Brain Death or Cerebral Blood Flow Scan

Exam Time: 20-30 minutes

Patient Preparation
- None Necessary. Some facilities put a rubber band or tourniquet around the head just above the ears to help diminish scalp blood flow. This should not be done in patients with a history of head trauma. Patient should be normally ventilated.

Patient Positioning Sitting or Supine

Radiopharmaceutical: (^{99m}Tc) technetium diethylene triamine pentaacetic acid (DTPA) or gluoheptomate, Brain specific agents such as ^{99m}Tc hexamethylpropyleneamine oxime (HMPAO) single photon emission computed tomorgraphy (SPECT) scan and ^{99m}Tc)ethyl cysteinate dimer (ECD), also called Tc-Bicisate, can be used, but there is no clear evidence that they are more accurate. They do obviate the need for a good bolus injection.

Method of Administration
- Bolus IV Injection

Normal Adult administered Activity
- 15 to 30 mCi (555 MBq to 1.11 G Bq)

Injection to Imaging Time
- Immediate

Conflicting exams and medications
- None

Acquisition Protocol
- Collimator – high resolution or ultrahigh-resolution; field of view (FOV) should include form the level of the common carotids to the skull vertex
- **Dynamic flow imaging time** Blood flow images: 1-3 seconds/frame for at least 60 seconds. Flow images should start before the arrival of the bolus in the neck.
- **Routine Views** Immediate blood pool anterior and anterior image at 5 minutes each.
- **Posterior and both lateral views.**
- **If brain specific images are obtained, initial images as described above are obtained as well as planar and SPECT images obtained after 20 minutes.**

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