

## CLINICAL CHEMISTRY / GENERAL CHEMISTRY

- **Basic Metabolic Panel/Electrolytes:**
  - Bicarbonate (CO<sub>2</sub>)
  - Chloride
  - Creatinine
  - Glucose
  - Potassium
  - Sodium
  - Blood Urea Nitrogen (BUN)
  - Calcium (Total & Ionized)
  - Phosphorus II
- **Liver Function Tests (LFTs):**
  - Alanine Aminotransferase (ALT/GPT)
  - Aspartate Aminotransferase (AST/GOT)
  - Albumin
  - Alkaline Phosphatase Total
  - Bilirubin Total
  - Bilirubin Direct
  - Gamma Glutamyl Transferase (γ-GT)
  - 5-Nucleotidase
  - Aldolase
  - Ceruloplasmin
  - Alpha-<sub>1</sub>-Antitrypsin I & II
  - Alpha <sub>2</sub> Macroglobulin
  - Cholesterase
  - FibroTest-<sup>o</sup> (Assessment of liver fibrosis)
  - FibroMax-<sup>a</sup> (Assessment of liver fibrosis)
  - NashTest (for patients with alcoholic steatosis)
  - ActiTest (for patients with chronic Hepatitis C&B)
- **Kidney Function Tests (RFTs):**
  - Creatinine Clearance
  - Glomerular Filtration Rate (GFR)
  - Microalbumin
  - Microalbumin/Crea Ratio
  - Cystatin C
  - Urea Nitrogen (BUN)
- **Lipid Panel:**
  - Cholesterol Total
  - Cholesterol - HDL
  - Cholesterol - LDL
  - Apolipoprotein A<sub>1</sub>
  - Apolipoprotein B
  - Lipoprotein (a)
  - Lipoprotein Electrophoresis
  - HDL Subfraction
- **Enzymes (Other):**
  - Amylase II
  - CPK (Creatine Phosphokinase)
  - Lipase

- LDH (Lactate Dehydrogenase)
- LDH Isoenzymes
- Acid Phosphatase-Prostatic
- Acid Phosphatase-Total
- Adenosin Deaminase
- Cholinesterase
- **Proteins:**
  - Protein – Total (Blood, Urine, Fluids)
  - Protein Electrophoresis- Blood
  - Protein Electrophoresis- Urine
  - Albumin (CSF, Urine, US, AF, Fluids)
  - Beta Microglobulin
  - Alpha Heavy Chain
  - Kappa Light Chain
  - Lambda Light Chain
  - Kappa/Lambda Ratio
- **Hormones & Endocrinology (Excluding full reproductive/thyroid/adrenal panels covered below):**
  - C-Peptide
  - Growth Hormone
  - Insulin
  - Insulin Like Growth Factor (IGF)
  - Insulin Like Growth Factor Binding Protein (IGFBP)
  - Insulin Resistance (HOMA Score)
  - ProInsulin
  - Leptin
  - Osteocalcin
  - Cortisol-Total
  - Cortisol-Free
  - Adrenaline (Epinephrine)
  - Noradrenaline (Norepinephrine)
  - Adrenaline+Noradrenaline
  - Catecholamines (Adrenaline/ Noradrenaline/ L-Dopamine) - Plasma & Urine
  - Metanephrines-Blood
  - Metanephrines-Urine
  - Dopamine
  - Chromogranin A
  - Melatonin
  - Melanocyte Stimulating Hormone (MSH)
  - Anti Diuretic Hormone-ADH (Vasopressin)
  - Aldosterone
  - Aldosterone/Renin Ratio
  - Renin – Active
  - Procalcitonin (BRAHMS PCT)
  - Corticosteroid Binding Globulin
  - PTH (Parathyroid Hormone)
  - Parathyroid Hormone Related Protein (PTHrP)
  - Calcitonine
  - Homocysteine

