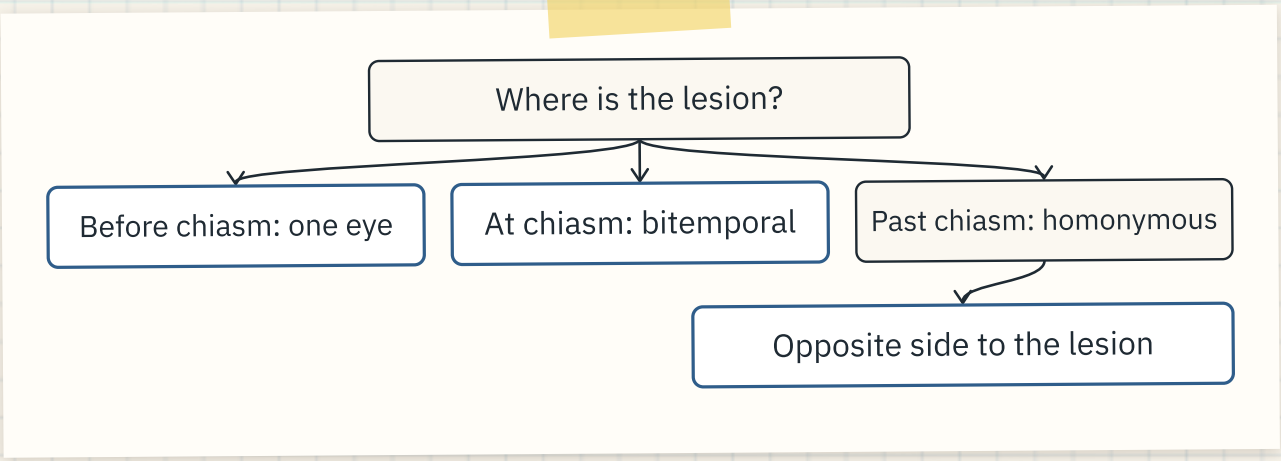
Visual pathway lesions in 3 shortcuts

Predict the field defect from the site of the lesion



Step by step

1. Nasal retina sees the temporal field; nasal fibres cross at the chiasm.
2. Before the chiasm: one eye.
3. At the chiasm: both outer fields.
4. After the chiasm: same side in both eyes, opposite the lesion.
5. Further back: more congruous.

Lesion	Defect
Optic nerve	One eye lost
Chiasm (midline)	Bitemporal hemianopia
Optic tract / whole radiation	Homonymous hemianopia, opposite the lesion
Temporal (Meyer loop)	Superior quadrantanopia: pie in the sky
Parietal	Inferior quadrantanopia: pie in the floor
Visual cortex	Homonymous hemianopia, often macular sparing

Site of lesion and defect

Three shortcuts

Before the chiasm: one eye

At the chiasm: both outer fields

After the chiasm: same side, opposite the lesion

Exam traps

- Bitemporal means a midline chiasmal lesion, not a lesion of one lobe.
- Homonymous defects are opposite the lesion.
- Lower field travels in the parietal fibres; upper field in the temporal loop.

Visual pathway lesions and field defects

Video, written lesson, practice question and sources: medservatory.com/usmle-step-1/neuroanatomy-localisation/visual-pathway-lesions-field-defects

For exam study only, not medical advice. Follow local guidelines and your lab's ranges.
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