

Red Flags and When to Image

How to identify migraine red flags and when to send a patient for imaging



When a patient with headache goes in for treatment, a healthcare provider must first determine: Is the headache primary or secondary? A primary headache isn't a symptom of an underlying disease, but the condition itself.

In contrast, a secondary headache means that the headache is a symptom of another underlying disorder. Secondary

headache requires proper diagnosis for a more specific treatment relevant to the headache's cause.

The "SNOOP" mnemonic (now SNOOP4) helps to identify the red flags that indicate a headache requires further investigation.

Red Flag	Possible Conditions
S ystemic symptoms and signs	Meningitis, vasculitis, cancer, infection
N eurologic symptoms or signs	Neoplasm, stroke
O nset sudden	Cerebrovascular causes, spontaneous CSF leak
O lder age at onset (>50 years)	Giant cell arteritis, neoplasm
P attern change/progression	Neoplasm
P recipitated by Valsalva maneuver	Posterior fossa lesion
P ositional aggravation	High or low pressure headache
P apilledema	High pressure headache

Trauma	Bleed	CT Head Without Contrast
New feature or neurological deficit	Neoplasm, vascular malformation	MRI brain
Thunderclap/orgasmic (sudden onset; severe)	Bleed (SAH)	CT head without contrast; MRI brain without gadolinium, MRA head and neck, MR venogram head (if CT negative)
Sudden unilateral and/or pain radiating to the neck	Vascular (e.g., arterial dissection)	CTA head and neck or MRA head and neck
Pain due to trigeminal autonomic cephalgia	Neoplasm	MRI brain with/without gadolinium
Persistent or positional pain	IIH/CSF leak	MRI brain with/without gadolinium
Immunocompromised state	Infection; malignancy	MRI brain with/without gadolinium
New onset in patient > 50 years old	Giant cell arteritis, neoplasm	MRI brain with/without gadolinium