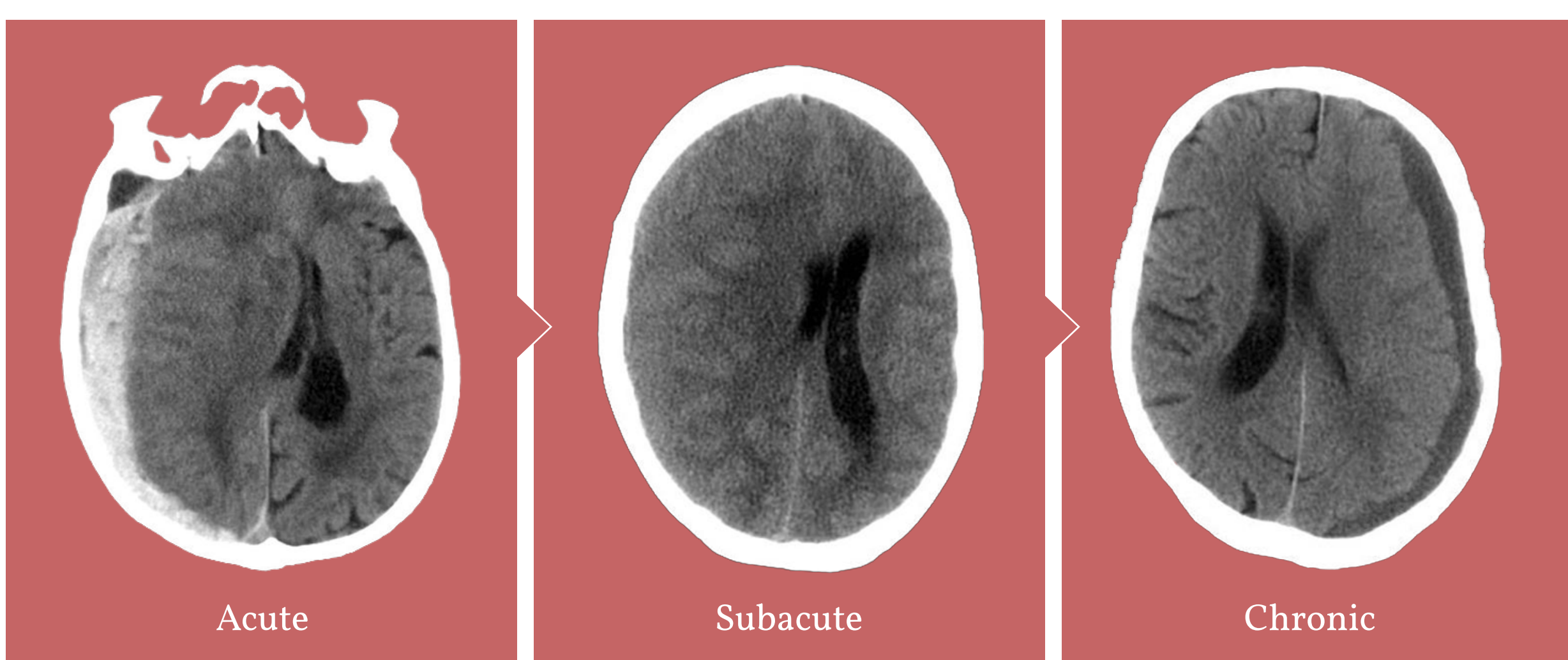


A systematic approach to the interpretation of: computed tomography of the head

“Blood Can Be Very Bad”

