**Question:** Do brain CT or brain MRI assessed within one week from cardiac arrest predict favorable neurologic outcome at hospital discharge to 6 months after arrest for patients comatose after cardiac arrest?

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Certainty Assessment | | | | | | | Certainty | Importance |
| No of Studies | Study Design | Risk of Bias | Inconsistency | Indirectness | Imprecision | Other Considerations |

**Grey matter to white matter ratio (GWR) >1.25 on brain CT**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Observational study (67 patients) | Seriousa | Not serious | Not serious | Seriousb |  | Very low | Critical |

**Quantitative regional abnormality (QRA) ≤5 on brain CT**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Observational study (67 patients) | Seriousa | Not serious | Not serious | Seriousb |  | Very low | Critical |

**Alberta Stroke Program Early CT Score (ASPECTS-b) ≥15 on brain CT**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Observational study (67 patients) | Seriousa | Not serious | Not serious | Seriousc |  | Very low | Critical |

**Reduced diffusion on brain MRI**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 5 | Observational studies (300 patients) | Seriousa | Seriousd | Not serious | Seriouse | Heterogeneity did not allow pooling to generate effect estimates | Very low | Critical |

**Absence of Gradient-Recalled Echo (GRE) changes on brain MRI**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | Observational study (39 patients) | Seriousa | Not serious | Not serious | Seriousf |  | Very low | Critical |

#### Explanations

a Moderate risk of bias due to confounding and low study participation.

b Sensitivity 25 [9-49]. Specificity 77 [62-88]].

c Sensitivity 75 [51-91]. Specificity 89 [77-96]].

d The time of measurement and the definitions of absent diffusion changes on MRI were inconsistent across studies. In one study, good outcome was described as CPC 1-3 instead of CPC 1-2.

e Sensitivity ranged from 50 [26–74] to 100 [87–100]. Specificity ranged from 88.7 [82.1–93.5] to 100 [97.9–100].

f Sensitivity 75 [43-95]. Specificity 100 [90-100].