Final Report

Patient

Name: Michael Hobbs
Date of Birth: 1997-11-07
Sex: Male
Case Number: 6294
Diagnosis: Epithelial ovarian carcinoma

Specimen Information

Primary Tumor Site: Ovarian
Specimen Site: Peritoneal surfaces
Specimen ID: 1469
Specimen Collected: 2024-02-20
Test Initiated: 2024-02-20

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	13 m/Mb High	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
NOTCH1	Seq	RNA-Tumor	Mutation not detected
PD-L1(SP142)	IHC	Protien	Positive| 3+, 63%
KLF1	Seq	DNA-Tumor	Fusion not detected

Genomic Signatures

BioMarker	Method	Analyte	Result
Microsatellite instability	Seq	DNA tumor	High
Tumor mutational burden	Seq	DNA tumor	13 mutations/Mb High
Genomic loss of heterozygosity (LOH)	Seq	DNA tumor	High - 37% 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 %
PDGFRB	Seq	DNA tumor	Benign	p.H598T	10	c.1820G>T	36.67
JAK2	Seq	DNA tumor	Pathogenic	p.R1192P	12	c.3260C>T	19.88
FGFR2	Seq	DNA tumor	Pathogenic	p.W266*	14	c.798G>A	9.09
MTOR	Seq	DNA tumor	Likely Benign	p.P95X	12	1	14.91
MYD88	Seq	DNA tumor	Benign	p.E7K	7	c.20A>T	12.35

Gene Variants of Unknown Significance

Gene	Method	Analyte	Variant Interpretation	Protien Alteration	Exon	DNA Alteration	Allele Frequency %
HRAS	Seq	DNA tumor	Variant of uncertain significance	p.I543V	17	c.1905+1G>A	2.92
FGFR4	Seq	DNA tumor	Variant of uncertain significance	p.K741X	7	1	2.31
SDHD	Seq	DNA tumor	Variant of uncertain significance	p.A572G	20	1	1.23
KLF1	Seq	DNA tumor	Variant of uncertain significance	p.V49M	9	c.145G>A	2.34
MYD88	Seq	DNA tumor	Variant of uncertain significance	p.D769Y	6	c.2329G>C	4.75

Immunohistochemistry Results

Biomarker	Result
MSH2	Negative| 2+, 98%
PD-L1(SP142)	Negative| 1+, 52%
PTEN	Positive| 2+, 25%
ER	Negative| 2+, 54%
MLH1	Negative| 2+, 20%

Genes Tested with Indeterminate Results by Tumor DNA Sequencing

KIT BRAF SMO SIX1 MYCN

Specimen Information

Specimen ID: 1469
Specimen Collected: 2024-02-20
Specimen Recieved: 2024-02-20
Testing Initiated: 2024-02-20
Gross Description: 1469

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