

# DETERMINING BRAIN DEATH

Notify Tennessee Donor Services (TDS): 1-800-969-4438

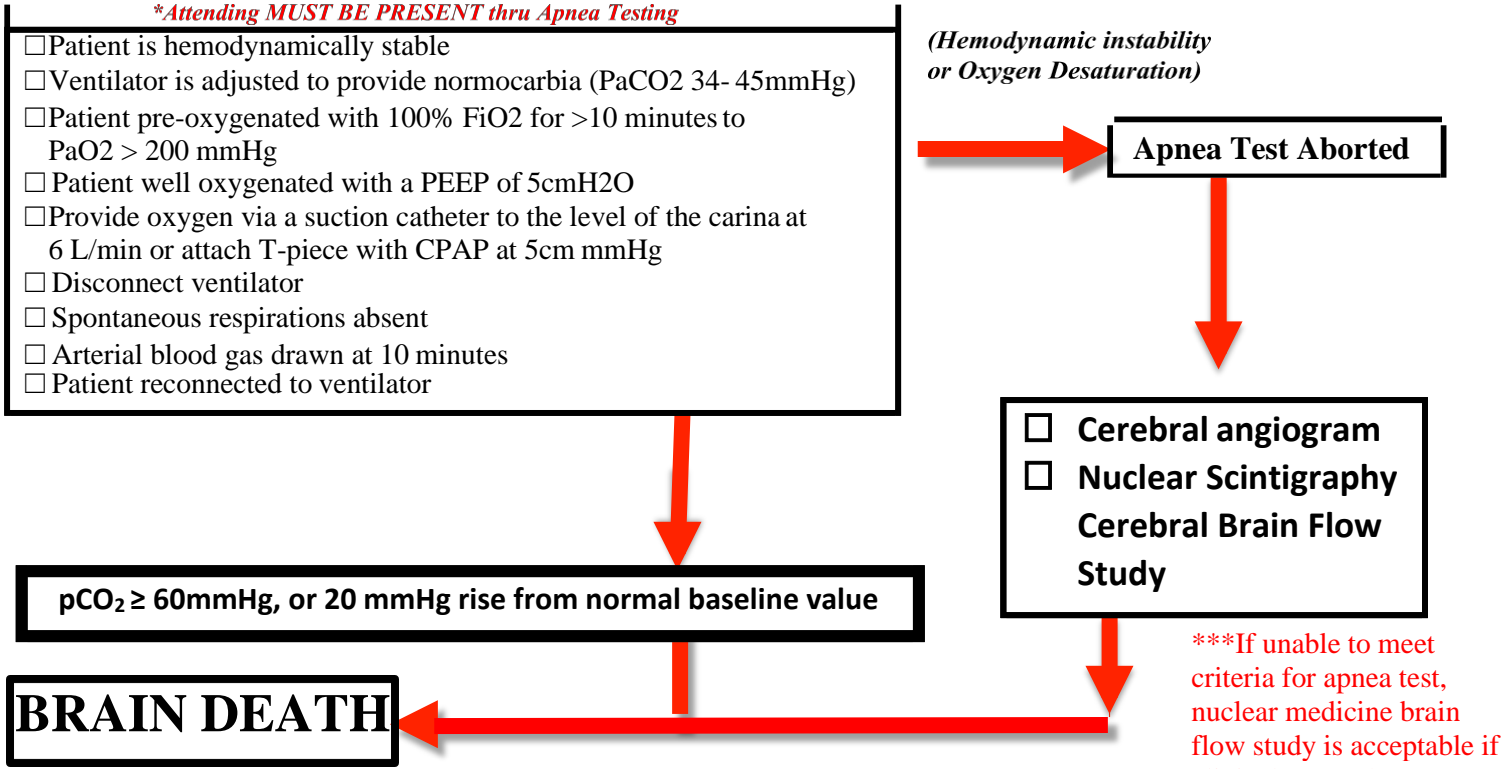
**Prerequisites (ALL must be checked)**

- Coma, irreversible and cause known
- Neuroimaging explains coma
- CNS depressant drug effect absent (if indicated toxicology screen; if barbiturates given, serum level < 10µg/mL)
- No evidence of residual paralytics (electrical stimulation if paralytics used)
- Absence of severe acid-base, electrolyte, endocrine abnormality
- pH is below 7.45
- Normothermia or mild hypothermia (core temperature > 36°C)
- Systolic blood pressure ≥ 100mmHg
- No spontaneous respirations
- Absence of cervical spinal cord injury

**Examination (ALL must be checked)**

- Pupils non-reactive to bright light
- Corneal reflex absent
- Oculocephalic reflex absent (tested only if C-spine integrity ensured)
- Oculovestibular reflex absent
- No facial movement to noxious stimuli at supraorbital nerve, temporomandibular joint
- Gag reflex absent
- Cough reflex absent to tracheal suctioning

\*\*\*If patient is under 18 years of age, two brain death tests must be performed. If brain death is determined by clinical exam (e.g. apnea test), testing must be 12 hours apart by two different ICU attending physicians. If radiographic study consistent with brain death, it must be accompanied by a clinical exam but does not require a second test



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### **TRAUMA TEAM DUTIES:**

1. Notify attending on call
2. Tennessee Donor Services (TDS): 1-800-969-4438 TDS is to be called on all deaths and all pending deaths
3. Complete Brain Death Note in eStar (attending must co-sign)
4. Medical Examiner Office: 615-743-1800 or 800-216-0107
5. Medical Examiner office is to be called on trauma service deaths
6. Complete Report of Death and Death Summary in eStar
7. Decedent Affairs: 615-835-1497 (pager)

### **ANCILLARY TESTS:**

- Cerebral Angiogram: Formal arteriography gold- standard, CTA and/or MRA are not valid alternatives
- Nuclear Scintigraphy Cerebral Brain Flow Study: Tc99m Hexametazime Nuclear medicine scan

**REFERENCES:**

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- Hills. Determining brain death: a review of evidence-based guidelines. *Nursing* (2010) vol. 40 (12) pp. 34-40; quiz 40-1
- Nakagawa et al. Clinical Report – Guidelines for the Determination of Brain Death in Infants and Children: An updated of the 1987 task force recommendations. *American Academy of Pediatrics* (2011)

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