

Table 1. Biomarkers in neonates with and without HIE (Ranked by Significance)

| Biomarker | Mean Difference | 95% CI | p-value | Overall effect Z | Heterogeneity |
|---|------------------------|---------------|----------------|-------------------------|----------------------|
| Tumor necrosis factor-alpha, pg/ml | 3.34 | 2.52–4.15 | <0.00001 | 8.05 | 62% |
| Prooxidant-antioxidant balance, HK | 0.80 | 0.59–1.00 | <0.00001 | 7.55 | 0% |
| Nucleated red blood cells, /100 WBC | 1.81 | 1.14–2.49 | <0.00001 | 5.28 | 96% |
| Activin-A, ng/ml | 0.88 | 0.52–1.24 | <0.00001 | 4.85 | 0% |
| Troponin, ng/l | 6.13 | 3.33–8.93 | <0.00001 | 4.29 | 99% |
| Creatine kinase-BB, ng/l | 1.80 | 0.97–2.62 | <0.00001 | 4.28 | 47% |
| Interleukin-6, pg/ml | 1.38 | 0.67–2.09 | 0.0001 | 3.83 | 93% |
| Neutrophil gelatinase-associated lipocalin, ng/ml | 2.31 | 1.11–3.51 | 0.0002 | 3.77 | 86% |
| Malondialdehyde, μ mol/l | 2.57 | 1.17–3.97 | 0.0003 | 3.6 | 91% |
| Neurofilament light protein, pg/ml | 0.65 | 0.29–1.01 | 0.0004 | 3.56 | 0% |
| Interleukin-16, pg/ml | 0.45 | 0.18–0.73 | 0.001 | 3.28 | 3% |
| Interleukin-1, pg/ml | 2.84 | 1.14–4.53 | 0.001 | 3.28 | 97% |
| Creatine kinase-MB, ng/ml | 2.63 | 0.96–4.31 | 0.002 | 3.08 | 98% |
| S100 calcium-binding protein B, pg/ml | 2.74 | 0.94–4.54 | 0.003 | 2.99 | 96% |
| Glial fibrillary acidic protein, ng/ml | 0.98 | 0.28–1.67 | 0.006 | 2.76 | 84% |
| Neuronal protein tau, pg/ml | 0.62 | 0.15–1.10 | 0.010 | 2.58 | 0% |
| Hypoxanthine, μ mol/l | 0.60 | 0.12–1.09 | 0.010 | 2.44 | 54% |
| Neuron-specific enolase, ng/ml | 3.22 | 0.55–5.90 | 0.020 | 2.36 | 97% |

HIE, hypoxic-ischemic encephalopathy; CI, confidence intervals