|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Time of ONSD performance** | **N** | **Measured Outcome** | **ONSD Measurements - mm****(IQR or SD)** | **Prognostic performance** |
| **Cut-off (mm)** | **Se****(%)** | **Sp****(%)** | **AUC****(95%CI)** |
| You Y et al., 2018 [1] | Before initiation of TTM | 83 | CPC at 3 months * CPC 1-2 (good): 28 (34%)
* CPC 3-5 (poor): 55 (66%)
 | ***Time (N)*** | ***Good outcome*** | ***Poor outcome*** |  |  |  |  |  |
| d1 | 4.48(4.27-5.09) | 5.29(4.5-5.76) | .008 | 5.11 | 56.4 | 78.6 | .677(.56-.78) |
| Ueda T et al., 2015 [2] | 12-72 hrs post CA(retrospective) | 17 | GOS at 28 days* GOS 4-5 (good): 6 (35%)
* GOS 1-3 (poor): 11 (65%)
 | d1-3 | 5.00(4.4-6.1) | 6.1(5.4-7.2) |  | 5.4 | 83 | 73 | .88(.69-1) |
| Ertl M et al., 2018 [3] | 4 measurements (admission day x 2, day 2 and day 3) | 49 | Survival: S 46%/NS 54%* CPC 1-2 (good): 15 (31%)
* CPC 3-4 (poor): 8 (15%)
* CPC 5 (death): 26 (54%)
 |  | ***Survivors*** | ***Non-survivors*** |  |  |  |  |  |
| Adm (49) | 5.36 (± .43) | 5.88 (± .44) | < .001 | 5.75 | 60 | 100 | NR |
| d1B (28) | 5.54 (± .31) | 5.88 (± .39) | .021 |
| d2 (37) | 5.56 (± .60) | 6.01 (± .39) | .011 | - | - | - | - |
| d3 (32) | 5.63 (± .58) | 6.00 (± 0.37) | .047 | - | - | - | - |
| Chelly J et al., 2016 [4] | 3 measurements (day 1, 2 and 3) | 36 | Survival: S 53%/NS 47% CPC 1-2: 14 (39%) | d1 (36) | 6.5 (6.4-7.2) | 7.2 (6.8-7.4) | P= .008 | 6.7 | 88 | 79 | 0.91 |
| d2 (21) | 6.7 (6.2-6.9) | 7.1 (6.9-7.4) | P= .1 | - | - | - | - |
| d3 (14) | 6.1 (6.0-6.6) | 7.3 (7.2-7.5) | P= .05 | - | - | - | - |
| ESMTable2a . Summary of studies exploring US-ONSD prognostic performance |
| Adm: Admission; AUC: Area Under the Curve; CI: Confidence Interval; CPC: Cerebral Performance Category; d: Day; GOS: Glasgow Outcome Scale; IQR: Inter-Quartile Range; SD: Standard Deviation; Se: Sensitivity; Sp: Specificity; TTM: Targeted Temperature Management |

 1. You Y, Park J, Min J, et al (2018) Relationship between time related serum albumin concentration, optic nerve sheath diameter, cerebrospinal fluid pressure, and neurological prognosis in cardiac arrest survivors. Resuscitation 131:42–47. https://doi.org/10.1016/j.resuscitation.2018.08.003

2. Ueda T, Ishida E, Kojima Y, et al (2015) Sonographic Optic Nerve Sheath Diameter: A Simple and Rapid Tool to Assess the Neurologic Prognosis After Cardiac Arrest. J Neuroimaging 25:927–930. https://doi.org/10.1111/jon.12246

3. Ertl M, Weber S, Hammel G, et al (2018) Transorbital Sonography for Early Prognostication of Hypoxic-Ischemic Encephalopathy After Cardiac Arrest. J Neuroimaging 28:542–548. https://doi.org/10.1111/jon.12528

4. Chelly J, Deye N, Guichard JP, et al (2016) The optic nerve sheath diameter as a useful tool for early prediction of outcome after cardiac arrest: A prospective pilot study. Resuscitation 103:7–13. https://doi.org/10.1016/j.resuscitation.2016.03.006