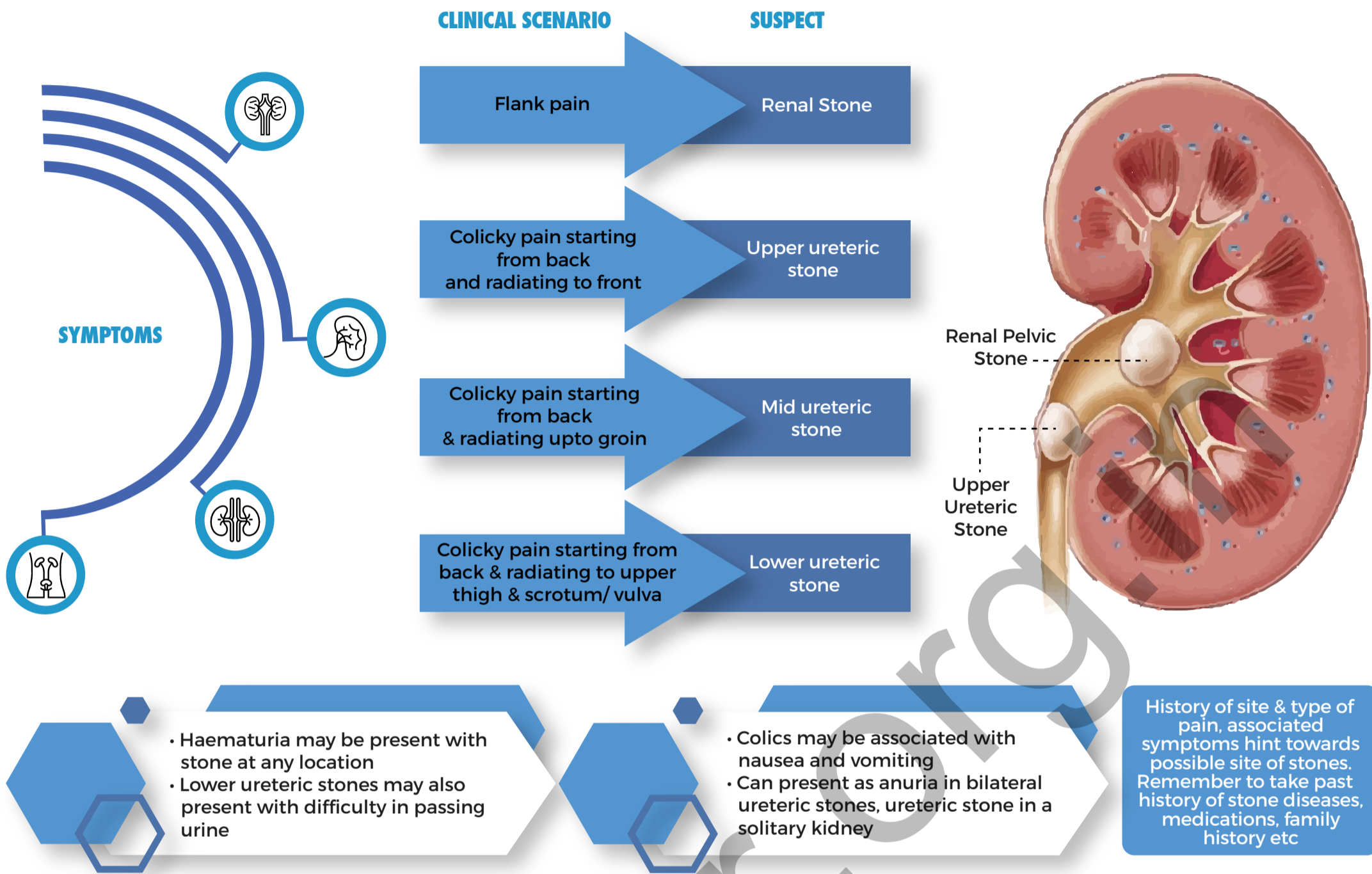




Standard Treatment Workflow (STW) for the Management of RENAL AND URETERIC STONES ICD N20.0

HOW WILL YOUR PATIENT PRESENT AND WHAT TO SUSPECT



INVESTIGATION

RADIOLOGY

NAME	ADVANTAGES AND DISADVANTAGES
X-KUB	Readily available, inexpensive, minimal radiation but needs preparation hence may not be the preferred test in emergency settings
USG	Readily available, no radiation, safe test in pregnancy , detects radiolucent stones, high sensitivity for hydronephrosis. Can miss a ureteric calculus
IVP	Anatomical and functional imaging, aids in planning surgery but high radiation and needs preparation. Not useful in poor renal function
CT Scan	No contrast required, highly sensitive and specific, detect radiolucent stones, detect other causes of flank pain, but risks higher radiation and cost