- B-Type Natriuretic Peptide, Serum (BNP)
- ProBNP (Pro B-type Natriuretic Peptide)
- **Vitamins & Nutrients:**
  - 25-OH Vitamin D (Vitamin D Total D3+D2)
  - 1,25 Dihydroxy Vitamin D3
  - Folate
  - Folate in RBC's
  - Iron
  - Ferritin
  - Copper (Chemistry & Atomic Absorption)
  - Zinc
  - Magnesium
  - Biotin (Vitamin H)
  - $\beta$ -Carotene
  - Thiamin (Vitamin B<sup>1</sup>)
  - Riboflavin (Vitamin B<sup>2</sup>)
  - Niacin (Vitamin B<sup>3</sup>)
  - Iodine
  - Selenium
  - Chromium
  - Cobalt
  - Manganese
- **Therapeutic Drug Monitoring (TDM):**
  - Acetaminophen (Paracetamol)
  - Amikacin
  - Amiodarone
  - Amitriptyline
  - Azathioprine (Immunar)
  - Bromazepam
  - Caffeine Level
  - Carbamazepine (Tegretol)
  - Clonazepam
  - Convex (Valporic Acid)/ (Depakin)
  - Cyclosporine
  - Diazepam (Valium)
  - Digoxin
  - Epanutin (Phenytoin)
  - Fluoxetine (Prozac)
  - Gentamicin
  - Keppra (Levetiracetam)
  - Lamictal (Lamotrigine)
  - Lithium
  - Luminal (Phenobarbital)
  - Methotrexate
  - Mycophenolic Acid
  - Oxcarbazepine (Trileptal)
  - Oxcarbazepine 10-OH Metabolite
  - Phenobarbital
  - Phenytoin
  - Primidone (Anticonvulsant)

- Risperidone
- Sirolimus (Rapamune)
- Tacrolimus (Prograf)
- Theophylline
- Antidepressants (Group Panel)
- Benzodiazepines (Group Panel)
- **Toxicology/Drug Screening:**
  - Acetone (Screen)
  - Alcohol (Ethanol)
  - Amphetamines
  - Barbiturates
  - Benzodiazepines
  - Cannabinoids (Marijuana)
  - Cocaine
  - Cotinine (Nicotine)
  - Drugs' Quantitation Group I-<sup>o</sup> (Amphetamines, Benzodiazepines, Opiates, Cannabinoids, Cocaine)
  - Drugs' Quantitation Group II-<sup>o</sup> (Barbiturates, Methadone, Methaqualone, Phencyclidine, Propoxyphen)
  - Heavy Metal by A.A. Graphite(Lead,Zinc,Copper),EACH
  - Heavy Metal by A.A. Hydrite (mercury,gold,arsenic,aluminum),EACH
  - Heavy Metals Panel
  - Lead
  - Mercury
  - Thallium
  - Methadone
  - Methaemoglobin
  - Multi Drug Screen
  - Nicotine (Cotinine)
  - Opiates
  - Phencyclidine
  - Propoxyphene
  - Arsenic
- **Special Chemistry / Metabolic Markers:**
  - 11-Desoxycortisol
  - 17-Ketosteroids
  - 17-OH Progesterone
  - 17-Hydroxycorticosteroid
  - 17-Hydroxypregnenolone
  - Aldolase
  - Amino Levulinic Acid (ALA)
  - Amyloid A-Blood
  - Amyloid B
  - $\beta$ -Cross Laps (CTX)
  - C- Terminal Telopeptides
  - Catecholamines (TOTAL+FREE+FRACTION)
  - Citric Acid
  - Coenzyme Q<sub>10</sub>
  - D-Dimer (Quantitative)
  - Delta Aminolevulinic Acid (DALA)

