ONCOMPASS™ REPORT

POWERED BY

Realtime Oncology
Molecular Treatment Calculator™

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

PATIENT INFORMATION

Oncompass™ ID: 144212
Name: Anonymous
Year of birth: 1968

Primary Tumor Site: lung
Histology Type: adenocarcinoma
Metastatic sites: brain, lymph node, bone

MEDICAL TEAM

Molecular Pharmacologist: István Peták MD PhD
Medical Biotechnologist: Orsolya Lörinczi MSc
Genetic Counselor: Júlia Déri MSc
Molecular Biologist: Edit Várkondi PhD
Consulting Physician: Gábor Pajkos MD
Clinical Oncologist: Csongor Lengyel MD
Case Coordinator: Lilian Hári
Info-Bionics Engineer: Dóra Tihanyi MSc

PATHOLOGICAL AND MOLECULAR DIAGNOSTIC TESTS

Oncompass tumor molecular profiling was performed on histology sample of the primary tumor of the patient.
Tumor cell ratio: 30% on the area selected for molecular diagnostic test
Tumor location and histology: lung adenocarcinoma

Tests performed:
NGS - 50 genes
IHC - PD-L1

SUMMARY

Oncompass FULL NGS hotspot multigene test panel revealed an activating mutation in the EGFR gene (EGFR-L858R), according to the scientific literature it is a known driver variant in non-small cell lung cancer. Several EGFR-inhibitors are labelled in NSCLC in cases of activating mutations. According to our Precision Oncology Calculator AFATINIB has the highest compound score. According to the Lux-Lung 7 study, which investigated efficacy of AFATINIB versus GEFITINIB in the first-line setting AFATINIB was associated with prolonged PFS in L858R mutant subgroups. Other option may be OSIMERTINIB or immunotherapies. With PDL1 immunohistochemistry 10% of the tumor cells were positive (by using the 22C3 pharmDx antibody). Several studies demonstrated that higher PD-L1 expression may be positively associated with the use of checkpoint inhibitors.

Einsiedlerstrasse 23, 8834 Schindellegi, SWITZERLAND
E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

MOLECULAR TARGET ANALYSIS

MOLECULAR ALTERATIONS

EGFR-L858R driver (AEL: 3968.12, AF/TR: 60.89%/30%),
PDL1 protein overexpression driver (AEL: 23.97, AF/TR: NA/30%),
TP53 wild-type biomarker (AEL: 0.00)

TARGET GENES

EGFR wild-type (AEL: 4821.26),
- EGFR-L858R driver (AEL: 3968.12)

AXL wild-type (AEL: 3976.82),
- EGFR-L858R driver (AEL: 3968.12)

Hsp90 wild-type (AEL: 3969.88),
- EGFR-L858R driver (AEL: 3968.12)

EGFR ngs mutant (AEL: 3969.12),
- EGFR-L858R driver (AEL: 3968.12)

PDL1 wild-type (AEL: 101.64),
- PDL1 protein overexpression driver (AEL: 23.97)

PDCD1 wild-type (AEL: 45.24),
- PDL1 protein overexpression driver (AEL: 23.97)

MDM2 wild-type (AEL: 0.46)

Einsiedlerstrasse 23, 8834 Schindellegi, SWITZERLAND
E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

DRUGS POSITIVELY ASSOCIATED

DRUGS IN CLINICAL USE
20 selected from 55

AFATINIB (lung - non-small cell carcinoma [FDA+EMEA]) (AEL: 14001.57)
- EGFR wild-type target (AEL: 4821.26) ;
- EGFR-L858R driver (AEL: 3968.12) ;
- EGFR ngs mutant target (AEL: 3969.12)

DACOMITINIB (lung - non-small cell carcinoma [FDA]) (AEL: 12787.92)
- EGFR wild-type target (AEL: 4821.26) ;
- EGFR-L858R driver (AEL: 3968.12) ;
- EGFR ngs mutant target (AEL: 3969.12)

GEFITINIB (lung - non-small cell carcinoma [FDA+EMEA]) (AEL: 10607.65)
- EGFR wild-type target (AEL: 4821.26) ;
- EGFR-L858R driver (AEL: 3968.12)

