Pathology, Inc.
Welcome to Excellence

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TEST UPDATES and ANNOUNCEMENTS

June 17, 2010

Dear Colleague:

Pathology, Inc. is pleased to announce the availability of 19 new immunohistochemistry and in situ hybridization biomarkers for better characterization of tissue and cell populations.

New IHC & ISH Markers

Pathology, Inc is now offering 16 new immunohistochemistry (IHC) and 3 new in situ hybridization (ISH) markers for characterizing cells. Our comprehensive library now totals 180 stains, consisting of 177 single IHC markers or panels and 3 ISH assays.

As part of our new offering, we are introducing ADH-5 (CK5/CK14/CK7/CK18/p63). ADH-5 is a multiplex IHC composed of CK5/14 +p63 +CK7/18. CK5/14 and p63 are both stained by DAB chromogen (brown) and represent either myoepithelial cells or the basal phenotype. CK7/18 is stained by FR chromogen (red) and represents glandular or luminal epithelium. Invasive breast carcinomas stain red only with CK7/18 only (no CK5/14 or p63), while noninvasive cancer shows both red and brown staining. Usual ductal hyperplasia shows luminal staining pattern with expression of both CK5/14 and CK7/18. The nuclei of the myoepithelium stain with p63. This is in contrast to atypical ductal hyperplasia or ductal carcinoma in situ, which are CK7/18 positive, but CK5/14 negative, with p63+ myoepithelium on the duct periphery. Breast cancers that are ER/PR/HER2 negative (triple negative) may show staining with CK5/14 and some p63. This corresponds to the basal phenotype which is usually high grade. Please feel free to contact Pathology, Inc. for any questions.

The complete list is available on our Website (www.pathologyinc.com) and is updated regularly. Please call client services at 877-922-PATH (7284) for ordering information.

We thank you for choosing Pathology, Inc. and look forward to your continued support. For additional information, please visit our website at www.pathologyinc.com or contact client services at 877-922- PATH (7284).

Respectfully yours,

Alfred Lui, M.D.
Chief Medical Officer

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New Tests

Immunohistochemistry (IHC)

Marker	Clinical Utility
ADH-5 – (CK5/14/7/8) and p63	Useful to distinguish usual ductal hyperplasia of breast, atypical hyperplasia, microinvasive, and basal phenotype breast CA
CA15-3	Epithelial marker; stains breast CA, synovial sarcoma, MFH, lung CA
Caldesmon	Smooth muscle marker; also positive in GIST and glomus tumors
Cathepsin D	Breast CA prognostic marker (>5% staining a/w favorable prognosis); also used to identify metastasis and response to hormonal therapy
CD38	Stains thymocytes, activated T cells, plasma cells, some ALL and AML
CK15	Epithelial marker positive with tricho differentiation; useful to distinguish tricho neoplasms from BCC
CK19	Stains many ductal and glandular epithelia, prostate, non-keratinizing squamous epithelium; negative in hepatocytes
DOG-1	Marker for GIST; establish therapy for tyrosine kinase inhibitors
Melan A + Ki-67	Useful to distinguish nevi from melanoma; Melan A=red, Ki-67=brown
Mesothelin	Additional mesothelial marker; also stains ovarian serous neoplasms and pancreatic-bile ductal epithelium, synovial sarcoma, DSRCT
MUC-2	Mucin-related glycoprotein; positive in tumors with “intestinal-type” mucin or goblet cells
Mycobacteria (TB)	Stains M. tuberculosis; also M. avium, M. phlei, and M. parafortuitum
Napsin A	Stains type II pneumocytes; positive in >90% lung adenoCA, negative in adenoCA lung metastasis
Oct 3/4	Positive in classical seminoma and embryonal CA
SP-A	Surfactant protein A; positive in primary lung neoplasms, predominantly pulmonary adenoCA
Uroplakin III	Stains urothelium; useful for metastasis and tumors of unknown primary site

In Situ Hybridization (ISH)

Marker	Clinical Utility
EBER-ISH	Gold standard for detecting latent EBV infection in tissue
Kappa-ISH	Plasma cell marker, cleaner background than IHC, improved signal:noise ratio
Lambda-ISH	Plasma cell marker, cleaner background than IHC, improved signal:noise ratio