



[ Oncofocus ] Patient Test Report

<b>Histology #</b>		<b>Tumour %</b>	80
<b>Primary site</b>	Eye	<b>Tumour %</b>	
<b>Tumour subtype</b>	Uveal Melanoma	<b>(macrodissected)</b>	
<b>Tissue type</b>			

### Comment:

The DNA and RNA extracted from this sample were of optimal quality. The Oncofocus assay on which the sample was run met all assay specific quality metrics.

221 genes were targeted using 2530 unique amplicons covering oncogenes, fusion genes, genes susceptible to copy number variation and tumour suppressors. Actionable genetic variants detected by Oncofocus are linked to 485 anti-cancer targeted therapies.

The following actionable variants were detected:

**Please note: No variants were identified at BRAF codon 600**

## Variant Summary

### Sample Cancer Type: Melanoma

In this cancer type
  In other cancer type
  In this cancer type and other cancer types
  Contraindicated
  Both for use and contraindicated
  No evidence

Gene Variant	EMA	US-FDA	ESMO	US-NCCN	Global Clinical Trials
BAP1 p.(L230fs) c.688_688delC	✗	✗	✗	✗	● (1)
GNAQ p.(Q209P) c.626A>C	✗	✗	✗	✗	● (4)
MYC amplification	✗	✗	✗	✗	● (1)

**EMA:** European Medicine Agency, **US-FDA:** United States-Food and Drug Administration, **ESMO:** European Society for Medical Oncology, **US-NCCN:** United States-National Comprehensive Cancer Network. Numbers in parentheses indicate the number of relevant therapies with evidence. Hotspot variants with >10% alternate allele reads, and in >10 unique reads are classified as 'detected' with an assay sensitivity and positive predictive value of 97%. Copy number variants; amplifications of a >5% confidence value of ≥4 after normalization and deletions of ≤1 are classified as present when the tumour% >50%. Gene Fusions are reported when occurring in >20 counts and meeting the thresholds of assay specific internal RNA quality control. With a sensitivity of 99% and PPV of 99%. Supplementary technical information is available upon request.

## 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

### BAP1 p.(L230fs) c.688\_688delC

Relevant Therapy	EMA	US-FDA	ESMO	US-NCCN	Global Clinical Trials*
vorinostat	×	×	×	×	● (II)

### GNAQ p.(Q209P) c.626A>C

Relevant Therapy	EMA	US-FDA	ESMO	US-NCCN	Global Clinical Trials*
trametinib	×	×	×	×	● (II)
vorinostat	×	×	×	×	● (II)
selumetinib + vistusertib	×	×	×	×	● (I/II)
LXH254	×	×	×	×	● (I)

### MYC amplification

Relevant Therapy	EMA	US-FDA	ESMO	US-NCCN	Global Clinical Trials*
INCB-54329	×	×	×	×	● (I/II)

\* Most advanced phase (IV, III, II/III, II, I/II, I) is shown and multiple clinical trials may be available. See global clinical trials section in the pages to follow.

## Current Global Clinical Trials Information

Global Clinical Trials information is current as of 2016-09-01. For the most up-to-date information regarding a particular trial, search [www.clinicaltrials.gov](http://www.clinicaltrials.gov) by NCT ID or search local clinical trials authority website by local identifier listed in 'Other identifiers'.

### BAP1 p.(L230fs) c.688\_688delC

**NCT01587352**

A Phase II Study of Vorinostat (NSC 701852) in Metastatic Uveal Melanoma

**Cancer type:** Melanoma

**Variant class:** BAP1 mutation

**Other identifiers:** 12-027, 9111, AAAO5917, CUMC-IRBAAA05917, MSKCC-12-027, NCI-2012-00860, NCI9111, TrialTroveID-166837, VICCMEL1351

**Population segments:** Second line or greater/Refractory/Relapsed, Stage IV

**Phase:** II

**Therapy:** vorinostat

**Country:** United States

**US States:** NY, TN

**US Contact:** Multiple contacts: See [www.clinicaltrials.gov](http://www.clinicaltrials.gov) for complete list of contacts.

### GNAQ p.(Q209P) c.626A>C

**NCT01587352**

A Phase II Study of Vorinostat (NSC 701852) in Metastatic Uveal Melanoma

**Cancer type:** Melanoma

**Variant class:** GNAQ mutation

**Other identifiers:** 12-027, 9111, AAAO5917, CUMC-IRBAAA05917, MSKCC-12-027, NCI-2012-00860, NCI9111, TrialTroveID-166837, VICCMEL1351

**Population segments:** Second line or greater/Refractory/Relapsed, Stage IV

**Phase:** II

**Therapy:** vorinostat

**Country:** United States

**US States:** NY, TN

**US Contact:** Multiple contacts: See [www.clinicaltrials.gov](http://www.clinicaltrials.gov) for complete list of contacts.

