### Supplemental Table 1. Multivariate modeling of cortical surface area and gyrification index by cumulative seizure burden

|                        | T value | P value |
|------------------------|---------|---------|
| **Cortical surface area** |         |         |
| Left                   | -3.71   | <0.01   |
| Right                  | -3.67   | <0.01   |
| Average CSA            | -3.71   | <0.01   |
| **Gyrification index** |         |         |
| Left                   | -1.22   | 0.22    |
| Right                  | -1.65   | 0.10    |
| Average GI             | -1.46   | 0.14    |

Footnote: All models adjusted for gestational age, antenatal steroids, WMI severity, IVH severity, presence of CH, necrotizing enterocolitis, culture positive sepsis, BPD, and postnatal steroid exposure.
### Supplemental Table 2. Neurodevelopmental outcomes

|                                | Sample (N=82) |
|--------------------------------|---------------|
| Cognitive composite score, median (range) | 85 (55-110) |
| Language composite score, median (range)   | 89 (53-121) |
| Motor composite score, median (range)      | 85 (46-103) |
| Moderate or severe impairment, n (%)\(^a\) | 52 (63) |
| Severe impairment, n (%)\(^b\)            | 12 (15) |

Footnotes: \(^a\)Defined as any one Bayley component score <85, \(^b\)Defined as any Bayley component score <70