B BLOOD

Timing

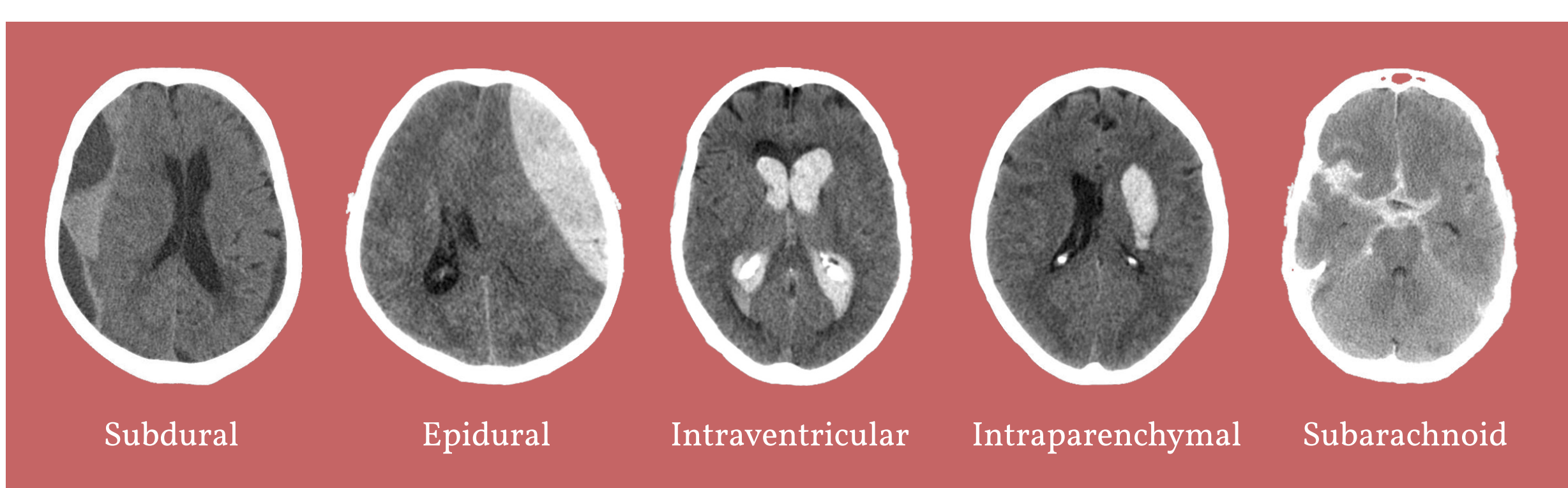


Immediate
Acute blood appears hyperdense

1-2 weeks
Subacute blood appears isodense

>2 weeks
Chronic blood appears hypodense

Locations

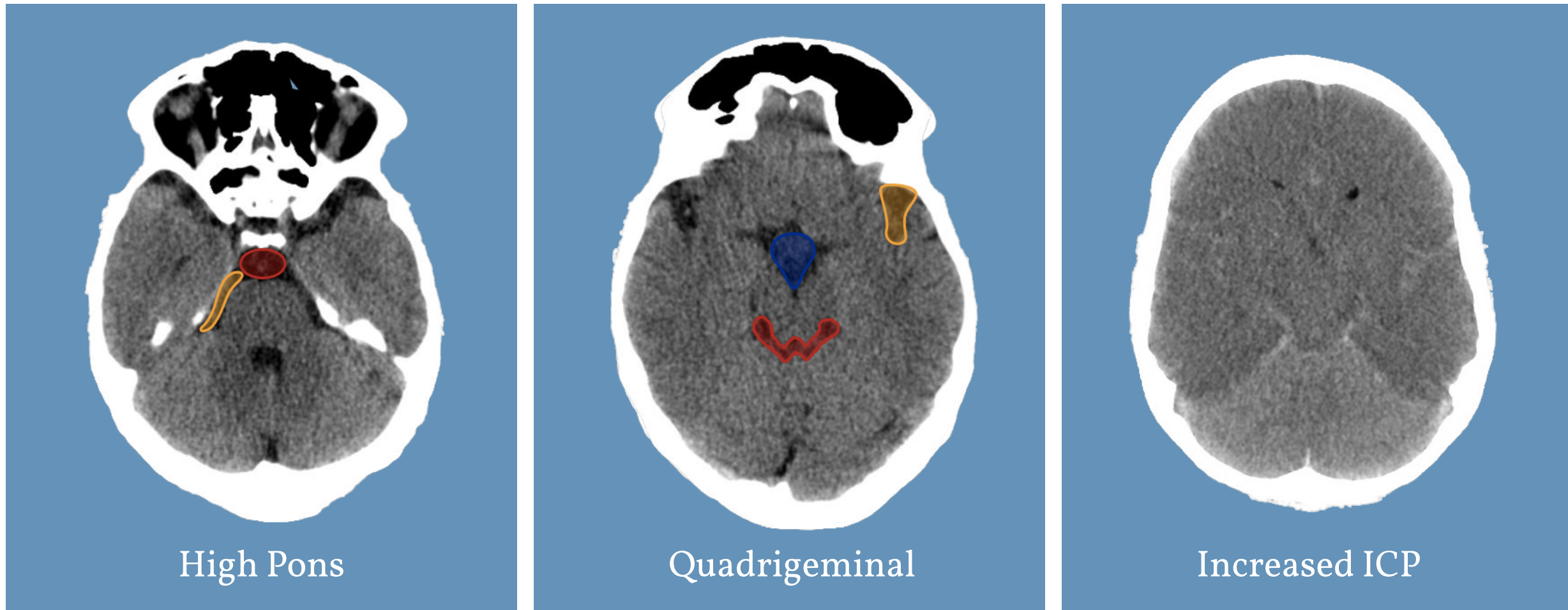


Subdural Epidural Intraventricular Intraparenchymal Subarachnoid

C CAN

Cisterns

Evaluating the cisterns is important for the identification of increased intracranial pressures (assessed by effacement of spaces) and presence of subarachnoid blood.



