**TESTS:**

**1. Cardiovascular Diseases**

**Hypertension (High Blood Pressure)**

* **Blood Pressure Measurement:**
  + **Procedure:** A cuff (sphygmomanometer) is placed around the upper arm and inflated to temporarily stop blood flow. The healthcare provider then slowly deflates the cuff while listening with a stethoscope to measure systolic and diastolic pressure.
  + **Duration:** A few minutes.
  + **Frequency:** Regular check-ups for those at risk.

**Coronary Artery Disease (Heart Attack)**

* **Electrocardiogram (ECG or EKG):**
  + **Procedure:** Electrodes are attached to the chest to measure the heart's electrical activity, detecting abnormal heart rhythms and signs of a heart attack.
  + **Duration:** A few minutes.
* **Angiography:**
  + **Procedure:** A catheter is inserted into the arteries, often through the groin or arm. A contrast dye is injected, and X-ray images are taken to check for blockages in the coronary arteries.
  + **Duration:** 30-60 minutes.
* **Echocardiogram:**
  + **Procedure:** Ultrasound waves are used to create an image of the heart’s structure and blood flow. It helps assess heart function and detect issues such as valve problems or fluid around the heart.
  + **Duration:** 30 minutes.

**Stroke**

* **CT Scan (Computed Tomography):**
  + **Procedure:** A series of X-ray images are taken to create cross-sectional images of the brain. This helps identify areas of the brain affected by bleeding or blockage.
  + **Duration:** 10-30 minutes.
* **MRI (Magnetic Resonance Imaging):**
  + **Procedure:** Uses magnetic fields and radio waves to create detailed images of the brain, identifying strokes, tumors, and brain abnormalities.
  + **Duration:** 30-60 minutes.
* **Carotid Ultrasound:**
  + **Procedure:** A special ultrasound probe is used to examine the blood flow in the carotid arteries in the neck to identify blockages or narrowing.
  + **Duration:** 15-30 minutes.

**Heart Failure**

* **Echocardiogram:**
  + **Procedure:** As described above, this ultrasound test evaluates the heart’s function and measures ejection fraction to assess heart failure severity.
  + **Duration:** 30 minutes.
* **B-type Natriuretic Peptide (BNP) Blood Test:**
  + **Procedure:** A blood test that measures the BNP hormone, which increases when the heart is under stress and may indicate heart failure.
  + **Duration:** A few minutes for the test; results take a few hours.

**2. Chronic Respiratory Diseases**

**Chronic Obstructive Pulmonary Disease (COPD)**

* **Spirometry:**
  + **Procedure:** A test to measure lung function. The patient is asked to inhale deeply and exhale into a tube connected to a spirometer. The device records the amount and speed of air exhaled.
  + **Duration:** 15-30 minutes.
* **Chest X-ray:**
  + **Procedure:** A painless X-ray image of the chest to check for signs of lung damage and other respiratory conditions.
  + **Duration:** A few minutes.

**Asthma**

* **Peak Flow Measurement:**
  + **Procedure:** The patient blows into a device called a peak flow meter, which measures the highest speed of expiration. It helps assess asthma control.
  + **Duration:** A few minutes.
* **Spirometry:**
  + **Procedure:** As described above for COPD, it is used to measure airflow limitation, a hallmark of asthma.
  + **Duration:** 15-30 minutes.

**Pulmonary Fibrosis**

* **High-Resolution CT Scan:**
  + **Procedure:** A detailed X-ray scan of the lungs to detect scarring or thickening of the lung tissue.
  + **Duration:** 15-30 minutes.
* **Lung Biopsy:**
  + **Procedure:** A small tissue sample from the lungs is taken, often through a needle, to examine the lung tissue for signs of disease.
  + **Duration:** 30-60 minutes.

**3. Diabetes Mellitus**

**Blood Glucose Test:**

* **Procedure:** A small blood sample is taken, often through a fingertip prick or from a vein, to measure the amount of glucose in the blood.
  + **Duration:** A few minutes for the test.

**Oral Glucose Tolerance Test (OGTT):**

* **Procedure:** The patient drinks a sugary solution, and blood glucose is measured at intervals (usually 1, 2, and 3 hours) to check for insulin resistance or diabetes.
  + **Duration:** 2-3 hours.

**Hemoglobin A1c Test:**

* **Procedure:** A blood test that measures average blood sugar levels over the past 2-3 months by assessing the amount of glucose attached to red blood cells.
  + **Duration:** A few minutes for the test; results take a few hours.

**4. Cancer**

**Lung Cancer**

* **Chest X-ray:**
  + **Procedure:** A simple imaging test to look for tumors, fluid, or other abnormalities in the lungs.
  + **Duration:** A few minutes.
* **CT Scan:**
  + **Procedure:** Detailed cross-sectional images of the lungs to detect and locate any lung masses or cancer.
  + **Duration:** 10-30 minutes.

