

Geisinger IHC's New Panels

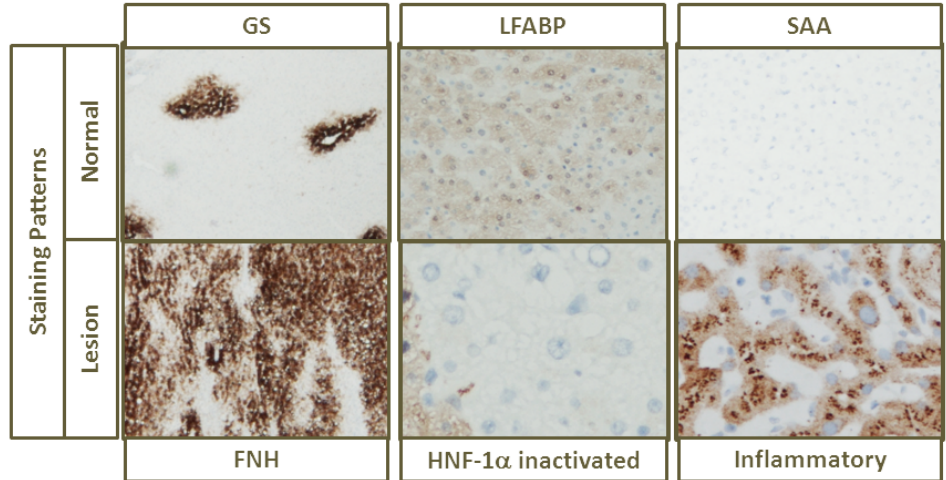
Hepatocellular adenoma subclassification and differentiation from focal nodular hyperplasia (FNH) and normal liver

Lesion types	IHC panel			
	LFABP	SAA/CRP	GS	β-Catenin
HNF-1α inactivation	-	-	Hepatic vein	M
β-Catenin activated	+	-	Diffusely +	N
Inflammatory	+	+	Hepatic vein	M or N
Unclassified	+	-	Hepatic vein	M
FNH	+	-	Map-like	M
Normal liver	+	-	Hepatic vein	M

Note: LFAB – liver fatty acid binding protein; SAA – serum amyloid associated protein; CRP – C-reactive protein; GS – glutamine synthetase; HNF-1α – hepatocyte nuclear factor 1α; FNH – focal nodular hyperplasia; : “+” – usually greater than 75% of cases are positive; “-” – less than 5% of cases are positive; M – membranous staining; N – nuclear staining.

References:

1. Bioulac-Sage P, et al. *Hepatology*. 2007;46(3):740- 748.
2. Bioulac-Sage P, et al. *Am J Surg Pathol*. 2012;36(11):1691-1699.



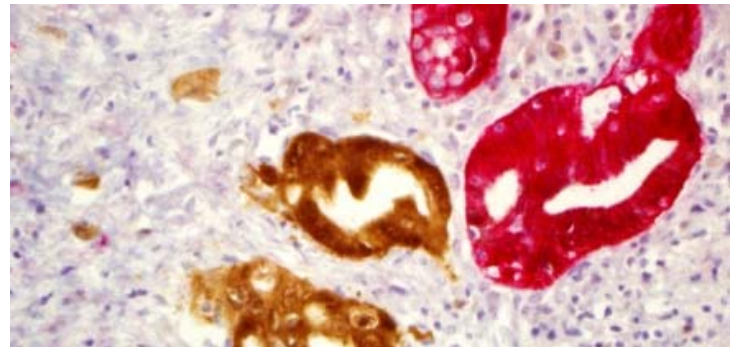
Pancreatic ductal adenocarcinoma (PDA) vs. chronic pancreatitis

Antibodies	PDA	Pancreatitis
pVHL	-	+
Maspin	+	-
S100P	+	- or C + only
IMP3(KOC)	+	-

Note: “+” – usually greater than 75% of cases are positive; “-” – less than 5% of cases are positive; C – cytoplasmic staining.

References:

1. Liu H, et al. *Arch Pathol Lab Med*. 2012;136(6):601-609.
2. Shi J, et al. *Hum Pathol*. 2013; 44(4):503-511.
3. Schmidt MT, et al. *Appl Immunohistochem Molec Morphol*. 2012;20(5):478-487.

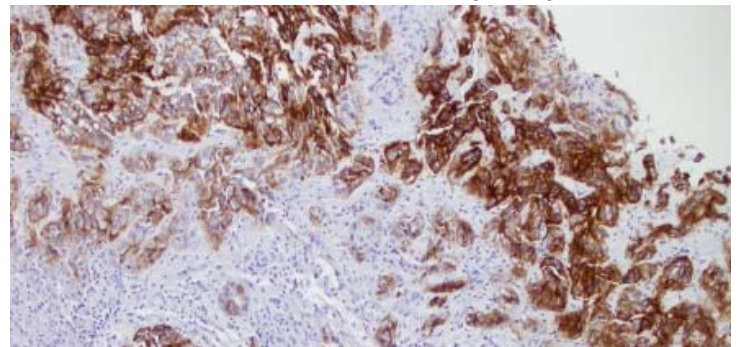


Maspin positive in adenocarcinoma (brown) and pVHL positive in benign ducts (red)

Intrahepatic cholangiocarcinoma (ICC) vs. pancreatic ductal adenocarcinoma (PDA)

Antibodies	% Positive	
	ICC	PDA
pVHL	71%	5%
S100P	27%	95%
MUC5AC	12%	67%
CK17	12%	60%

Reference: Lok T, et al. *Hum Pathol*. 2014;45(2):394-400.



pVHL positive in ICC