High Pons

Quadrigeminal

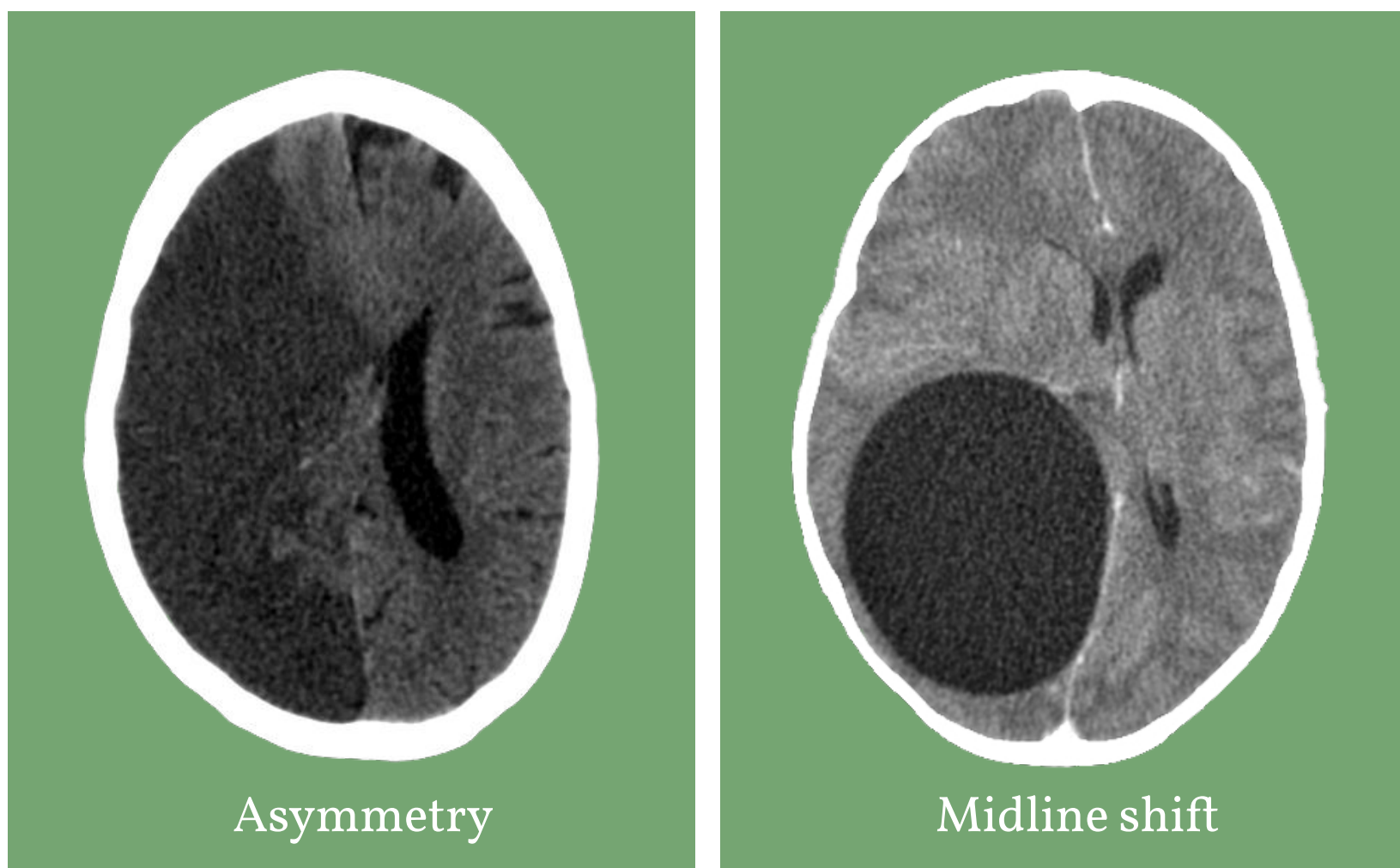
Increased ICP

- Suprasellar Cistern
- Suprasellar Cistern
- Circummesencephalic Cistern
- Quadrigeminal Cistern
- Sylvian Cistern

B BE

Brain

Evaluate the brain parenchyma, including an assessment of **symmetry** of the gyri/sulci pattern, **midline shift**, and a clear **gray-white differentiation**.