ERLOTINIB (lung - non-small cell carcinoma [FDA+EMEA]; pancreas - all [FDA+EMEA]) (AEL: 9500.30)
- EGFR wild-type target (AEL: 4821.26) ;
- EGFR-L858R driver (AEL: 3968.12)

PANITUMUMAB (rectum - all [FDA]; colon - all [FDA]) (AEL: 8801.76)
- EGFR-L858R driver (AEL: 3968.12) ;
- EGFR wild-type target (AEL: 4821.26)

BRIGATINIB (lung - non-small cell carcinoma [FDA]) (AEL: 8790.37)
- EGFR ngs mutant target (AEL: 3969.12) ;
- EGFR wild-type target (AEL: 4821.26)

OSIMERTINIB (lung - non-small cell carcinoma [FDA]) (AEL: 8790.37)
- EGFR-L858R driver (AEL: 3968.12) ;
- EGFR wild-type target (AEL: 4821.26)

NECITUMUMAB (lung - squamous [FDA]) (AEL: 4823.03)
- EGFR wild-type target (AEL: 4821.26)

VANDETANIB (thyroid - medullary carcinoma [FDA]) (AEL: 4821.26)
- EGFR wild-type target (AEL: 4821.26)

NERATINIB (breast - all [FDA]) (AEL: 4821.26)
- EGFR wild-type target (AEL: 4821.26)

PEMBROLIZUMAB (all - malignant melanoma [FDA]; lung - non-small cell carcinoma [FDA]) (AEL: 3519.11)
- PDCD1 wild-type target (AEL: 45.24) ;
- PDL1 protein overexpression driver (AEL: 23.97)

ATEZOLIZUMAB (ureter - all [FDA+EMEA]; lung - non-small cell carcinoma [FDA+EMEA]) (AEL: 859.30)
- PDL1 wild-type target (AEL: 101.64) ;
- PDL1 protein overexpression driver (AEL: 23.97)

CETUXIMAB (head-neck - squamous cell carcinoma [FDA+EMEA]; colon - all [FDA+EMEA]; rectum - all [FDA+EMEA]) (AEL: 858.25)
- EGFR-L858R driver (AEL: -3968.12) ;
- EGFR wild-type target (AEL: 4821.26)

AVELUMAB (lung - non-small cell carcinoma [FDA]; ureter - all [FDA]; skin - Merkel cell carcinoma (MCC) [FDA+EMEA]; bladder - all [FDA]) (AEL: 218.40)
- PDL1 wild-type target (AEL: 101.64) ;
- PDL1 protein overexpression driver (AEL: 23.97)

DURVALUMAB (all - urothelial carcinoma [FDA]) (AEL: 149.76)
- PDL1 protein overexpression driver (AEL: 23.97) ;
- PDL1 wild-type target (AEL: 101.64)

NIVOLUMAB (kidney - renal cell carcinoma [FDA]; all - malignant melanoma [FDA]; lung - non-small cell carcinoma [FDA]) (AEL: 106.81)
- PDCD1 wild-type target (AEL: 45.24) ;
- PDL1 protein overexpression driver (AEL: 23.97)

RAMUCIRUMAB (stomach - all [FDA]; gastroesophageal junction - adenocarcinoma [FDA]; gastric - all [FDA]; lung - non-small cell carcinoma [FDA]; colon - all [FDA]; rectum - all [FDA]) (AEL: 13.13)

DRUGS NEGATIVELY ASSOCIATED

DRUGS IN CLINICAL USE
2 selected from 2

CRIZOTINIB (lung - non-small cell carcinoma [FDA+EMEA]) (AEL: -7941.08)
- MET wild-type target (AEL: -3969.14) ;
- EGFR-L858R driver (AEL: -3968.12)

LAPATINIB (breast - all [FDA]) (AEL: -3968.26)
- EGFR-L858R driver (AEL: -3968.12)

