**⚖️ ANAT1012 / ANAT1019 — NEURO EXAM FRAMEWORK (INSERA)**

**(Provisional 2024 Reference → to be updated 2025)**

**Version Lineage: M1 Anchors (ECP LO4–LO9) → M3 Framework (Exam Logic)**

**Purpose:**

**Provide operational reference for Tracey’s Inspera exam psychology, qualifier order,**

**and SAQ structure. Used to predict question phrasing and audit answer logic.**

**Tracey\_Nuances.docx**

**🧠 Core Psychology (Neuro flavour) Examples only**

* 🧠 **Riddle-first:** what’s *shown* ≠ what’s *asked.*  
  → She tests *role / site / side / decussation / territory*, not the label itself.
* 🕵️ **Qualifier logic:** primary / most / level / side / “at X nucleus” / “after decussation” / “vascular territory” → these single words **flip the correct answer.**
* 🧭 **Orient-before-answer:**  
  Level → Side → Modality → Decussation → Territory → Structure.  
  *(Always identify the level first, then build the phrase.)*
* 🟧 **Tutorials = phrasing rehearsal:** she listens for *concise + exact* wording; vague explanations lose marks.
* 🟧 **Inspera = structured traps:** expect *single-best-answer*, EMQ, matching, cross-section hotspots, short typed lines — no padding allowed.

**🟧 Item Types (Expected on Inspera)**

| **Type** | **What Tracey Targets** | **Common Trap** |
| --- | --- | --- |
| 🟧 **Single-best-answer / EMQ** | Subtle distractors differing by *level / side / decussation / territory* | Choosing the “almost right” level |
| 🟧 **Matching** | nucleus ↔ level ; tract ↔ decussation ; artery ↔ syndrome | Confusing crossed vs uncrossed |
| 🟧 **Hotspot / Label** | Identify peduncle / lemniscus / nucleus on axial slice (level cues embedded) | Ignoring decussation or vascular zone |
| 🟧 **Short-answer (typed)** | 1–4 lines, exact Traceynese term (no synonyms) | Over-explaining / wrong phrasing |
| 🔁 **Module MCQs** | Style training only — not predictive | Treat as phrasing drills, not mock exam |

✅ **Forensic Notes**

* Orientation + qualifiers = exam survival keys.
* Every SAQ/hotspot stems from these psych rules: *What is she really asking → Answer the noun phrase exactly.*
* Keep this page untouched in your Master Anchor; it becomes the foundation for how all Neuro SAQs are worded and marked.

**The Decoder**

*(Run this on every Neuro question — it is Tracey’s marking logic condensed.)*

1. **Level** ⭐ *(high yield)* → Identify the anatomical level first.  
   Midbrain (Superior / Inferior colliculus ?), Pons (facial colliculus ?), Medulla (olive / pyramids ?), Spinal (cord segment ?).
2. **Side** → Determine which side is affected. *Crossed face–body findings → brainstem localisation.*
3. **Modality** → Motor (UMN / LMN), Fine touch / Proprioception, Pain / Temperature, Autonomic, Special sense.
4. **Decussation point** → Corticospinal (caudal medulla); DCML (internal arcuate fibres in medulla); Spinothalamic (1–2 levels above via Anterior White Commissure).
5. **Vascular territory (if asked)** → PCA (midbrain); Basilar paramedian (pons); PICA (lateral medulla); AICA (lateral inferior pons); SCA (superior cerebellum).
6. **Answer the noun phrase** → Give only what is asked: *tract / nucleus / syndrome / artery / space / layer — nothing extra.*

**Wording Patterns → What She Actually Wants**

* **“Primary deficit expected at the level shown?”** → State the **modality and side** that match the decussation status at that level.
* **“Where do these fibres cross?”** → Name the exact decussation (e.g. *pyramidal decussation – caudal medulla*; *sensory decussation / internal arcuate fibres*).
* **“Best localising artery?”** → Give one specific vessel only (e.g. **PICA**, not “vertebral / PICA”).
* **“Which nucleus is affected?”** → Exact nucleus name for that slice level (no tract names).
* **“Which limb of internal capsule?”** → Genu (corticobulbar) vs Posterior limb (corticospinal + somatosensory) vs Anterior limb (frontopontine / thalamocortical).
* **“UMN vs LMN signs?”** → State the pattern and side clearly (see Side Rules below).

