TEST: REPRODUCTIVE IMMUNOPHENOTYPE

PRINCIPLE:
This test quantitates and analyzes cell surface markers of lymphocyte subsets and other cell populations using monoclonal antibodies. The two major types of lymphocytes are T lymphocytes that are responsible for cellular immunity and B lymphocytes that produce humoral immunity. Monoclonal antibodies have been produced to identify each of these types or their subsets. These antibodies are conjugated with fluorochromes and then reacted with lymphocytes. The percentage of positively stained cells can be determined by flow cytometry. Results are reported as percentage of positive lymphocytes; absolute counts are reported for immunodeficiency profile.

SPECIMEN REQUIREMENTS:
10-20 ml of whole blood collected in green top tubes with heparin. Make sure blood is mixed well after it is drawn from the patient to prevent clots. Send blood at room temperature. **Do not refrigerate.** Deliver to the laboratory within 24 hours. Criteria for an unacceptable sample are a cold specimen (due to refrigeration or shipment on ice), extensive clotting or hemolysis or specimens more than 48 hours old.

METHOD:
Flow Cytometry.

REFERENCES:
1. Lovett, E.J. et al: Application of flow Cytometry to Diagnostic Pathology. Lab. Invest. 50:115, 1984.

2. Lane, H.C. and A. Fauci. Immunologic Aspects of the Acquired Immunodeficiency Syndrome. Adv. Host Def. Mech. 5:131, 1985.

Normal Range: See lab report

Turnaround Time: 3 days

Immunophenotype Panels

CD3 (pan T Cell)	CD3-CD56+(NK cells)
CD4 (T-helper)	CD56+CD16+cells
CD8 (T-cytotoxic/suppr)	CD19 (B cells)
CD3+CD56+(NKT)	%CD19+cells,CD5+
CD3 / CD25 (IL-2 Receptor)	