مدينة الملك فهد الطبية
King Fahad Medical City

Flow Cytometry Section

Flow Cytometry assays covers a wide sub-specialty of testing.

One category of flow Cytometry evaluation is the enumeration of well-defined CD4-positive or CD34-positive cell populations.

The more complex leukemia/lymphoma immunophenotyping assays use the same flow cytometry instrumentation and technique; however, they involve the recognition of many different and, many times, subtle hematologic neoplasms. Such processes interpretation requires knowledge of the maturation and expression patterns of normal and abnormal populations.

A comprehensive quality assurance/quality management program designed for these complex assays is necessary to ensure that the results obtained are accurate, consistent, and reproducible

over time, regardless of laboratory variables such as staff, reagent, sample preparation, instrumentation, acquisition, and analysis.

PRINCIPLE

To determine the types of markers and receptors on the surface of a cell. For these experiments, a fluorescent dye is attached to antibodies or receptor ligands.

These cells can then be subjected to flow cytometry and the amount of the receptor on their surface detected as a level of fluorescence.
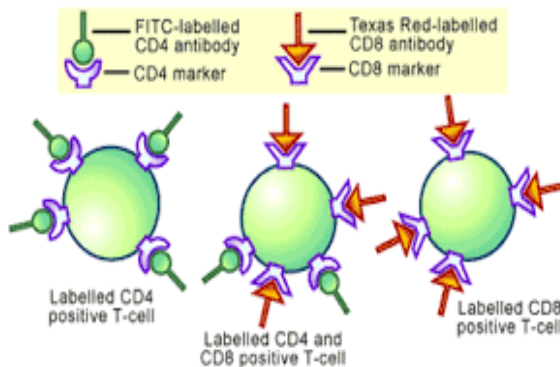
IMMUNOFLOURESCE LABELING

These experiments can be designed to incorporate more than one fluorescent marker at a time, giving the ability to detect multiple cell-surface markers simultaneously.

B Rituximab	monitoring B cells count post Rituximab drug
CD4/CD8 RATIO	The ratio tells the healthcare provider how strong your immune system
DNA Index	B ALL Prognostic Tool

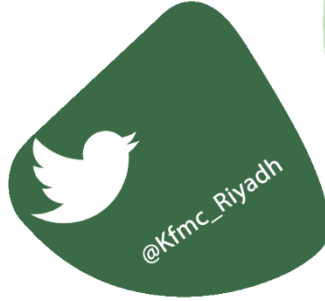|	
Leukemia Panel	Distinguishing acute lymphoblastic leukemia (ALL) from acute myeloid leukemia (AML) & Immunologic subtyping of ALL
Paroxysmal nocturnal hemoglobin urea	Screening for and confirming the diagnosis of paroxysmal nocturnal hemoglobinuria (PNH) Monitoring patients with PNH

Oxidative Burst Test	this assay determines the ability of PMNs togenerate an oxidative burst by indirectly measuring the increase in fluorescence generated by the oxidation by (O2) of a dye, dihydrorhodamine (DHR-123).
Minimal residual disease	Predict disease prognosis post chemotherapy
Leukocyte adhesion Molecules (LAD)	Assessment of Adhesion Markers, Diagnosis of Leukocyte adhesion deficiency disease

Platelets Glycoprotein	Detects platelet glycoprotein antigens: CD61, CD41, CD42a, CD42b. Roll out Glanzmann and Bernard solier Syndrom
Leuco-count	QC tool for Blood bank
CD34 enumeration	CD34 % and Absolute, can be done on PB, BM or Cord blood

لأن الوعي وقاية ..

إدارة التثقيف الصحي

**Pathology & Clinical Laboratory Medicine
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