

Date of Birth
1935-08-03

Sex
Female

Physician
Dr. Beth Wang

Institution
Thomas-Kirk

Tumor specimen:
source Lymphoma
CollectedDate 2023-09-05
ReceivedDate 2023-09-05
TumorPercentage 62%

Normal specimen:
source Blood
CollectedDate 2023-09-07
ReceivedDate 2023-09-07

GENOMIC VARIANTS

Somatic - Potentially Actionable

| | | variant allele fraction |
|--------|---|-------------------------|
| XPC | c.3113A>G p.S346P Spliceregionvariant-LOF | 25.15% <div></div> |
| IKZF1 | c.3113A>G p.N159Y Spliceregionvariant-GOF | 4.33% <div></div> |
| DICER1 | c.5438A>G p.E1813K Missensevariant(exon2)-GOF | 19.02% <div></div> |

Somatic - Biologically Relevant

| | | |
|-----|--|--------------------|
| APC | c.3920T>A p.D1810H Spliceregionvariant-GOF | 23.36% <div></div> |
|-----|--|--------------------|

Germline - Pathogenic

No Germline - Pathogenic variants were found in the limited set of genes on which we report.

Pertinent Negatives

| | | | |
|--------|------|-------|------|
| DICER1 | JAK2 | NTRK1 | DDR2 |
|--------|------|-------|------|

IMMUNOTHERAPY MARKERS

Tumor Mutational Burden

| | |
|---------|-----|
| 49 m/Mb | 82% |
|---------|-----|

Microsatellite Instability Status

| | | |
|--------|-----------|------|
| Stable | Equivocal | High |
|--------|-----------|------|

FDA-APPROVED THERAPIES, Current Diagnosis

| | | |
|----------------------|-----------|---|
| KRAS G12C Inhibitors | Sotorasib | NCCN, Consensus, Non-Small Cell Lung Cancer MSK OncoKB, Level 1 KRASp.G12C G12C-GOF |
|----------------------|-----------|---|

FDA-APPROVED THERAPIES, Other Indications

| | | |
|----------------------|-----------|---|
| KRAS G12C Inhibitors | Sotorasib | NCCN, Consensus, Non-Small Cell Lung Cancer MSK OncoKB, Level 1 KRASp.G12C G12C-GOF |
|----------------------|-----------|---|

ADDITIONAL INDICATORS

| | |
|-----------------------|--|
| Unfavorable Prognosis | NCCN, Consensus, Non-Small Cell Lung Cancer KRASp.G12C Gain-of-function |
|-----------------------|--|

CLINICAL TRIALS

| | |
|---|--|
| A Study of VS-6766 v. VS-6766 + Defactinib in Recurrent G12V, Other KRAS and BRAF Non-Small Cell Lung Cancer | Phase 2 City, state - x mi KRAS mutation |
| A Phase 1/2 Study of MRTX849 in Patients With Cancer Having a KRAS G12C Mutation KRYSTAL-1 | Phase 1/2 City, state - x mi KRAS mutation STK11 mutation |
| First-in-human Study of DRP-104 (Sirpiglenastat) as Single Agent and in Combination With Atezolizumab in Patients With Advanced Solid Tumors. (NCT04471415) | Phase 1/2 City, state - x mi NFE2L2 mutation STK11 mutation |

VARIANTS OF UNKNOWN SIGNIFICANCE

| Somatic | Mutation effect | Variant allele fraction |
|----------|---|-------------------------|
| HSD3B1 | c.1100= p.T367N Spliceregionvariant-LOF NM_001011645 | 7.39% <div></div> |
| U2AF1 | c.3113A>G p.R156X Nonsense-LOF NM_001011645 | 16.15% <div></div> |
| ERBB2 | c.2326_2327insTCT p.G776C Nonsense-LOF NM_001011645 | 4.72% <div></div> |
| JAK3 | c.3113A>G p.L857P Spliceregionvariant-LOF NM_001011645 | 1.43% <div></div> |
| RNF43 | c.380G>C p.A169T Frameshift-GOF NM_001011645 | 5.57% <div></div> |
| NCSTN | c.3113A>G p.A572G Frameshift-GOF NM_001011645 | 3.88% <div></div> |
| Germline | Mutation effect | Condition |
| NT5C2 | c.1100G>A p.R367Q Frameshift-GOF NM_001011645 | wait |
| FGFR3 | c.1948A>G p.Y373C Frameshift-LOF NM_001011645 | need |

LOW COVERAGE REGIONS

HSD3B1 HRAS ARID2

SOMATIC VARIANT DETAILS - POTENTIALLY ACTIONABLE

XPC

c.3113A>G p.S346P Spliceregionvariant-LOF

VAF: 25.15%

RBM10 encodes a protein that contains a RNA-binding motif and interacts with RNA homopolymers, and is thought to function in regulating alternative splicing. Loss of function mutations and copy number loss of RBM10 are associated with cancer progression.

IKZF1

c.3113A>G p.N159Y Spliceregionvariant-GOF

VAF: 4.33%

ARID2 encodes a protein that is a subunit of the SWI/SNF chromatin remodeling complex SWI/SNF-B or PBAF. This complex functions in ligand-dependent transcriptional activation. Loss of function mutations and copy number loss of ARID2 are associated with cancer progression.

DICER1

c.5438A>G p.E1813K Missensevariant(exon2)-GOF

VAF: 19.02%

STK11 (LKB1) encodes an enzyme in the serine/threonine kinase family that is responsible for maintaining energy metabolism and cellular polarization through the activation of AMP-activated protein kinase and other members of the AMPK family. The enzyme also acts as a tumor suppressor by regulating cell growth. Loss of function mutations, copy number loss, epigenetic variation, and underexpression of STK11 are associated with cancer progression.

SOMATIC VARIANT DETAILS - BIOLOGICALLY RELEVANT

APC

c.3920T>A p.D1810H Spliceregionvariant-GOF

VAF: 23.36%

KRAS is a GDP/GTP binding protein that acts as an intracellular signal transducer. KRAS is involved in several pathways involved in cellular proliferation and survival, including the PI3K-AKT-mTOR pathway and the Ras-Raf-MEK-ERK pathway. Activating mutations, copy number gains, and overexpression of KRAS are associated with cancer progression.

CLINICAL HISTORY

Diagnosed on
2023-09-01