Final Report

Patient

Name: Terri Brennan
Date of Birth: 2006-02-24
Sex: Male
Case Number: 3587
Diagnosis: Adenocarcinoma

Specimen Information

Primary Tumor Site: Pancreatic
Specimen Site: Duodenum (for periampullary tumors)
Specimen ID: 8379
Specimen Collected: 2024-02-18
Test Initiated: 2024-02-23

Ordered By

Biomarker	Method	Analyte	Result	Therapy association		Biomarker level
ER	IHC	protein	Positive | 3+, 100%	BENEFIT	abemaciclib, palbociclib, ribociclib, endocrine, therapy, everolimus	level 2
PR	IHC	protein	Positive | 2+, 95%	BENEFIT	abemaciclib, palbociclib, ribociclib, endocrine therapy	level 2
TMB	seq	DNA tumor	11 m/Mb Low	BENEFIT	pembrolizumab	level 2
ERBB2	IHC	Protien	Negative | 0	LACK OF BENEFT	trastuzumab, ado-trastuzumab emtansine, pertuzumab, fam-trastuzumab deruxtecan-nxki, lapatinib, neratinib, tucatinib	level 1

Cancer-Type Relevant Biomarkers

BioMarker	Method	Analyte	Result
AR	IHC	Protien	Positive| 3+, 43%
MUTYH	Seq	RNA-Tumor	Fusion not detected
AR	IHC	Protien	Negative| 3+, 97%
Mismatch repair status	IHC	Protien	Negative| 1+, 80%
MYO1G	Seq	DNA-Tumor	Stable

Genomic Signatures

BioMarker	Method	Analyte	Result
Microsatellite instability	Seq	DNA tumor	Low
Tumor mutational burden	Seq	DNA tumor	11 mutations/Mb Low
Genomic loss of heterozygosity (LOH)	Seq	DNA tumor	Low - 10% of tested genmoic segments exhibit LOH

Genes Tested with Pathogenic Alterations or likely Pathogenic Alterations

Gene	Method	Analyte	Variant Interpretation	Protien Alteration	Exon	DNA Alteration	Allele Frequency %
ERBB2	Seq	DNA tumor	Benign	p.R80X	10	c.322G>C	24.7
IDH2	Seq	DNA tumor	Benign	p.A774X	11	1	6.74
KIT	Seq	DNA tumor	Benign	p.D463H	9	c.1387G>C	28.75
RB1	Seq	DNA tumor	Benign	p.I543V	17	c.1679T>G	6.67
TEK	Seq	DNA tumor	Likely Pathogenic	p.M1R	9	c.2T>G	7.8
MAPK1	Seq	DNA tumor	Benign	p.Q125R	14	c.602G>A	2.46

Gene Variants of Unknown Significance

Gene	Method	Analyte	Variant Interpretation	Protien Alteration	Exon	DNA Alteration	Allele Frequency %
FLT3	Seq	DNA tumor	Variant of uncertain significance	p.G1386D	10	1	5.19
CCND3	Seq	DNA tumor	Variant of uncertain significance	p.M1R	18	c.2T>G	3.27
FOXL2	Seq	DNA tumor	Variant of uncertain significance	p.K659E	20	c.1647T>A	17.8

Immunohistochemistry Results

Biomarker	Result
PMS2	Positive| 3+, 98%
AR	Negative| 3+, 94%
MSH2	Positive| 2+, 60%
ERBB2	Positive| 1+, 9%

Genes Tested with Indeterminate Results by Tumor DNA Sequencing

PAX5 SF3B1 FBXW7 NTRK1

Specimen Information

Specimen ID: 8379

Specimen Collected: 2024-02-18

Specimen Recieved: 2024-02-23

Testing Initiated: 2024-02-23

Gross Description: 8379

Pathological Diagnosis:

Left breast, central, 12:00, suspicious mass, 12-gauge core needle biopsy: Infiltrating moderately-differentiated mammary carcinoma, grade 2, Nottingham score 6 (architectural grade 3, nuclear grade 2, mitotic figures 1).

Dissection Information:

Molecular testing of this specimen was performed after harvesting of targeted tissues with an approved manual microdissection technique. Candidate slides were examined under a microscope and areas containing tumor cells (and separately normal cells, when necessary for testing) were circled. A laboratory technician harvested targeted tissues for extraction from the marked areas using a dissection microscope.

Clinical Trials Connector

CHEMOTHERAPY CLINICAL TRIALS				
Drug class	**Biomarker**	**Method**	**Analyte**	**Investigational agents**
Anti hormonal therapy	ER	IHC	protein	anastrazole, letrozole, exemestane, fulvestrant, tamoxifen, goserelin, leuprolide
Anti hormonal therapy	PR	IHC	protein	anastrazole, letrozole, exemestane, fulvestrant, tamoxifen, goserelin, leuprolide
Anti inflammatory agents	PIK3CA	NGS	DNA tumor	aspirin

TARGETED THERAPY CLINICAL TRIALS				
Drug class	**Biomarker**	**Method**	**Analyte**	**Investigational agents**
Akt inhibitors	ARID1A	NGS	DNA tumor	AZD5363, MK-2206, ipataserib
immunomodulatory agents	TMB	NGS	DNA tumor	avelumab, atezolizumab, durvalumab, ipilimumab, nivolumab, pembrolizumab
PARP inhibitors	NBN	NGS	DNA tumor	BGB-290, BMN-673, olaparib, rucaparib, talazoparib
Akt/mTor inhibitors	PIK3CA	NGS	DNA tumor	AZD5363, BYL719, MK-2206, ipataserib, everolimus, temsirolimus