**Breast Cancer**

* **Mammogram:**
  + **Procedure:** A low-dose X-ray of the breast to detect tumors, cysts, or abnormal changes in breast tissue.
  + **Duration:** 15-30 minutes.
* **Ultrasound:**
  + **Procedure:** High-frequency sound waves are used to examine the breast tissue and detect the size and shape of masses.
  + **Duration:** 20-30 minutes.
* **Biopsy:**
  + **Procedure:** A small tissue sample from the suspicious mass is taken and examined for cancer cells.
  + **Duration:** 30 minutes.

**Colorectal Cancer**

* **Colonoscopy:**
  + **Procedure:** A long, flexible tube with a camera is inserted into the colon to look for polyps, tumors, or abnormal areas.
  + **Duration:** 30-60 minutes.
* **Fecal Occult Blood Test (FOBT):**
  + **Procedure:** A stool sample is tested for hidden blood, which can indicate colorectal cancer.
  + **Duration:** A few minutes.

**5. Mental Health Disorders**

**Depression and Anxiety Disorders**

* **Clinical Interview:**
  + **Procedure:** A mental health professional asks about symptoms, medical history, and life events to diagnose depression or anxiety disorders.
  + **Duration:** 30-60 minutes.

**Bipolar Disorder**

* **Mood Charting:**
  + **Procedure:** The patient keeps a record of mood swings, sleep patterns, and other behaviors to aid diagnosis.
  + **Duration:** Ongoing, for several weeks or months.

**Schizophrenia**

* **Psychiatric Evaluation:**
  + **Procedure:** A mental health professional evaluates symptoms through interviews, observations, and questionnaires.
  + **Duration:** 30-60 minutes.

**6. Neurological Disorders**

**Alzheimer’s Disease**

* **Mini-Mental State Examination (MMSE):**
  + **Procedure:** A series of questions and tasks to assess memory, problem-solving, and cognitive function.
  + **Duration:** 10-15 minutes.
* **CT or MRI Scan:**
  + **Procedure:** Brain scans are used to check for brain shrinkage or abnormalities.
  + **Duration:** 30-60 minutes.

**Parkinson’s Disease**

* **Neurological Examination:**
  + **Procedure:** A doctor assesses motor skills, reflexes, and balance to identify Parkinson’s-related symptoms.
  + **Duration:** 30-60 minutes.

**7. Chronic Kidney Diseases**

**Chronic Kidney Failure**

* **Blood Tests (Creatinine, GFR):**
  + **Procedure:** Blood is tested to measure kidney function by checking creatinine levels and calculating the Glomerular Filtration Rate (GFR).
  + **Duration:** A few minutes for the test; results take a few hours.
* **Ultrasound:**
  + **Procedure:** An imaging test that evaluates kidney size and structure.
  + **Duration:** 15-30 minutes.

**8. Musculoskeletal Disorders**

**Osteoarthritis**

* **X-rays:**
  + **Procedure:** X-ray imaging of the affected joint to assess joint space narrowing, bone spurs, and other signs of osteoarthritis.
  + **Duration:** A few minutes.
* **MRI:**
  + **Procedure:** Detailed imaging of joints and soft tissues to assess cartilage damage and joint health.
  + **Duration:** 30-60 minutes.

**Osteoporosis**

* **DEXA Scan (Dual-Energy X-ray Absorptiometry):**
  + **Procedure:** A low-dose X-ray measures bone density, especially in the spine, hip, and forearm.
  + **Duration:** 10-20 minutes.

**9. Digestive Disorders**

**Liver Cirrhosis**

* **Ultrasound:**
  + **Procedure:** An imaging test to check for liver size, structure, and signs of cirrhosis or liver damage.
  + **Duration:** 15-30 minutes.

**Inflammatory Bowel Disease (IBD)**

* **Colonoscopy:**
  + **Procedure:** A camera is inserted into the colon to identify inflammation or ulcers.
  + **Duration:** 30-60 minutes.

**10. Other Chronic Conditions**

**Obesity**

* **BMI Calculation:**
  + **Procedure:** A simple calculation of height and weight to determine the body mass index (BMI), which helps assess obesity.
  + **Duration:** A few minutes.

**Hyperlipidemia (High Cholesterol)**

* **Lipid Profile:**
  + **Procedure:** A blood test to measure cholesterol levels, including total cholesterol, LDL, HDL, and triglycerides.
  + **Duration:** A few minutes for the test; results take a few hours.

**Thyroid Disorders**

* **TSH, T3, T4 Blood Tests:**
  + **Procedure:** Blood tests to measure thyroid-stimulating hormone (TSH) and thyroid hormones (T3 and T4).
  + **Duration:** A few minutes for the test; results take a few hours.