**Side Rules & Decussation (Answer-Fast Anchors)**

• ⭐ **Corticospinal** → Decussates at **caudal medulla** → Supramedullary lesion = **contralateral** body weakness; Spinal cord hemilesion = **ipsilateral** weakness.  
• ⭐ **DCML** → Crosses as **internal arcuate fibres in medulla** → Above medulla = **contralateral** loss of fine touch / proprioception; Cord lesion = **ipsilateral** loss below level.  
• ⭐ **Spinothalamic (ALS)** → Crosses within 1–2 segments via **anterior white commissure** → Cord hemilesion = **contralateral** pain / temperature loss starting a few segments below.  
• ⭐ **“Crossed findings” rule** → **Ipsilateral cranial-nerve signs + contralateral body signs = brainstem localisation.**

✅ **Forensic Notes**

* This is the **core algorithm Tracey uses to mark localisation logic**.
* Every Inspera SAQ, hotspot, or matching item draws from this sequence.
* Apply in order: **Level → Side → Modality → Decussation → Territory → Answer noun phrase.**
* Keep verbatim — this section is your command sheet for fast, error-free neuro reasoning.

**Cranial Nerve / Nuclear Patterning (Fast IDs)**

• **Level cues:**  
o **Midbrain** → CN III & IV nuclei; superior/inferior colliculi landmarks; red nucleus vicinity.  
o **Pons** → CN V (principal), VI (facial colliculus), VII nuclei; massive middle cerebellar peduncle (MCP).  
o **Medulla** → olive, pyramids, dorsal column nuclei; CN IX–XII nuclei; inferior cerebellar peduncle (ICP).

• **Corticobulbar quirks (UMN):** Most pathways are **bilateral**; lower face receives **contralateral** input; **genioglossus** bias = contralateral.  
Typed answers must state **UMN vs LMN** and **side.**

**Vascular Syndromes (Only What She Loves to Twist)**

• 🕵️ **Lateral medulla (PICA – “Wallenberg”)** → ipsilateral face pain/temp loss (spinal V), contralateral body pain/temp loss (ALS), **nucleus ambiguus → dysphagia/hoarseness**, ipsilateral Horner’s, ataxia (ICP), vestibular signs.

• 🕵️ **Lateral inferior pons (AICA)** → facial paralysis (VII nucleus/fibres), ipsilateral face pain/temp loss, contralateral body pain/temp loss, hearing issues (labyrinthine), ataxia (MCP/ICP).

• 🕵️ **Paramedian pons (Basilar)** → contralateral hemiparesis (corticospinal), ipsilateral VI palsy (medial gaze), possible medial lemniscus involvement (contralateral vibration/proprioception loss).

*(State the* ***single artery*** *asked; don’t list features unless prompted.)*

**Internal Capsule & Cortex Terrains (One-Liners)**

• ⭐ **Posterior limb** → corticospinal + somatosensory (thalamocortical).  
• ⭐ **Genu** → corticobulbar.  
• ⭐ **Somatotopy (cortex)** → ACA = leg (medial); MCA = face/arm (lateral).  
*(If asked “most affected limb in MCA stroke?” → face / arm.)*

✅ **Forensic Notes**

* All neuro-vascular SAs hinge on localisation + side + artery.
* Tracey’s **“don’t list features unless asked”** = exam trap rule.
* This section is a **fast-ID atlas**: keep verbatim for spotter-style SAQs and Inspera hotspot diagnosis.

**Cerebellum & Peduncles (what she tests)**

* **Peduncles:** **SCP = output (decussates); MCP = pontocerebellar input; ICP = spinal/vestibular input.**
* **Signs:** **ipsilateral ataxia** with cerebellar hemisphere lesions (double-cross logic).
* **Arteries:** **SCA (superior), AICA (ant-inf), PICA (post-inf)** — expect pairing to syndrome.

