Slow 4 within Ventral Attention Network between patients and controls (a) and between the three subgroups.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Patients** | **Controls** | **t** | **p** |
| Slow 5 | -0.348 ± 0.093 | -0.382 ± 0.077 | -1.305 | .197 |
| Slow 4 | -0.359 ± 0.052 | -0.401 ± 0.049 | -2.754 | **0.008** |

*Table S4 a. Patients = Patients with Anorexia Nervosa + Patients with Bulimia Nervosa; Controls = Healthy controls.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | AN | BN | CN | f | P |
| Slow 5 | -0.349 ± 0.095 | -0.345 ± 0.096 | -0.381 ± 0.075 | .820 | .446 |
| Slow 4 | -0.365 ± 0.044 | -0.351 ± 0.065 | -0.400 ± 0.048 | 4.119 | .022 |

*Table S4 b. AN= Anorectic Patients; BN= Bulimic Patients; CN= Healthy Controls.*