

Urinalysis (UA)

| Lab | Normal Range | Significance | Notes |
|----------------------------------|--------------|---|-------|
| Color | Pale yellow | Dark = dehydration; red = blood | |
| Specific Gravity | 1.005-1.030 | High = concentrated urine; Low = dilute | |
| pH | 4.6-8.0 | Reflects acid-base status | |
| Protein, Glucose, Ketones | Negative | Presence may indicate kidney disease, diabetes, or starvation | |

Complete Blood Count (CBC)

| Lab | Normal Range | Significance | Notes |
|--------------------------------|--|--|------------------|
| White Blood Cells (WBC) | 5,000-10,000/mm ³ <i>(Critical values <2,500 or >30,000)</i> | High = infection; Low = immunosuppression | *Think INFECTION |
| Hemoglobin (Hgb) | Female: 12-16 g/dL Male: 14-18 g/dL <i>(Critical values < 5 g/dL or > 20 g/dL)</i> | Low = anemia, fatigue, pallor | *Think ANEMIA |
| Hematocrit (Hct) | Female: 37-47% Male: 42-52% <i>(Critical values < 15% or > 60%)</i> | Reflects blood volume and anemia | |
| Platelets | 150,000-400,000/mm ³ <i>(Critical values < 20,000 or > 1 million)</i> | Low = bleeding risk; High = clotting risk | *Think BLEEDING |

Metabolic Panel

| Lab | Normal Range | Significance | Notes |
|--|---|--|---|
| Sodium (Na⁺) | 135-145 mEq/L (Critical values < 120 mEq/L or > 160 mEq/L) | Low = confusion, seizures; High = dehydration | *Think NEURO |
| Potassium (K⁺) | 3.5-5.0 mEq/L (Critical values < 2.5 mEq/L or > 6.5 mEq/L) | Low = muscle cramps, arrhythmias; High = cardiac risk | *Think HEART |
| Glucose | 70-110 mg/dL (Critical values < 50 mg/dL or > 400 mg/dL) | Low = hypoglycemia; High = diabetes risk | |
| BUN (Blood Urea Nitrogen) | 7-20 mg/dL (Levels > 100 mg indicate serious renal Impairment) | High = dehydration or kidney dysfunction | BUN alone- *Think HYDRATION status BUN & Creatinine- *Think KIDNEY |
| Creatinine | 0.6-1.2 mg/dL (Critical values < 0.4 mg/dL or > 2.8 mg/dL) | High = impaired kidney function | *Think KINDEY |
| Calcium | 8.6-10.2 mg/dL (Critical values < 4.4 mg/dL or > 13 mg/dL) | | Hypercalcemia <i>may</i> occur if the tourniquet is left on too long |
| Liver Function Tests (LFTs) AST/ALT/ Alkaline phosphatase | | Monitor liver function/disease | *Think LIVER |
| Total bilirubin | 0.3 - 1.0 mg/dL (Bilirubin > 2.5mg/dL = jaundice) | | *Think LIVER Jaundice >2.5 |
| Total Protein | 6.0 - 8.0 g/dL | Made up of prealbumin, albumin, globulins Maintain osmotic pressure within vascular space | *Think LIVER |
| Albumin | 3.4 - 5.4 g/dL | Protein formed in the | *Think LIVER |

| | | | |
|--|--|---|--|
| | | liver Maintain colloidal osmotic pressure | |
|--|--|---|--|

Coagulation Studies

| Lab | Normal Range | Significance | Notes |
|---|--|---------------------------|---|
| PT (Prothrombin Time) | 11-13 seconds | Prolonged = bleeding risk | Run with INR |
| INR (International Normalized Ratio) | 0.8-1.2 (normal) 2-3 (therapeutic for warfarin) | Monitors warfarin therapy | *Think WARFARIN Reversal- Vit. K |
| PTT (Partial Thromboplastin Time) | 25-35 seconds | Monitors heparin therapy | *Think HEPARIN Reversal- Protamine sulfate |

Add Ons - Pancreatic tests

| Lab | Normal Range | Significance | Notes |
|----------------|--|---|------------------------------------|
| Amylase | 30-220 SI units/L (Critical values: > 3x upper limit) | Helpful in evaluation of abdominal pain Detect & monitor pancreatitis (Not as specific as lipase) | *Think PANCREAS *Not on CMP |
| Lipase | 0 - 160 units/L | Highly specific for pancreatic disease | *Think PANCREAS *Not on CMP |