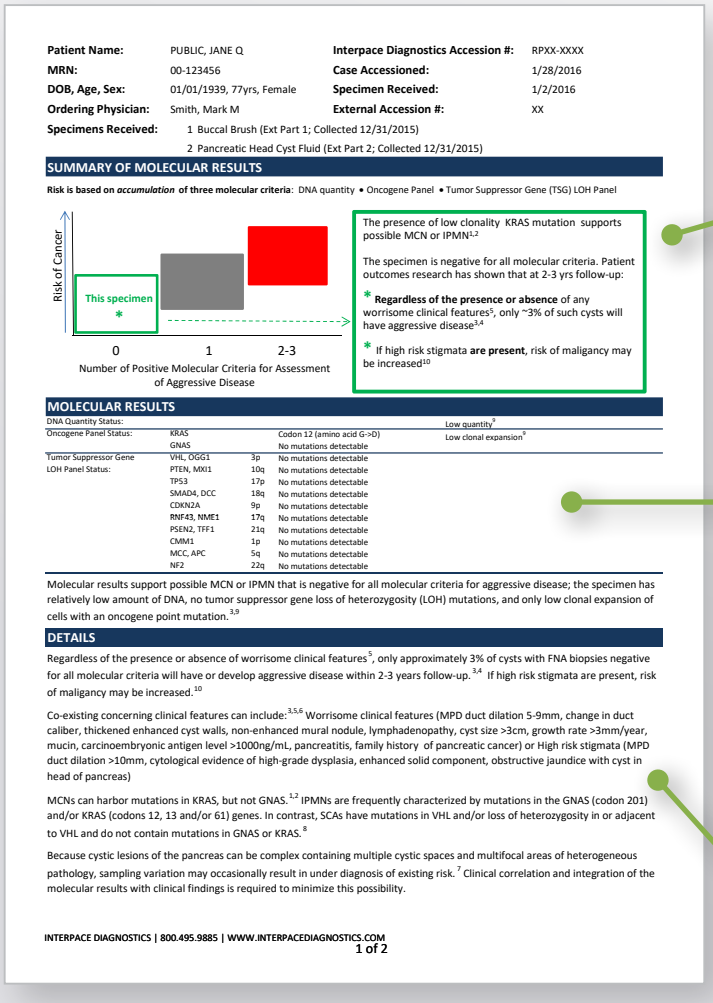
PanDNA® Report Guide



Patient Name: PUBLIC, JANE Q
MRN: 00-123456
DOB, Age, Sex: 01/01/1939, 77yrs, Female
Ordering Physician: Smith, Mark M
Specimens Received: 1 Buccal Brush (Ext Part 1; Collected 12/31/2015)
2 Pancreatic Head Cyst Fluid (Ext Part 2; Collected 12/31/2015)

Interpace Diagnostics Accession #: RPXX-XXXX
Case Accessioned: 1/28/2016
Specimen Received: 1/2/2016
External Accession #: XX

SUMMARY OF MOLECULAR RESULTS

Risk is based on *accumulation* of three molecular criteria: DNA quantity • Oncogene Panel • Tumor Suppressor Gene (TSG) LOH Panel

Risk of Cancer
This specimen *
0 1 2-3
Number of Positive Molecular Criteria for Assessment of Aggressive Disease

The presence of low clonality KRAS mutation supports possible MCN or IPMN[1,2]

The specimen is negative for all molecular criteria. Patient outcomes research has shown that at 2-3 yrs follow-up:

* **Regardless of the presence or absence** of any worrisome clinical features[5], only ~3% of such cysts will have aggressive disease[3,4]

* If high risk stigmata **are present**, risk of maligancy may be increased[10]