**GNAQ p.(Q209P) c.626A>C (continued)****NCT02583542**

A Phase Ib/IIa Study of AZD2014 in Combination With Selumetinib in Patients With Advanced Cancers.

**Cancer type:** Melanoma

**Variant class:** RAS/RAF/MEK/ERK pathway

**Other identifiers:** 009896QM, EudraCT Number: 2014-002613-31, IRAS ID 172356, Torcmek, TrialTroveID-265019, UKCRN ID:18725

**Population segments:** EGFR, FGFR, HER2 negative, HER2 positive, KRAS, Second line or greater/Refractory/Relapsed, Squamous Cell, Stage III, Stage IV, Triple receptor negative

**Phase:** I/II

**Therapy:** selumetinib + vistusertib

**Country:** United Kingdom

**NCT02465060**

Molecular Analysis for Therapy Choice (MATCH)

**Cancer type:** Unspecified Solid Tumor

**Variant class:** GNAQ mutation

**Other identifiers:** CTSU/EAY131, EAY131, EAY131-A, EAY131-B, EAY131-E, EAY131-F, EAY131-G, EAY131-H, EAY131-I, EAY131-MATCH, EAY131-N, EAY131-P, EAY131-Q, EAY131-R, EAY131-S1, EAY131-S2, EAY131-T, EAY131-U, EAY131-V, EAY131-X, ECOGEAY131-M, MATCH, NCI-2015-00054, NCI-MATCH, TrialTroveID-258747

**Population segments:** ALK, EGFR, HER2 positive, Second line or greater/Refractory/Relapsed, Stage III, Stage IV

**Exclusion criteria variant class:** BRAF V600 mutation

**Phase:** II

**Therapy:** trametinib

**Country:** United States

**US States:** AK, AL, AR, AZ, CA, CO, CT, DC, DE, FL, GA, HI, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NV, NY, OH, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, WA, WI, WV, WY

**US Contact:** Multiple contacts: See [www.clinicaltrials.gov](http://www.clinicaltrials.gov) for complete list of contacts.

## GNAQ p.(Q209P) c.626A>C (continued)

### NCT02607813

A Phase I Dose Finding Study of Oral LXH254 in Adult Patients With Advanced Solid Tumors Harboring MAPK Pathway Alterations

**Cancer type:** Unspecified Solid Tumor

**Variant class:** RAS/RAF/MEK/ERK pathway

**Other identifiers:** 2015-0913, CLXH254X2101, EudraCT Number: 2015-003421-33, NCI-2015-02280, REec-2016-2132, TrialTroveID-268216

**Population segments:** Second line or greater/Refractory/Relapsed, Stage III, Stage IV

**Phase:** I

**Therapy:** LXH254

**Countries:** Canada, Germany, Japan, Netherlands, Spain, United States

**US States:** NY, TX

**US Contact:** Novartis Pharmaceuticals [888-669-6682]

## MYC amplification

### NCT02431260

A Phase I, Open-Label, Dose-Escalation, Safety and Tolerability Study of INCB054329 in Subjects With Advanced Malignancies

**Cancer type:** Unspecified Solid Tumor

**Variant class:** MYC aberration

**Other identifiers:** 2015-0054, INCB 54329-101, NCI-2015-00936, TrialTroveID-252118, UMCC 2015.032, UW15024

**Population segments:** Aggressive, Classical, Diffuse large B-cell lymphoma (DLBCL), Hormone refractory, Indolent, Nodular lymphocyte-predominant, Other subtype, Second line or greater/Refractory/Relapsed, Stage III, Stage IV

**Phase:** I/II

**Therapy:** INCB-54329

**Country:** United States

**US States:** CA, CO, IL, IN, MI, MO, TN, TX, WA

**US Contact:** Incyte Corporation Call Center [855-463-3463]

## Appendix: Evidence Summary by Variant Class

A variant class hierarchy was created to summarize gene variants with associated clinical evidence. Evidence items refers to citations across the different global data sources.

### BAP1 p.(L230fs) c.688\_688delC

Variant Class	Evidence Items
BAP1 mutation	1

### GNAQ p.(Q209P) c.626A>C

Variant Class	Evidence Items
RAS/RAF/MEK/ERK pathway	2
↳ GNAQ mutation	2

### MYC amplification

Variant Class	Evidence Items
MYC aberration	1
↳ MYC amplification	0

## Appendix: Variant Details

### DNA Sequence Variants

Gene	Amino Acid Change	Coding	Variant ID	Locus	Allele Frequency Transcript	Variant Effect
BAP1	p.(L230fs)	c.688_688delC	.	chr3:52440363	27.35% NM_004656.3	frameshift Deletion
GNAQ	p.(Q209P)	c.626A>C	COSM28758	chr9:80409488	22.05% NM_002072.4	missense

### Copy Number Variations

Gene	Locus	Copy Number
MYC	chr8:128748884	4.74



## Terms and Conditions

The following paragraph on Liability is an extract from the Oncologica Tests' Terms and Conditions. The extract is to draw your attention to particular terms applicable to you but nothing set out here is intended to supersede or override our Terms and Conditions, which can be found on our website at [www.oncologica.com](http://www.oncologica.com) under the title Oncologica Tests' Terms and Conditions. Please read these Oncologica Test Terms and Conditions carefully before you submit an order for the Oncologica Tests, as you will be bound by these Terms and Conditions, once a contract comes into existence as per paragraph 2 of the Oncologica Test's Terms and Conditions.

