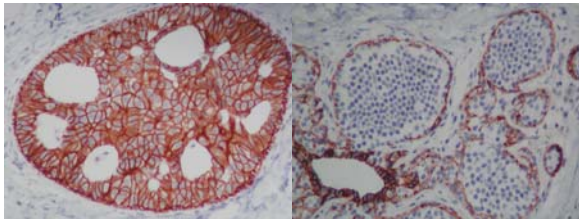


## Focus on Antibodies - August 2000

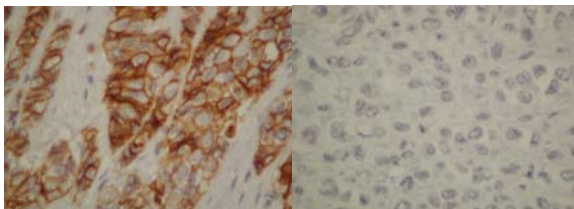
### E-Cadherin: An aid in Distinguishing Ductal from Lobular Breast Proliferations.

On certain occasions, it can be difficult to distinguish lobular carcinoma and lobular carcinoma in-situ (LCIS) from ductal carcinoma and ductal carcinoma in-situ (DCIS). In this situation, immunostains for E-cadherin are very useful. E-cadherin has been found to be expressed in only 4% of invasive lobular



*This photomicrograph depicts the strongly positive E-cadherin immunostains in a case of DCIS (left), vs. the negative staining in a case of LCIS (right). Note the intact myoepithelial cells staining on the periphery of the lobules involved by LCIS.*

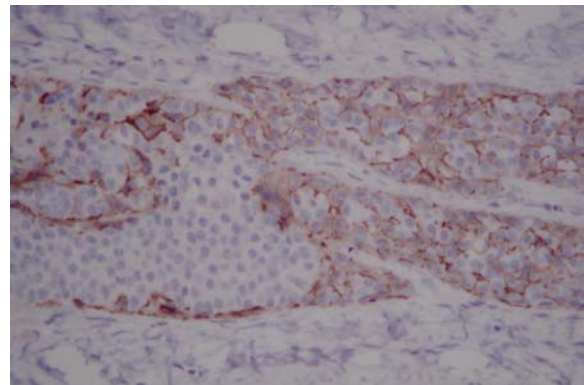
carcinomas (1 of 27 cases), but in all of 43 cases of ductal carcinoma and DCIS. E-cadherin also stains normal ductal epithelium, as well as normal myoepithelial cells that are associated with benign ducts and lobules.



*Invasive ductal carcinoma (left) is characteristically strongly positive with E-cadherin, in contrast to invasive lobular carcinoma (right), which is characteristically negative.*

In addition to E-cadherin, low molecular weight cytokeratin is advocated by some authors for use in distinguishing ductal from lobular proliferations. Low molecular weight cytokeratin

staining has been described as resembling a "bag of marbles" in lobular proliferations, whereas ductal proliferations have a more cohesive immunostain appearance. We have evaluated both of these markers on numerous occasions at ProPath, and in our experience, E-cadherin immunostaining is substantially easier to interpret, and we do not believe that low molecular weight cytokeratin immunostaining offers any particular advantage over E-cadherin.



*This E-cadherin immunostain highlights the presence of lobular neoplasia involving a breast duct, reflected in the collection of unstained cells growing within the confines of the duct.*

#### References:

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