Taipei Veterans General Hospital

Department of Pathology and Laboratory Medicine
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Sample Information

Patient Name: 陳芳如
Gender: Female
ID No.: Q221226751
History No.: 44067007
Age: 50

Ordering Doctor: DOC6285K 王亭雅
Ordering REQ.: 0ALWMFG
Signing in Date: 2019/11/01

Path No.: S108-98772
MP No.: F1902
Assay: Oncomine Focus Assay
Sample Type: FFPE
Block No.: S108-44305A
Percentage of tumor cells: 70%
Note:

Sample Cancer Type: Breast Cancer

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Clinically Significant Biomarkers

Indicated Contraindicated

Genomic Alteration	Relevant Therapies (In this cancer type)	Relevant Therapies (In other cancer type)	Clinical Trials
AKT1 p.(E17K) c.49G>A AKT serine/threonine kinase 1 Tier: IIC Allele Frequency: 80.93%	None	None	12

Sources included in relevant therapies: FDA1, NCCN, EMA2, ESMO

Tier Criteria Met

Genomic Alteration	Tier Classification for Breast Cancer
AKT1 p.(E17K) c.49G>A Tier: IIC	IIC: Biomarker is an inclusion criteria for clinical trials

Reference: Li et al. *Standards and Guidelines for the Interpretation and Reporting of Sequence Variants in Cancer: A Joint Consensus Recommendation of the Association for Molecular Pathology, American Society of Clinical Oncology, and College of American Pathologists.* J Mol Diagn. 2017 Jan;19(1):4-23.

Disclaimer: The data presented here is a result of the curation of published data sources, but may not be exhaustive. The data version is 2019.09(005).

Variant Details

DNA Sequence Variants

Gene	Amino Acid Change	Coding	Variant ID	Locus	Allele Frequency	Transcript	Variant Effect	Coverage
AKT1	p.(E17K)	c.49G>A	COSM33765	chr14:105246551	80.93%	NM_001014431.1	missense	1998
ALK	p.(D1529E)	c.4587C>G	.	chr2:29416366	49.55%	NM_004304.4	missense	1998
ALK	p.(I1461V)	c.4381A>G	.	chr2:29416572	99.75%	NM_004304.4	missense	1997
ALK	p.(=)	c.3375C>A	.	chr2:29445458	46.54%	NM_004304.4	synonymous	1994
FGFR3	p.(=)	c.348C>T	.	chr4:1801219	48.22%	NM_000142.4	synonymous	1999
FGFR3	p.(=)	c.1953G>A	.	chr4:1807894	99.72%	NM_000142.4	synonymous	1811
PDGFRA	p.(=)	c.1701A>G	.	chr4:55141055	99.90%	NM_006206.5	synonymous	1996
FGFR4	p.(P136L)	c.407C>T	.	chr5:176517797	99.55%	NM_213647.2	missense	2000
FGFR4	p.(=)	c.483A>G	.	chr5:176517985	24.43%	NM_213647.2	synonymous	1269
RET	p.(=)	c.2307G>T	.	chr10:43613843	52.66%	NM_020975.4	synonymous	1994

Relevant Therapy Summary

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ⊘ Contraindicated ⚠ Both for use and contraindicated ✖ No evidence

AKT1 p.(E17K) c.49G>A

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
ipatasertib + chemotherapy	✖	✖	✖	✖	● (III)
alpelisib	✖	✖	✖	✖	● (II)
capivasertib + fulvestrant	✖	✖	✖	✖	● (II)
capivasertib, olaparib	✖	✖	✖	✖	● (II)
everolimus	✖	✖	✖	✖	● (II)
ipatasertib	✖	✖	✖	✖	● (II)
LY-3023414	✖	✖	✖	✖	● (II)
temsirolimus	✖	✖	✖	✖	● (II)
atezolizumab + ipatasertib	✖	✖	✖	✖	● (I/II)
chemotherapy, mTOR inhibitor	✖	✖	✖	✖	● (I/II)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

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Relevant Therapy Summary (continued)

● In this cancer type ○ In other cancer type ◑ In this cancer type and other cancer types ⊘ Contraindicated ⚠ Both for use and contraindicated ✖ No evidence

AKT1 p.(E17K) c.49G>A (continued)

Relevant Therapy	FDA	NCCN	EMA	ESMO	Clinical Trials*
ARQ-751, chemotherapy, fulvestrant	✖	✖	✖	✖	● (I)
gedatolisib + palbociclib	✖	✖	✖	✖	● (I)

* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available.

Signatures

Testing Personnel:

Laboratory Supervisor:

Pathologist:

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