

**Cardiac Catheterization Laboratory  
Chiangrai Prachanukroh Hospital  
CR-TTM Standing Order**

**M5.2.**

**TTM**



| <b>First EKG rhythm</b>  | <b>Cause of arrest</b>  |  | <b>Neurological assessment</b>  |   |                 |   |
|--|---|--|---|---|-----------------|---|
| <input type="checkbox"/> VF<br><input type="checkbox"/> VT<br><input type="checkbox"/> Unknown rhythm but responsive to shock<br><input type="checkbox"/> PEA<br><input type="checkbox"/> _____  | <input type="checkbox"/> STEMI<br><input type="checkbox"/> NSTEMI/UA<br><input type="checkbox"/> Electrical injury<br><input type="checkbox"/> _____  |  | <b>GCS = _____</b><br>Brain stem sign<br>Pupil<br>Corneal<br>Doll's eye<br>Gag<br>Spont. breathing<br>Myoclonus | E   | V               | M |
|  |   |  |   | <b>positive</b>   | <b>negative</b> |   |
|  |   |  |   |   |                 |   |
|  |   |  |   |   |                 |   |
|  |   |  |   |   |                 |   |
| <b>Inclusion criteria</b><br>(must have <b>ALL 5 items</b> )   |   |  |   |   |                 |   |
| <input type="checkbox"/> Non-traumatic cardiac arrest<br><input type="checkbox"/> CPR time <60 min<br><input type="checkbox"/> ROSC >20 min<br><input type="checkbox"/> GCS <8 or <5T<br><input type="checkbox"/> Start TTM<12 hr after arrest | <b>Exclusion criteria</b> (have <b>ONLY 1 item</b> is contraindication)   |  |   |   |                 |   |
|  | <input type="checkbox"/> Pregnancy<br><input type="checkbox"/> Intracranial hemorrhage<br><input type="checkbox"/> Acute ischemic stroke<br><input type="checkbox"/> First EKG rhythm is asystole |  |   | <input type="checkbox"/> Active bleeding/coagulopathy<br><input type="checkbox"/> BT before TTM was <30 °C<br><input type="checkbox"/> Severe disability<br><input type="checkbox"/> MAP <75 mmHg on inotrope |                 |   |

| <b>Date</b>                               | <b>Time</b> | <b>Order for one day</b>  | <b>Order for continuation</b>   |
|---|-------------|---|---|
| BW ____ kg                                |             | <input type="checkbox"/> CT brain NC emergency<br><input type="checkbox"/> CXR<br><input type="checkbox"/> A-line & C-line insertion<br><input type="checkbox"/> Core temperature probe insertion<br><input type="checkbox"/> TTM lab q 6 hr CBC PT PTT DTX<br>BUN Cr E'lyte Ca Mg P lactate ABG<br><input type="checkbox"/> H/C x2 sp  | <input type="checkbox"/> NPO except med<br><input type="checkbox"/> Record V/S, I/O<br>Medication<br><input type="checkbox"/> Omeprazole 40 mg IV q 12hr<br><input type="checkbox"/> Paracet (500) 1-2 tabs PO prn BT>37.5 C q 6 hr |
| <b>Cooling phase</b>                      |             |   |   |
| Hr.0                                      | ____ : ____ | <input type="checkbox"/> Start TTM set target 33 CELCIUS<br><input type="checkbox"/> Cold NSS (4 °C) ____ ml (30 ml/kg) IV in 30 min via C-line hold if frank pulmonary edema or core BT <34 °C<br><input type="checkbox"/> Midazolam ____ mg (0.1 mg/hr) IV bolus then 100 mg (20 amps) + NSS 100 ml (1:1) IV ____ mg/hr (0.1 mg/kg/hr)<br><input type="checkbox"/> Cistracurium ____ mg (0.1 mg/hr) IV bolus then 100 mg (10 amps) + NSS 100 ml (1:1) IV ____ mg/hr (0.1 mg/kg/hr)<br><input type="checkbox"/> V/S q 15 min until achieve target 33 °C then q 1 hr<br><input type="checkbox"/> Consult neuromed if myoclonus or seizure |   |
| <b>Achieve target 33 °C</b>               |             |   |   |
|   |             | <input type="checkbox"/> Keep target 33 °C for 24 hrs   |   |
| <b>Rewarm phase</b>                       |             |   |   |
| Hr.                                       | ____ : ____ | <input type="checkbox"/> Gradually raised BT 0.5 °C/hr to 37 C then <b>OFF</b> blanket<br><input type="checkbox"/> TTM lab q 12 hr (hr.36, 48)<br><input type="checkbox"/> Pethidine 12.5 mg IV bolus if chill  |   |
| Hr.36                                     | ____ : ____ |   |   |
| <b>Complete TTM protocol</b>              |             |   |   |
| Hr.108                                    | ____ : ____ | <input type="checkbox"/> Stop cistracurium first, then wean off midazolam   |   |
| <b>Neurological reassessment @ Hr.108</b> |             |   |   |
|   |             |   | _____ (doctor sign)<br>Ver 1.2 26/8/62  |

HN sticker