Asymmetry

Midline shift

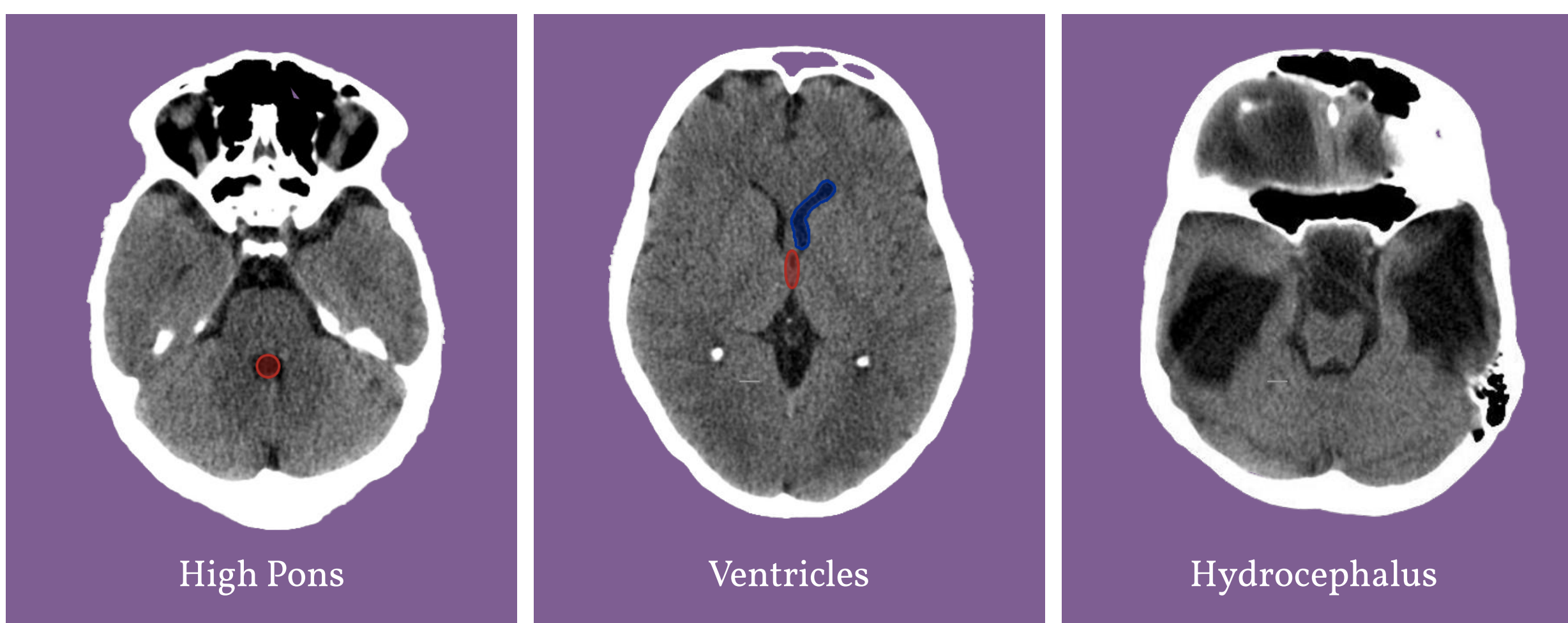
Stroke
Asymmetry, loss of gray-white differentiation

Mass
Causing midline shift

V VERY

Ventricles

Evaluate the ventricles for dilation or compression. Compare to cisterns, large ventricles with normal/compressed cisterns and sulcal spaces suggests **obstruction**.