- Deoxypyridinoline (Pyrilinks-D)
- Fructosamine
- Fructose
- Glycosaminoglycans – Total
- Histamine
- Homogentisic acid HGA
- Homovnillic acid HVA
- Hydroxyproline
- Ketones (Qualitative & Quantitative)
- Lactate
- Methylmalonic Acid
- Myoglobin- Blood (Quantitative)
- Myoglobin- Urine
- N- Telepeptide (NTX)
- Osmolality (measured)
- Ostase
- Oxalate (Quantitative)
- Porphobilinogen (Quantitative)
- Porphyrins – Total (Urine & Stool)
- Pyruvate
- Reducing Substances
- Serotonine (Blood & Urine)
- Soluble Fms-like Tyrosine Kinase- $\alpha$  (sFlt- $\alpha$ )
- sFlt- $\alpha$ /PIGF Ratio
- Thiopurin-SMethyltransferase (Partial list, cutoff)
- **Amino Acids/Organic Acids/Metabolic Screens:**
  - Acylcarnitine
  - Amino Acid- Blood Chromatography (Quantitative)
  - Amino Acids- Urine Chromatography (Quantitative)
  - Alanine
  - Arginine
  - Asporagine
  - Cystine (Quantitative)
  - DNPH (Dinitrophenylhydrazine)
  - Glutamine
  - Glycine
  - Isoleucine
  - Leucine
  - Lysine
  - Ornithine
  - Phenylalanine (quantitative)
  - Serine
  - Organic Acids (Urine)
  - Neonatal Screening- $\alpha$  (Amino Acids- $\alpha$ , Fatty Acids- $\alpha$ , Organic Acids- $\alpha$ )
  - Neonatal PKU
  - Fructose intolerance
  - Lactose intolerance by PCR
  - Lactose Tolerance Test
  - Mucopolysaccharides

- Fatty Acid

## REPRODUCTIVE ENDOCRINOLOGY & PRENATAL SCREENING

- **Female Hormones:**
  - 17-Beta Estradiol – E2
  - Androstenedione
  - Estradiol (E $\gamma$ )
  - Estrogen (total)
  - Estriol Free (FE $\gamma$ )
  - Estrone (E $\delta$ )
  - FSH (Follicle-Stimulating Hormone)
  - LH (Luteinizing Hormone)
  - Progesterone II
  - Prolactin
  - Testosterone Bioavailable
  - Testosterone- Free
  - Testosterone – Total
  - Sex Hormone Binding Globulin (SHBG)
  - Anti Mullerian Hormone / Mullerian Inhibiting Substance
  - Inhibin A
  - Inhibin B
  - Macroprolactin
- **Male Hormones:**
  - Dihydrotestosterone
  - Free Androgen Index (FAI)
- **Tumor Markers (Reproductive):**
  - CA 125
  - CA 15-3
  - CA 19-9
  - CA 50
  - CA 22-4
  - HE $\xi$  (Human Epidermal Protein –  $\xi$ )
  - PSA – Free
  - PSA – Total III
  - Squamous Cell Carcinoma (SCC)
  - Carcinoembryonic Antigen (CEA)
  - Cyfra 21-1
  - NSE (Neuron Specific Enolase)
- **Pregnancy & Prenatal Screening:**
  - Pregnancy Test
  - $\beta$ -HCG – Free
  - $\beta$ -HCG
  - 1st Trimester Prenatal Interpretive Screening
  - Down Syndrome Dual Test 1st Trimester (PAPP-a, Free  $\beta$ -HCG)
  - Down Syndrome (AFP,  $\beta$ - HCG, FE $\gamma$ )(Triple Test)
  - Down Syndrome (AFP,  $\beta$ -HCG, FE $\gamma$ , Inhibin A) (Quadruple Test)
  - Integrated Test (wk 12 + wk 16)
  - Quadruple Test
  - PAPP-a

- Placental Growth Factor (PIGF)
- Soluble Fms-like Tyrosine Kinase- $\alpha$  (sFlt- $\alpha$ )
- sFlt- $\alpha$ /PIGF Ratio
- **Infertility:**
  - Anti Sperm Abs
  - Sperm sex selection
  - Sperm Wash (IUI)
  - Seminal Fluid Analysis (dynamic,non-CAZA)
  - Carrier screening test (pre-marital  $\cdot\cdot\cdot$ )
  - Baby Sure (Call)