LEADING ARTICLE

NON-MELANOMA SKIN CANCERS: IMMUNOHISTOCHEMICAL MARKERS IN DIAGNOSIS

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Cutaneous metastases of common primary tumours in most populations are rare. The common primary tumours metastatic to the skin in men are lung, large intestine, melanoma and squamous cell carcinoma of the oral cavity. For women the primary tumours are breast, large intestine, melanoma and ovary (1). As the authors of an article in this Journal on Cutaneous metastases point out, patients who present with cutaneous skin metastases are very rare and usually have a uniformly bad prognosis regardless of the primary. When metastases are biopsied it then becomes essential to ascertain the origin of the cell-type. This problem could not be more acute than in spindle cell tumours. This brief review will look at the present immunohistochemical stains available and reflect on future trends.

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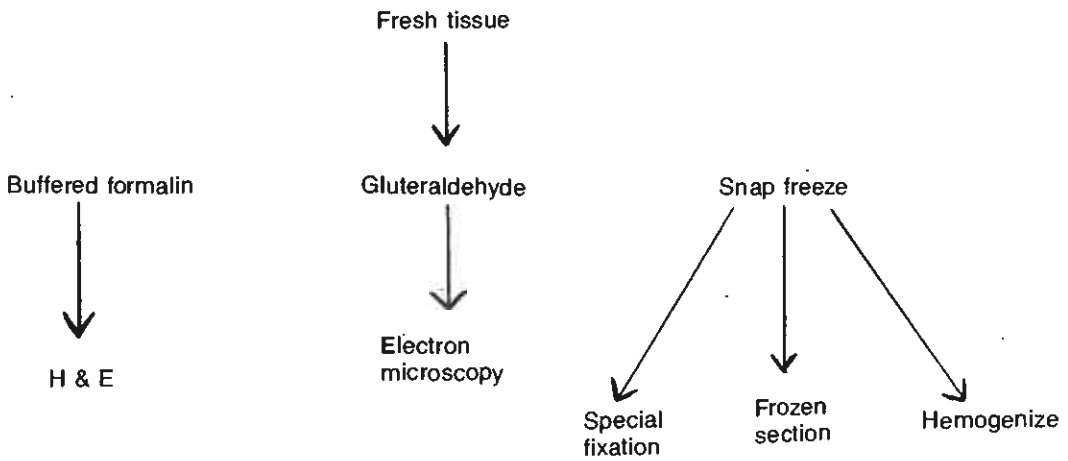
In good clinical laboratories all specimens required for immunohistology should be treated in the following manner:



The most striking recent advance in diagnostic immunohistology have been in the allocation of poorly differentiated tumours in appropriate broad diagnostic categories — epithelial lymphoid and melanocytic, and in the sub-classification of lymphoid and endocrine tumours according to their "immunophenotype" ie, their state of molecular and functional specialization as revealed by appropriate immunohistochemical staining (2). The basic stains used are as follows:

Cytokeratins peculiar to epithelial cells
Vimentin to connective and lymphoid tissues
Desmin to smooth and striated muscle
Glial fibrillary acidic protein to glial cells
Neurofilaments to neurons and their precursors

To distinguish carcinoma from lymphoma by judicious use of monoclonal antibodies like the leucocyte common antigen, S100 and keratin stains will result in correct diagnosis in some 75% of cases.

Further developments to distinguish if a lymphoid infiltrate is indeed benign or malignant is to show the presence of clonality. Clonality is considered to be sine qua non of malignancy (3). This technique holds consider-

able promise and could be extended to study inflammatory diseases like lupus erythematous, lichen planus and other T-cell mediated responses.

Molecular Biology is now being used to shed light on the aetiology of several tumours. One of the best recognized is demonstration of papilloma virus infection associated with squamous cell carcinoma (4) and Epidermodysplasia verruciforms (5).

The contributions of immunohistochemistry are already making a major impact on current classification of neoplasms, especially when the cell of origin is obscure with the use of routine stains. Although we cannot simplistically expect these 'magic markers' to provide all the answers, used in the appropriate context they represent a powerful developing tool in the armentarium of the clinician.

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