Imaging & Lab Tests
East Bay Newborn Specialist Guideline
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General Considerations:

- Never order an imaging procedure or lab without asking how the results will change your care
- Always discuss on rounds your plans for (not) obtaining labs and imaging
- Minimizing labs and imaging is important for improving patient care by decreasing risk of "chasing" incorrect results and decreasing blood loss, as well as decreasing cost
- The following general recommendations are for typical "good babies". Infants with more complex problems may require more extensive lab and/or imaging evaluation

NUS

- If GA < 30 wks or BW < 1500 g , first NUS at approx. 7-10 days
    - If intraventricular blood, repeat in 1-2 wks
    - Repeat q 1-2 wks if ventricular size increasing significantly
- If GA < 30 wks or BW < 1500 g, NUS for PVL at 36-40 wks

CT

- Obtain only if patient has a condition which may require neurosurgical intervention (e.g. r/o fracture with subdural)

MRI

- Obtain at 3-5 days in cooled patients
- Obtain as needed as part of work up for seizures or abnormal neuro exam

CXR

- At admission for any baby with significant respiratory symptoms (FIO2 > 0.3 and/or on positive pressure)
- Following intubation or re-intubation
- Following line placement or re-position
- On return from OR or following bedside thoracic procedure
- If on HFV:
    - 1-6 hrs after beginning HFV
    - 12-24 hrs after beginning HFV
    - Consider CXR with any change in FIO2 of 0.2 or more
    - Q 2-4 days for "stable" HFV patient
- If on CV:
    - Routine CXRs not indicated
    - Consider CXR for significant deterioration (e.g. FIO2 increase by > 0.2)
    - CXRs not needed after change in ETT position
    - CXRs not needed after extubation
- If on non-invasive support:
    - CXRs rarely indicated

Renal US
- Following resolution of first UTI
- Not needed following subsequent UTIs
- No need to follow nephrocalcinosis with serial renal US

VCUG
- 6 weeks after resolution of first UTI
- Not needed after subsequent UTIs

Admission Labs if < 1000 g and stable
- CBC, Electrolytes, Ca++ within first 6-24 hrs
- Blood cx if not previously done and not on antibiotics
- Newborn workup (Type)

Routine Labs if < 1000 g and stable
- Daily electrolytes, Ca++ x 3 days
- Complete chemistry panel q week while on HA
- Decrease total labs to once-twice per week when stable
- Decrease total labs to q o week in older stable patients on long term HA
- No routine labs when off HA, unless abnormal D Bili or other concerning lab
- No routine Pre-DC labs, unless abnormal D Bili or other concerning lab

Blood Gases – general rules
- Arterial or venous puncture blood gases are not indicated
- CBGs are no more accurate than TCM – ask yourself what you are going to change based on the results before obtaining them
- TCM can be accurate in small and large babies
- ETCO2 is accurate in big babies with minimal lung disease (e.g. post-op)
- Blood gas is not needed after every vent change, so long as monitoring exam and SPO2
- Blood gas is not needed q day on every ventilated patient
- Blood gas is not needed following extubation
- Blood gas is not needed on non-invasive support, unless you need the information to decide whether to intubate the patient

Bilirubin – general rules
- All babies should have serum or TC bilirubin measured by 3 days or by discharge, whichever comes first
- "Rebound" bilirubin is not indicated in most term/near-term infants after D/C'ing Phototherapy – babies with hemolysis may benefit from checking "rebound" bilirubin levels
- Babies on PhotoRx don't need daily bilirubin levels

CBC and CRP – general rules – this doesn't apply to the Chorio babies
- WBC count and differential are poorly correlated with infection
- There are very few indications for doing a manual differential with a CBC
- There is no need to check Hb unless you are considering transfusion or starting/stopping Epo
- There is no need to check Platelet count unless you are considering transfusion

- CRPs should be ordered only if the results will allow you to D/C antibiotics early, or to avoid starting them, or to avoid doing something like an LP

Viral Studies

- There is no need to check a viral panel unless the results will change your therapy
- Viral PCR is quicker, cheaper, and more reliable than viral culture for some organisms. Consider obtaining ID consultation prior to ordering viral studies so that optimal tests are ordered.