TIPS FOR ORDERING INVESTIGATIONS

- Order X-KUB and Ultrasound in all patients of suspected renal stones (90% of renal stones are radio-opaque).
- In acute colic NCCT should be preferred if available
- Once the stone is detected, get Intravenous pyelography if stone is seen on X-ray
- CT urography if stone is radiolucent to aid further treatment

METABOLIC EVALUATION

Initial biochemical evaluation in all stone formers

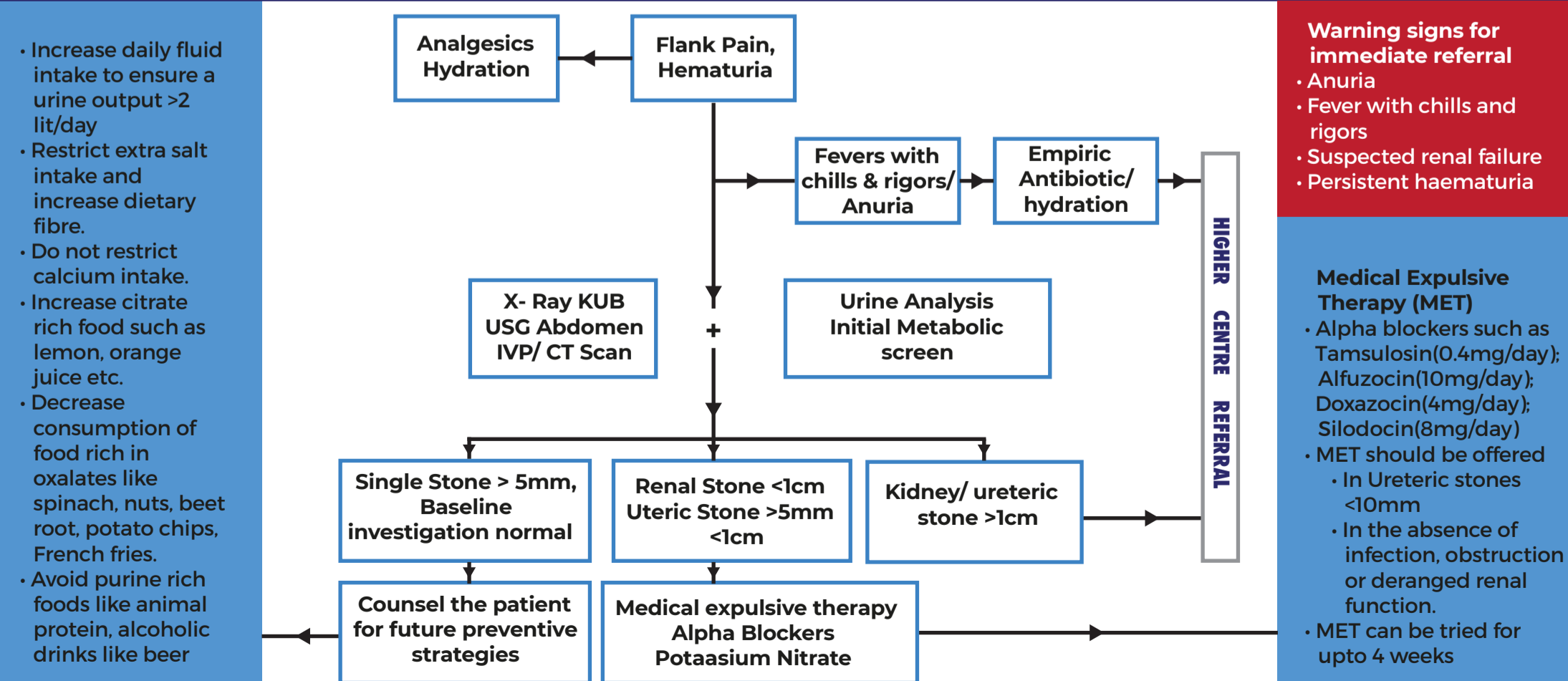
Urine analysis, serum creatinine, electrolytes namely calcium, phosphorus and uric acid. Intact parathyroid hormone and stone analysis are preferable.

Extended Evaluation

To be done in recurrent stone former, stone in children, bilateral stones, family history of stone, history of gut surgery, solitary kidney and cysteine stones. Typically to be done at 3-4 weeks after stone clearance

Should include initial metabolic evaluation plus 24-hour urinary levels of calcium, uric acid, and creatinine. Preferable to do urinary oxalate and citrate levels too.

MANAGEMENT ALGORITHM



KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES