



# *Hematopathology*

## Embark on an Adventure

Hematopathology encompasses a number of specialty labs that perform both basic and specialized hematology testing. Our laboratories utilize instrumentation, microscopic review and morphologic evaluation to obtain the complete hematologic picture of our patients. Hematopathology consists of four hematologic labs: Core Hematology, Cell Kinetics, Metabolic Hematology, and Special Coagulation.

### **Core Hematopathology Laboratory**

The Core Hematology Laboratory performs a variety of tests on many fluid types. Complete blood counts (CBCs) are performed on peripheral blood samples that are flagged abnormal by our instrumentation. If necessary, a slide preparation is made and the peripheral blood cells are viewed microscopically in search of anemias, infections, or possible hematologic malignancies. A variety of body fluids including but not limited to cerebral spinal fluid (CSF), synovial fluid, and chest fluids are tested for infection, hemorrhage, or malignancy. Other specialty testing such as special stains are accomplished following bone marrow collections. Bone marrow samples are reviewed morphologically and analyzed by other specialty labs to aid in the diagnosis of acute and chronic leukemias or other hematologic malignancies.

### **Cell Kinetics Laboratory**

Flow cytometry is the primary technology that is used to subclassify cell types. This laboratory immunophenotypes leukemia's, quantitate T and B cells and perform other miscellaneous tests utilizing flow cytometry.

### **Metabolic Hematology Laboratory**

This lab is a specialized chemistry-oriented laboratory providing a variety of testing related to hematological disorders. Tests included are identification of abnormal or variant hemoglobins, red cell deficiencies, red cell folates, osmotic fragilities, plasma hemoglobins, and sickle solubilities. Types of instrumentation or technology include alkaline and acid gel electrophoresis, globin chain electrophoresis, isoelectric focusing, HPLC, DNA sequencing, and spectrophotometers. This is a very interpretive laboratory with daily consultant interactions.

### **Special Coagulation and Special Coagulation DNA Diagnostic Laboratories**

These laboratories perform esoteric hemostatic laboratory studies designed to aid physicians in the diagnosis and treatment of patients with bleeding and thrombosing disorders. An extensive test repertoire is offered including clot-based assays, chromogenic assays, immunoassays, Platelet aggregation and secretion assays, gel electrophoresis as well DNA sequencing and genotyping. Results are integrated into a consultative report.

### **Core/Morphology Laboratory**

Technologists provide morphologic interpretation of peripheral blood, body fluid and bone marrow on patient samples. The laboratory technologists also support in the collection and preparation of patient bone marrow samples prior to analysis.

### **Molecular Hematology Laboratory**

This lab performs DNA and RNA extraction as well as several PCR and Southern blot techniques for various hematologic malignancies.