Master Answers to Clinical Immunologic Assays-II

Comments on immunofluorescence (IF)

1. IF is commonly used by pathologists to confirm the presence of antibodies bound in renal glomeruli and skin. There is a wide range of commercially available reagents that can be used to localize immunoglobulins of all isotypes, complement components, fibrin, etc. in biopsy or autopsy tissue. In fact, if antibodies can be made to something, then a researcher can set up an IF assay that will detect the antibody bound to that something (antigen) in tissue. Understanding how to interpret IF will become evident in a later Small Group

Questions on flow cytometry:

1. ***The beauty of flow analysis is that the clinician can customize a search for specific CD markers by developing monoclonal antibodies specific for surface markers that will provide critical clinical information. Leukemias and lympho-proliferative disorders were the first logical targets for monoclonal probes because of the information already available on their characteristic CD markers. For example, if the patient has clinical characteristics of aT cell leukemia, CD3 might be one of the markers used. In the case described, all we know is that the white blood cell count is markedly elevated. Using markers for granulocytes, lymphocytes and monocytes would determine the lineage of the cell. Once the lineage is determined, you would then choose the markers that would detect specific phenotypes. In this case, it might be that lymphocytes were the expanded cell population. You would then select CD3 and B cell markers that could sort out the 2 populations. Then, if the expanded population was B cell in origin, you could easily use kappa and lambda chain markers to determine clonality. If there is a skewed distribution of kappa or lambda chains in the cell population, the likely assumption is that there has been proliferation of a single clone of B cells. The more precise the diagnosis, the more targeted the therapy and prognosis will be.***