## Glasgow-Liege Scores

Overview: The Glasgow-Liege Scores combines the status of the brain stem reflexes and the Glasgow Coma Scale. From this score it is possible to estimate the probability of a comatose patient's outcome.

| Brain Stem Reflex | Finding | Score |
|---|---|---|
| fronto-orbicular reflex | on one side | 5 |
| vertical oculocephalic reflex | in one eye | 4 |
| papillary light reflex | in one eye | 3 |
| horizontal oculocephalic reflex | in one eye | 2 |
| oculocardiac reflex | present | 1 |
| oculocardiac reflex | absent | 0 |

Glasgow-Liege Scale = (Glasgow Coma Scale) + (Brain Stem Reflex Score)

where:

• maximum score = maximum GCS + maximum BSRS = 15 + 5 = 30

• minimum score = minimum GCS + minimum BSRS = 3 + 0 = 3

probability of a good recovery or moderate disability = (1 / (1 + (e ^ (S1)) + (e ^ (S2))))

probability of severe disability or vegetative state = (e ^ (S2)) * (1 / (1 + (e ^ (S1)) + (e ^ (S2))))

probability of death = (e ^ (S1)) * (1 / (1 + (e ^ (S1)) + (e ^ (S2))))

where:

• S1 = 10.00 - (1.63 * (Glasgow-Liege Scale)) + (0.16 * (age in years))

• S2 = 6.30 - (1.00 * (Glasgow-Liege Scale)) + (0.08 * (age in years))

References:

Contant CF Jr Narayan RK. Chapter 74: Prognosis after head injury. pages 1792-1812. IN: Youmans JR. Neurological Surgery Fourth Edition. WB Saunders Company. 1996.