High Pons

Ventricles

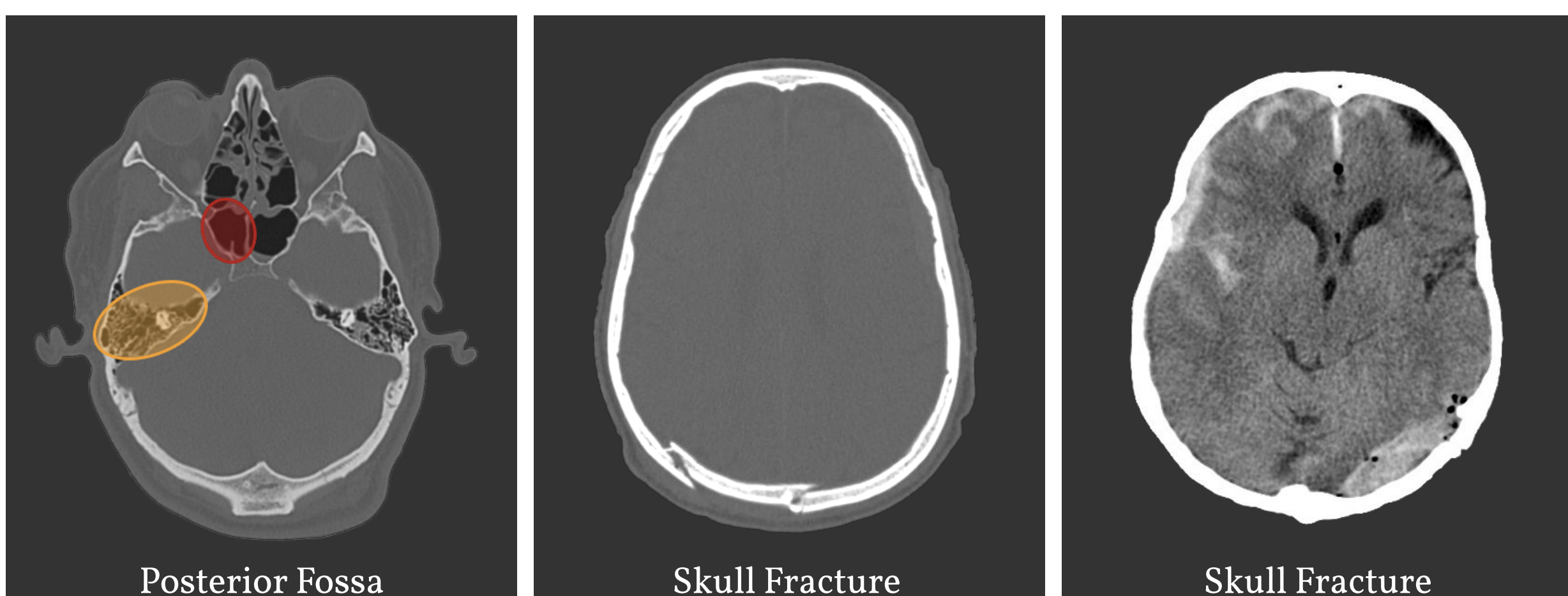
Hydrocephalus

- 4th Ventricle
 - Lateral Ventricle
 - 3rd Ventricle
- Non-obstructive
Massive ventricles, comparatively large cisterns

B BAD

Bone

Switch to **bone windows** to evaluate for fracture. Surrogates include **pneumocephalus**, and **abnormal aeration** of mastoid air cells and sinuses.



Posterior Fossa

Skull Fracture

Skull Fracture

- Mastoid Air Cells
- Sphenoid Sinus

Depressed
Occipital bone fracture

Coup-contrecoup
Skull fracture (pneumocephalus) with subdural/subarachnoid hemorrhage

