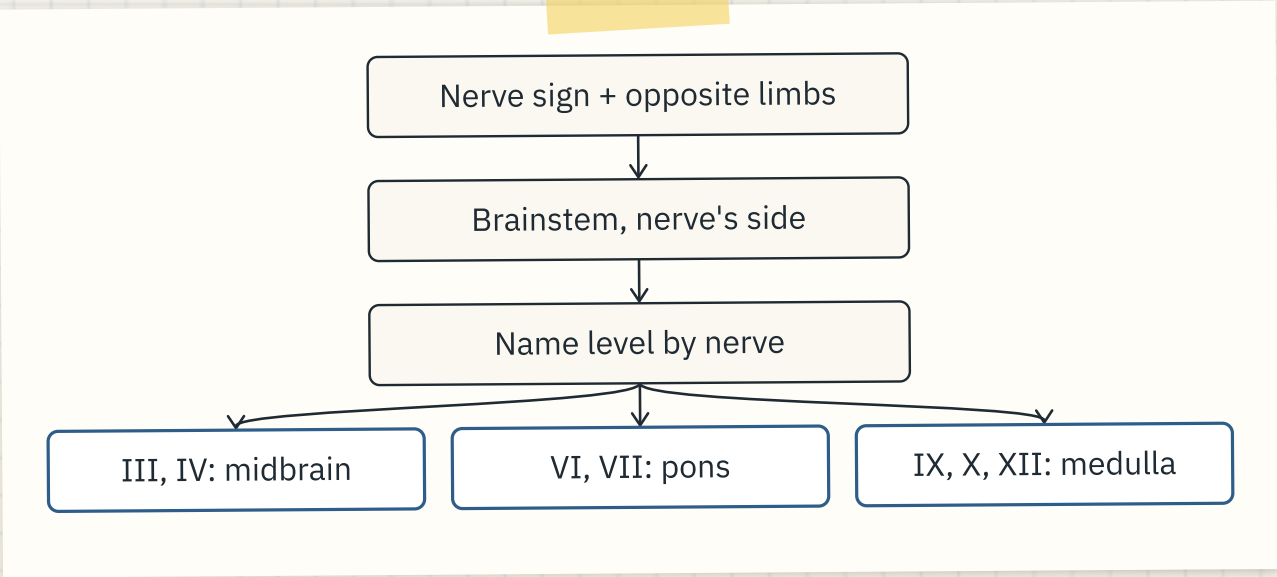
Brainstem crossed findings

Name the side and the level of the lesion



Step by step

1. Cranial nerve sign: lesion on that side (not IV nucleus)
2. Opposite weakness or sensory loss: brainstem
3. Name the level from the nerve
4. No crossed pattern: think above the brainstem

Level	Nerves	Pairing
Midbrain	III, IV	Weber
Pons	VI, VII	Millard-Gubler
Medulla	IX, X, XII	XII + pyramid
All three	V	Exception

Cranial nerves name the level

Where each tract crosses

Corticospinal: bottom of the medulla
Spinothalamic: spinal cord
Medial lemniscus: medulla

Exam traps

- Nerve V runs through all three levels, so it does not name one.
- An internal capsule lesion has no crossed pattern.
- The lesion is on the side of the cranial nerve sign, not the weak limbs.

Brainstem crossed findings: the localisation rule

Video, written lesson, practice question and sources: medservatory.com/usmle-step-1/neuroanatomy-localisation/brainstem-crossed-findings-the-localisation-rule

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