

Flow Cytometry

Acute Myeloid Leukemia (AML) Panel

Methodology:	Flow Cytometry Markers: CD34, CD41a, CD45, CD235a, Myeloperoxidase
Test Description:	The Acute Myeloid Leukemia (AML) Panel by flow cytometry is used to characterize the immunophenotype of a myeloblast population to aid in the diagnosis and subclassification of AML and other myeloid neoplasms. This panel is best used in combination with the Leukemia/Lymphoma Panel. Bone marrow aspirate: 2-3 ml in green top (sodium heparin) or purple top (EDTA) tube Peripheral blood: 5-7 ml in green top (sodium heparin) or purple top (EDTA) tube Specimens should be received within 24-48 Hours from collection to ensure acceptable cell viability. Peripheral blood and bone marrow aspirate specimens can be stored and transported at room temperature. Other tissue biopsies and body fluids should be refrigerated but not frozen; please use a cold pack to transport these specimens, making sure the cold pack is not in direct contact with the specimen.
Specimen Requirements:	
Storage & Transportation	
CPT Code(s):	*88184, 88185, 88189
Level of Service:	Global
Turnaround Time:	1 day

DNA Ploidy[†]

Methodology:	Flow Cytometry
Test Description:	DNA stain propidium iodide is used to determine S-phase cell cycle fraction and DNA index as indicators of DNA ploidy. Clinical Significance DNA analysis is, after immunofluorescence, the second most important application of flow cytometry. By measuring the DNA content of individual cell, we can obtain information about their ploidy, of particular relevance in tumors, and, for a population, the distribution of cells across the cell cycle.
Specimen Requirements:	Flow cytometry testing can be performed on bone marrow aspirate, peripheral blood, fresh bone marrow core biopsy, unfixed tissue, and body fluids. Please see full specimen requirements for either Standard Leukemia/Lymphoma Analysis or Extended Leukemia/Lymphoma Analysis.
Storage & Transportation	Specimens should be received within 24-48 Hours from collection to ensure acceptable cell viability. Peripheral blood and bone marrow aspirate specimens can be stored and transported at room temperature. Other tissue biopsies and body fluids should be refrigerated but not frozen; please use a cold pack to transport these specimens, making sure the cold pack is not in direct contact with the specimen.
CPT Code(s):	*88182
Level of Service:	Global
Turnaround Time:	1 day

Hairy Cell Leukemia Panel

Methodology:	Flow Cytometry Markers: CD11c, CD20, CD25, CD45, CD103
Test Description:	The Hairy Cell Leukemia Panel by flow cytometry is used to aid in the initial diagnosis of hairy cell leukemia or hairy cell leukemia variant or to assess for the presence of residual/relapsed disease. This panel is best used in combination with the Leukemia/Lymphoma Panel.
Specimen Requirements:	Bone marrow aspirate: 2-3 ml in green top (sodium heparin) or purple top (EDTA) tube Peripheral blood: 5-7 ml in green top (sodium heparin) or purple top (EDTA) tube Specimens should be received within 24-48 Hours from collection to ensure acceptable cell viability. Peripheral blood and bone marrow aspirate specimens can be stored and transported at room temperature. Other tissue biopsies and body fluids should be refrigerated but not frozen; please use a cold pack to transport these specimens, making sure the cold pack is not in direct contact with the specimen.
Storage & Transportation	
CPT Code(s):	*88184, 88185, 88187
Level of Service:	Global
Turnaround Time:	1 day

The CPT codes provided with our test descriptions are based on AMA guidelines and are for informational purposes only. Correct CPT coding is the sole responsibility of the billing party. Please direct any questions regarding coding to the pay or being billed. [†]Tests are sent to CBLPath's preferred laboratory.

Immune Deficiency Panel

Methodology:	Flow Cytometry Markers: CD3, CD4, CD8, CD19, CD45, CD56
Test Description:	Clinical Significance The Immune Deficiency Panel by flow cytometry is used to quantify the relative proportions and absolute numbers of T, B, and NK cells in the peripheral blood. This data can help to evaluate the status of a patient's immune system and assess degree of immunodeficiency, for example, by measuring absolute CD4 counts in patients with HIV infection.
Specimen Requirements:	Peripheral blood: 5-7 ml in purple top (EDTA) tube (preferred) or green top (sodium heparin) tube
Storage & Transportation	Specimens should be received within 24 Hours from collection to ensure sample integrity and acceptable cell viability. Specimens should be transported at room temperature.
CPT Code(s):	86359, 86360, 86357, 86355
Level of Service:	Global
Turnaround Time:	12-24 Hours

Leukemia/Lymphoma Panel for Peripheral Blood and Bone Marrow

Methodology:	Flow Cytometry Markers: CD2, CD3, CD4, CD5, CD7, CD8, CD10 CD11b, CD13, CD14, CD16, CD19, CD20, CD22, CD23, CD25, CD34, CD38, CD45, CD56, CD64, CD117, CD138, HLA-DR, sKappa, sLambda
Test Description:	This is a general panel used to screen peripheral blood or bone marrow specimens for the presence of hematolymphoid neoplasms.
Specimen Requirements:	Bone marrow aspirate: 2-3 ml in green top (sodium heparin) or purple top (EDTA) tube Peripheral blood: 5-7 ml in green top (sodium heparin) or purple top (EDTA) tube
Storage & Transportation	Specimens should be received within 24-48 Hours from collection to ensure sample integrity and acceptable cell viability. Specimens should be stored and transported at room temperature.
CPT Code(s):	*88184, 88185, 88189
Level of Service:	Global
Turnaround Time:	24-36 Hours