MOLECULAR RESULTS

DNA Quantity Status:				Low quantity[9]
Oncogene Panel Status:	KRAS		Codon 12 (amino acid G->D)	Low clonal expansion[9]
	GNAS		No mutations detectable	
Tumor Suppressor Gene LOH Panel Status:	VHL, OGG1	3p	No mutations detectable	
	PTEN, MXI1	10q	No mutations detectable	
	TP53	17p	No mutations detectable	
	SMAD4, DCC	18q	No mutations detectable	
	CDKN2A	9p	No mutations detectable	
	RNF43, NME1	17q	No mutations detectable	
	PSEN2, TFF1	21q	No mutations detectable	
	CMM1	1p	No mutations detectable	
	MCC, APC	5q	No mutations detectable	
	NF2	22q	No mutations detectable	

Molecular results support possible MCN or IPMN that is negative for all molecular criteria for aggressive disease; the specimen has relatively low amount of DNA, no tumor suppressor gene loss of heterozygosity (LOH) mutations, and only low clonal expansion of cells with an oncogene point mutation.[3,9]

DETAILS

Regardless of the presence or absence of worrisome clinical features[5], only approximately 3% of cysts with FNA biopsies negative for all molecular criteria will have or develop aggressive disease within 2-3 years follow-up.[3,4] If high risk stigmata are present, risk of malignancy may be increased.[10]

Co-existing concerning clinical features can include:[3,5,6] Worrisome clinical features (MPD duct dilation 5-9mm, change in duct caliber, thickened enhanced cyst walls, non-enhanced mural nodule, lymphadenopathy, cyst size >3cm, growth rate >3mm/year, mucin, carcinoembryonic antigen level >1000ng/mL, pancreatitis, family history of pancreatic cancer) or High risk stigmata (MPD duct dilation >10mm, cytological evidence of high-grade dysplasia, enhanced solid component, obstructive jaundice with cyst in head of pancreas)

MCNs can harbor mutations in KRAS, but not GNAS.[1,2] IPMNs are frequently characterized by mutations in the GNAS (codon 201) and/or KRAS (codons 12, 13 and/or 61) genes. In contrast, SCAs have mutations in VHL and/or loss of heterozygosity in or adjacent to VHL and do not contain mutations in GNAS or KRAS.[8]

Because cystic lesions of the pancreas can be complex containing multiple cystic spaces and multifocal areas of heterogeneous pathology, sampling variation may occasionally result in under diagnosis of existing risk.[7] Clinical correlation and integration of the molecular results with clinical findings is required to minimize this possibility.

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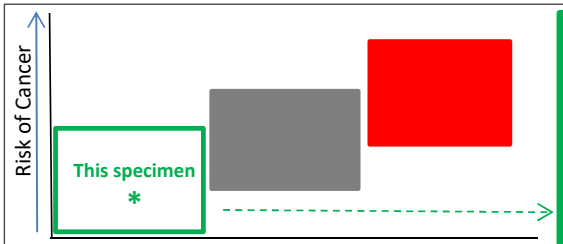
SUMMARY OF MOLECULAR RESULTS



The presence of low clonality KRAS mutation supports possible MCN or IPMN[1,2]

The specimen is negative for all molecular criteria. Patient outcomes research has shown that at 2-3 yrs follow-up:

* **Regardless of the presence or absence** of any worrisome clinical features[5], only ~3% of such cysts will have aggressive disease[3,4]

* If high risk stigmata **are present**, risk of maligancy may be increased[10]

A summary of risk is provided based on the accumulation of three molecular criteria: DNA quantity, Oncogene Panel, and Tumor Suppressor Gene (TSG) LOH panel.

MOLECULAR RESULTS

DNA Quantity Status:				Low quantity[9]
Oncogene Panel Status:	KRAS		Codon 12 (amino acid G->D)	Low clonal expansion[9]
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	NF2	22q	No mutations detectable	

This section provides a detailed listing of the molecular results generated and reported by Interpace Diagnostics.

DETAILS

This section includes a review of the molecular data and the possible implications. This information is provided for considerations when clinicians integrate the molecular results with the clinical features to inform diagnostic risk stratification.

Interpace Diagnostics®