### 6. Liability

6.1 Oncologica operates in compliance with international ISO15189:2012 standards and is regulated by UKAS. The Oncologica Tests have not been cleared or approved by the United States Food and Drug Administration; however, such clearance or approval is not required.

6.2 The Patient agrees that the Oncologica Test Report is intended for clinical use and interpretation by a physician who is experienced and skilled in the use and interpretation of clinical test data. The Oncologica Test Report is based on the Sample submitted by the Patient. The Oncologica Test Report should not be considered or its contents applied to any other patient or any other sample. Oncologica does not update an Oncologica Test Report once it has been sent.

6.3 Information compiled in the Oncologica Test Report includes is from publicly available as well as proprietary sources. By updating the source database, Oncologica makes every effort to provide the most accurate and up-to-date information. However, Oncologica does not warrant or represent that the information in the Oncologica Test Report is accurate, timely or complete.

6.4 The Oncologica Test Report contains drug and clinical trial information. However, Oncologica does not warrant or represent that any drug or clinical trial identified by the Oncologica Test will guarantee a therapeutic response for a particular Patient. The drugs listed in an Oncologica Test Report are ranked on clinical evidence as to the predicted efficacy or appropriateness for the Patient. The Patient shall ensure that its physician shall evaluate and interpret the Oncologica Test Report, along with all other available clinical information about the Patient, to determine the best treatment decisions in their own independent medical judgment. Patient management decisions should not be based on a single test, nor solely on the information contained in the Oncologica Test Report.

6.5 Subject to paragraph 6.10, Oncologica shall have no liability for any use made of the information provided in the Oncologica Test Report, including but not limited to any report prepared by Oncologica summarising the results of the Oncologica Tests, any advice supplied by Oncologica, any decisions taken, or for any costs incurred by Patient and/or the Patient's physician and/or the Agent in consequence of such use, advice or decisions. The Oncologica Test and/or the Oncologica Test Report is not a substitute for the Patient's physician's professional judgment. The use of the information provided in the Oncologica Test Report is provided as a tool for the ordering physician's use in determining the appropriate treatment for the Patient. The decision as to what course of treatment and the appropriate use of the information provided by the Oncologica Test Report is solely that of the Patient's physician.

6.6 Oncologica does not warrant or represent or guarantee that the Oncologica Tests will identify an actionable genetic alteration that is linked to anti-cancer targeted therapies. Although the Oncologica Tests are comprehensive, in a proportion of Patients, the Oncologica Test result may not identify any actionable mutations for a patient's cancer. In the event that no actionable alteration in the Sample is identified by the Oncologica Test, then the Patient is still under full obligation to pay the Charges and no refund is available to the Patient and/or Agent.

6.7 The Oncologica Test identifies genomic actionable alterations found in the submitted Sample that are linked to anti-cancer targeted agents. Also note that this test only examines tumour, and not normal tissue from the patient, and therefore cannot distinguish between somatic and germline (i.e., heritable) alterations.

6.8 Subject to Clause 6.8, Oncologica shall not be liable to the Patient whether in contract, tort (including negligence and breach of statutory duty), or otherwise for any:

- (a) Error or defect in the Oncologica Test Report as a result of any inaccurate or incomplete information supplied by the Patient;
- (b) Loss of data or materials, including the Sample and/or the Report and including any loss arising as a result of the acts or omissions of a courier;
- (c) Indirect or consequential loss arising whether or not advised of the possibility of the same.

6.9 Subject to the provisions of this Clause 6, Oncologica's total liability to the Patient in respect of all losses arising under or in connection with the Contract, whether in contract, tort (including negligence and breach of statutory duty), or otherwise, shall in no circumstances exceed the Charges paid for the Test that is the subject of the claim.

6.10 Nothing in the Contract limits or excludes the liability of Oncologica for breach of its obligations under section 12 of the Sale of Goods Act 1979 and/or section 2 of the Supply of Goods and Services Act 1982; death or personal injury resulting from negligence; or fraud or fraudulent misrepresentation.

6.11 If the Patient is a consumer (and not a business), the Patient expressly acknowledges and agrees that the Test is supplied to the Patient's specification and therefore there is no right to cancel the Test following acceptance under Clause 2.2. If the Patient is a consumer, then notwithstanding any other provisions of the Contract, none of the Patient's consumer statutory rights are affected.