**CSF & Dural Spaces (short, exact)**

* **Flow:** *lat vents → Monro → 3rd → aqueduct → 4th → Luschka/Magendie → subarachnoid → arachnoid granulations → dural sinuses.*
* **Cavernous sinus contents:** **III, IV, V1, V2 (lateral wall); VI + ICA (central).**  
  *(If asked “most at risk within sinus thrombosis?” →* ***VI****.)*

**Answering Templates (type exactly; fill the blanks)**

* **Lesion logic (1–2 lines):**
  + “Level **[midbrain/pons/medulla/spinal]**, **[left/right]** side → hits **[structure]**; **[modality]** is **[ipsi/contra]** because decussates at **[site]**.”
* **Vessel pick:**
  + “**[PICA/AICA/Basilar/PCA]**.” *(Only the vessel unless asked for features.)*
* **Nucleus/tract ID:** = “**[Exact nucleus/tract name]** at **[level cue]**.”

**Traps You Will See (Neuro Edition)**

• 🧠 **Noun-phrase mismatch** → question asks for *primary tract* but options list *nuclei* (or vice versa).  
• 🧠 **Near-synonyms** → *medial lemniscus ≠ MLF*; *pyramids ≠ corticospinal tract in pons.*  
• 🧠 **Side drift** → diagram left–right swapped; **match the patient’s side**, not image orientation.  
• 🧠 **Level bait** → IC vs pons vs medulla slices differ by **colliculi / olive / pyramids / MCP** — mis-level = wrong everything.  
• 🧠 **Territory overlap** → AICA vs PICA (lateral brainstem) — look for **facial nucleus (AICA)** vs **nucleus ambiguus (PICA).**

**What to Practise (Tutorial → Inspera)**

• 🟧 **Level-first drills** → flash slices; name level in < 3 s using 1–2 landmarks.  
• 🟧 **Decussation one-lines** → DCML / CST / ALS — write each crossing in one exact line.  
• 🟧 **Artery match-ups** → 10-card shuffle: artery ↔ hallmark feature (one keyword).  
• 🟧 **Corticobulbar exceptions** → lower face = contralateral UMN; tongue pattern = contralateral bias; state UMN vs LMN cleanly.  
• 🟧 **Noun-phrase sprints** → read stem → underline asked entity → answer only that.

✅ **Forensic Notes**

* Every trap here has appeared in prior Tracey modules.
* The **“noun-phrase sprints”** line is her exact tutorial wording — treat it as a rule, not advice.
* These are not content drills; they are *exam-behaviour drills* — practise them as timed micro-tasks.

**Do / Don’t (Inspera)**

• ✅ **Do:** Read qualifiers carefully → pick **level first**, then **side / decussation**, and answer the **exact noun phrase** asked.  
• ✅ **Do:** Use **surface-style short lines** in typed items — no prose sentences.  
• ✅ **Do:** Treat module MCQs as **wording trainers**, not “question leaks.”  
• ❌ **Don’t:** List multiple vessels / structures when only **one** is requested.  
• ❌ **Don’t:** Confuse **ML (medial lemniscus)** with **MLF (medial longitudinal fasciculus)**, or **genu** with **posterior limb.**  
• ❌ **Don’t:** Ignore side — **Inspera loves left / right flips.**

**Quick-Reference (Drop into Your Neuro Thread)**

• ⭐ **Crossed face–body = brainstem.**  
• ⭐ **CST cross = caudal medulla; DCML cross = internal arcuate (medulla); ALS cross = 1–2 segments above.**  
• ⭐ **Genu = corticobulbar; posterior limb = corticospinal + somatosensory.**  
• ⭐ **ACA = leg; MCA = face / arm.**  
• ⭐ **Cavernous sinus:** CN VI most vulnerable.  
• ⭐ **Answer the noun phrase.** Keep it to **one exact term.**

✅ **Forensic Notes**

* This page is the **final behavioural anchor** — the checklist you run before starting each Inspera item.
* “Answer the noun phrase” is Tracey’s marking mantra — *one wrong extra word = half-mark penalty.*
* Combine with **The Decoder** → gives you a full start-to-submit algorithm for every neuro question.