what's happening here?
where are we in relation to the red nucleus?
what do fibers running here connect?
what receptors are present here? describe the pathway this connects to.
CN nucleus?
what's this? what does it produce? what disease is associated with this?
what does this produce?

Refl

Reflex? Why unique?

what kind of receptors are found here?

what would happen if you stimulated this region?

CN? Are the nuclei rostral or caudal to this level?

what do these produce?

Two names for this?
**Pontine infarct** - causes contralateral UMN signs because the CST hasn't decussated yet, and causes contralateral cerebellar signs because the pontocerebellar fibers decussate to enter the MCP.

**Midbrain metastatic tumor or brainstem glioma** = loss of CN3, red nucleus, and SCP -- ptosis, outward deviation of eye, unreactive pupil, ipsilateral cerebellar signs.
Afferents?

Efferents?

what conjugate eye movements does this nucleus help integrate?

motor nucleus here?

what sensory pathway is this part of?

where are these fibers, continuing around the nucleus, headed?

where is this going?

what sensory pathway is this part of?

where is this going?
**Where are we now?**

what's forming here?

what's happening here

what important medullary center is this part of?
what kind of fibers? why do they appear white?
what does this produce?
***Trigeminal Neuralgia - anything compressing the trigeminal nerve --- ie the SCA can irritate it... or a tumor (slow progression with more symptoms arising later).
• Lightning-like pain in the cheek, often triggered by touching the face.
Where are we in the spinal cord?
what is decussating here?

how many layers?

what is all of this stuff?

Afferents?

Nucleus?

Afferents?
what receptors are present here?

CN nuclei?

where is this going?

what sensory modality runs in fibers here? what brodmann area does this ultimately project to? what cerebral lobe? what named gyrus?

describe this pathway

what is this connecting?

what is happening here?

where is this going?

somatotopy?

what’s this stuff? what does it produce? what disease is it associated with?

BONUS: what nuclei are found here? what do they produce?

what fibers are located in the middle of this?
**where are we?**

what is becoming what here? functionally, what is this replacing? what lamina is this?

Nucleus of what CN located here? What lamina is this?
Note: Weber Syndrome "Medial Midbrain Syndrome" -- Occlusion of Posterior Cerebral Artery causes loss of ipsilateral CN3 and contralateral hemiplegia (due to damage to ipsilateral cerebral peduncle)
what are some of the functions of this diverse array of fibers?

what reflex is this involved in?
what kind of sensory info does it receive?
what CN's use this?
what are its sensory modalities?

where does this project to? via what?
**where are we?**

what's forming here?
what will it become?
where does it terminate?

Nucleus? Modalities?

what's forming here?
efferents?

dorsally

decided
what's happening here?

what sensory pathway is this part of?

Two names for these?

Leaky or impermeable blood vessels?

Modalities?

Termination?

Axons from which tract?

Where are we?

Ends where?
**where are we?**

Fibers from here are terminating ipsilaterally at this level, entering what?

what nuclei pictured here does the vagus nerve use?

**what modality and reflex is this involved in? (hint: NA is also involved)**

what modality?

what CNs use this?

what fibers run through here?

what fibres decussate to enter here?

lesion sign?

**where are we?**

**what nuclei pictured here does the vagus nerve use?**

***Wallenberg Syndrome - Classic "crossed-brainstem disorder" - PICA supplies blood to this level, and an occlusion (of it or the vertebral) produces hoarseness (10), ptosis (HAT), nausea/dizziness/dysmetria (ICP), IPSILATERAL LOSS OF PAIN/TEMP ON FACE (Spinal 5 Tract), CONTRALATERAL LOSS OF PAIN/TEMP BODY (spinothalamic tract).

***Medulloblastoma - most common primary central nervous system tumor that arises in childhood -- presents with dizziness, headaches and double vision.

***Medial Midbrain / Weber Syndrome - Posterior Cerebral Artery occlusion

Signs:

• Ipsilateral CN 3 lesion - outward deviation of eye on this side
• Contralateral hemiplegia (cerebral peduncle involved)
**Note: Loss of dorsal columns = +Rhomberg sign**

**Note: Weber Syndrome - "Medial Midbrain Syndrome" -- occlusion of posterior cerebral artery... ipsilateral CN3 lesion and contralateral hemiplegia (loss of ipsilateral cerebral peduncle)**
A tumor in this "angle" would affect what CN nuclei?

Extension of what?
Sends projections to where?

sensory modality? to what?

what pathway does this project to? where is its final termination?

what two tracts terminated here just caudally to this level?

A tumor in this "angle" would affect what CN nuclei?

**where are we?**
**what nuclei pictured here does the glossopharyngeal (9) nerve use?**
**what CN "level" is just caudal to this?**

**Note the absence of the medial and lateral vestibulospinal tracts at this level (medulla/glossopharyngeal)... this is because we have reached the apex of the medial and lateral vestibular nuclei (the source of these descending tracts).**
Basilar artery from this cross section was on the quiz.
What functional division of the cerebellum is this part of?

What projects to these nuclei?

What kind of fibers course through this? What is their source?

Sensory modality?

Projects bilaterally to what?

Where does this project to?

Which cerebellar cortical fibers project to the deep cerebellar nuclei?
reflex?

what spinal column tract does this mimic? where are its afferent axon cell bodies located?

what foramen does this branch run through?

Asending or descending?
How do you test the functionality of this tract?

which cranial nerve exits the brainstem here, via the middle cerebellar peduncle?
*Note the absence of the VSCT at this level - it has now terminated in the SCP.*