Leukemia/Lymphoma Panel for Lymph Node/Tissue Biopsies

Methodology:	Flow Cytometry Markers: CD2, CD3, CD4, CD5, CD7, CD8, CD10, CD16, CD19, CD20, CD22, CD23, CD25, CD38, CD45, CD56, CD138, FMC7, sKappa, sLambda
Test Description:	This is a general panel used to screen lymph node and other tissue biopsies for the presence of lymphoproliferative disorders.
Specimen Requirements:	Incisional/excisional or core needle biopsy: Ideally, 1 cm ³ of tissue completely immersed in RPMI. Testing can be successfully performed on smaller specimens if the tissue has adequate cellularity. The number of markers tested may be reduced if cellularity is insufficient. If RPMI is unavailable, tissue can be submitted wrapped in saline-moistened gauze but not submerged in saline. Fine needle aspirate (FNA): 1:1 ratio of aspirate and RPMI; minimum 2 ml total
Storage & Transportation	Specimens should be received within 24-48 Hours from collection to ensure sample integrity and acceptable cell viability. Specimens should be refrigerated but not frozen. Please use a cold pack for transport, making sure the cold pack is not in direct contact with the specimen
CPT Code(s):	*88184, 88185, 88189
Level of Service:	Global
Turnaround Time:	1 day

Paroxysmal Nocturnal Hemoglobinuria (PNH) Panel*

Methodology:	Flow Cytometry Markers: CD14, CD15, CD24, CD33, CD45, CD59, FLAER
Test Description:	The PNH Panel by flow cytometry is used to diagnose and monitor patients with paroxysmal nocturnal hemoglobinuria (PNH).
Specimen Requirements:	Peripheral blood: 3 ml in purple top (EDTA) tube
Storage & Transportation	Specimens should be received within 24 Hours of draw time to ensure sample integrity and acceptable cell viability.
CPT Code(s):	88184, 88185, 88187
Level of Service:	Global
Turnaround Time:	72 Hours

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Plasma Cell Neoplasm Panel

Methodology:	Flow Cytometry Markers: CD19, CD38, CD45, CD56, CD138, cKappa, cLambda
Test Description:	The Plasma Cell Neoplasm Panel by flow cytometry is used to aid in the initial diagnosis of plasma cell neoplasms (i.e., plasma cell myeloma, plasmacytomas, and monoclonal gammopathy of undetermined significance) or to assess for the presence of residual/relapsed disease. This panel is best used in combination with the Leukemia/Lymphoma Panel.
Specimen Requirements:	Bone marrow aspirate: 2-3 ml in green top (sodium heparin) or purple top (EDTA) tube Peripheral blood: 5-7 ml in green top (sodium heparin) or purple top (EDTA) tube Incisional/excisional or core needle biopsy: Ideally, 1 cm ³ of tissue completely immersed in RPMI. Testing can be successfully performed on smaller specimens if the tissue has adequate cellularity. If RPMI is unavailable, tissue can be submitted wrapped in saline-moistened gauze but not submerged in saline. Fine needle aspirate (FNA): 1:1 ratio of aspirate and RPMI; minimum 2 ml total
Storage & Transportation	Specimens should be received within 24-48 Hours from collection to ensure sample integrity and acceptable cell viability. Specimens should be stored and transported at room temperature.
CPT Code(s):	+88184, 88185, 88187
Level of Service:	Global
Turnaround Time:	1 day

T-Cell Panel

Methodology:	Flow Cytometry Markers: CD1a, CD3, CD45, TCR $\alpha\beta$, TCR $\gamma\delta$, TdT
Test Description:	The T-Cell Panel by flow cytometry is used to aid in the diagnosis of T-cell leukemias/lymphomas. This panel is best used in combination with the Leukemia/Lymphoma Panel.
Specimen Requirements:	Bone marrow aspirate: 2-3 ml in green top (sodium heparin) or purple top (EDTA) tube Peripheral blood: 5-7 ml in green top (sodium heparin) or purple top (EDTA) tube Incisional/excisional or core needle biopsy: Ideally, 1 cm ³ of tissue completely immersed in RPMI. Testing can be successfully performed on smaller specimens if the tissue has adequate cellularity. If RPMI is unavailable, tissue can be submitted wrapped in saline-moistened gauze but not submerged in saline. Fine needle aspirate (FNA): 1:1 ratio of aspirate and RPMI; minimum 2 ml total
Storage & Transportation	Specimens should be received within 24-48 Hours from collection to ensure sample integrity and acceptable cell viability. Peripheral blood and bone marrow aspirate specimens should be stored and transported at room temperature. Other tissue biopsies and body fluids should be refrigerated but not frozen; please use a cold pack to transport these specimens, making sure the cold pack is not in direct contact with the specimen.
CPT Code(s):	+88184, 88185, 88187
Level of Service:	Global
Turnaround Time:	1 day

ZAP-70 Panel

Methodology:	Flow Cytometry Markers: CD5, CD19, CD45, ZAP-70
Test Description:	Clinical Significance The ZAP-70 Panel by flow cytometry is used to assess for the presence of ZAP-70 expression on chronic lymphocytic leukemia/small lymphocytic lymphoma. The presence of ZAP-70 expression has been associated with an adverse prognosis and correlates with unmutated IGHV status. This panel is best used in combination with the Leukemia/Lymphoma Panel.
Specimen Requirements:	Peripheral blood: 5-7 ml in green top (sodium heparin) or purple top (EDTA) tube
Storage & Transportation	Specimens should be received within 24 Hours of draw time. Specimens should be stored and transported at room temperature.
CPT Code(s):	+88184, 88185, 88187
Level of Service:	Global
Turnaround Time:	1 day

Flow TC- Contact CBLPath for the current menu