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

DRUGS POSITIVELY ASSOCIATED

CABOZANTINIB (thyroid - medullary carcinoma [FDA+EMEA]; kidney - renal cell carcinoma [FDA+EMEA]) (AEL: 12.96)
- AXL wild-type target (AEL: 3976.82) ;
- MET wild-type target (AEL: -3969.14)

BEVACIZUMAB (breast - all [FDA+EMEA]; ovary - epithelial carcinoma [FDA+EMEA]; rectum - all [FDA+EMEA]; fallopian tube - all [FDA+EMEA]; lung - non-small cell carcinoma [FDA+EMEA]; colon - all [FDA+EMEA]; cervix - all [FDA+EMEA]; peritoneum - all [FDA+EMEA]; kidney - renal cell carcinoma [FDA+EMEA]) (AEL: 11.54)

NINTEDANIB (lung - adenocarcinoma [FDA+EMEA]) (AEL: 3.02)

DRUGS NEGATIVELY ASSOCIATED

DRUGS IN CLINICAL DEVELOPMENT
9 selected from 69

MP-470 (AEL: 7945.81)
- AXL wild-type target (AEL: 3976.82) ;
- EGFR-L858R driver (AEL: 3968.12)

17-AAG (AEL: 7938.00)
- Hsp90 wild-type target (AEL: 3969.88) ;
- EGFR-L858R driver (AEL: 3968.12)

AP32788 (AEL: 7937.34)
- EGFR-L858R driver (AEL: 3968.12) ;
- EGFR ngs mutant target (AEL: 3969.12)

Zalutumumab (AEL: 4821.33)
- EGFR wild-type target (AEL: 4821.26)

Simotinib (AEL: 4821.26)
- EGFR wild-type target (AEL: 4821.26)

Matuzumab (AEL: 4821.26)
- EGFR wild-type target (AEL: 4821.26)

H 447 (AEL: 4821.26)
- EGFR wild-type target (AEL: 4821.26)

Imgatuzumab (AEL: 4821.26)
- EGFR wild-type target (AEL: 4821.26)

BIBX 1382 (AEL: 4821.26)
- EGFR wild-type target (AEL: 4821.26)

DRUGS IN CLINICAL DEVELOPMENT
16 selected from 16

MASITINIB (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

RILOTUMUMAB (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

AMG 208 (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

AMG 337 (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

TIVANTINIB (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

BMS-777607 (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

GOLVATINIB (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

EMD 1204831 (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

EMD 1214063 (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

PF-04217903 (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

ONARTUZUMAB (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

SAR125844 (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

SGX523 (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

CAPMATINIB (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

VOLITINIB (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

S49076 (AEL: -3969.14)
- MET wild-type target (AEL: -3969.14)

Compound scores displayed represent aggregated evidence levels (AEL). AEL represents the number, scientific impact and clinical relevance of evidence relations in the system, connecting tumor types, molecular alterations, targets and compounds. Individual evidence relation scores are normalized and weighted according to the degree of similarity of the parameters to the parameters of the given patient case. Compound AELs are obtained by aggregating all relevant associations (and AELs) between the specific compound, tumor type, drivers and targets. Compounds are listed in descending order of their AELs.
(Abbreviations: AEL - aggregated evidence level, AF - allele frequency, TR: tumor ratio)

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

AVAILABLE CLINICAL TRIALS

Search Criteria

IDENTIFIER	DESCRIPTION
NCT02410512	A Dose-Escalation Study of the Safety and Pharmacokinetics of MOXR0916 and MPDL3280A in Patients With Locally Advanced or Metastatic Solid Tumors

Active (not recruiting)

Line	Phase	Compounds
Neoadjuvant-4	1a-1b	BEVACIZUMAB, MOXR0916, MOXR0916, MPDL3280A, MPDL3280A

Countries	Allocation	Masking
	Non Randomized	Single Group Assignment

NCT02923947	Open-label,Non-randomised,Multicentre,Phase I Study to Assess the Pharmacokinetics, Safety & Tolerability of Osimertinib Following a Single Oral 80mg Dose to Patients w/ Adv Solid Tumours & Normal Renal Function or Severe Renal Impairment

Active recruiting

Line	Phase	Compounds
2-10	1a-1b	OSIMERTINIB

Countries	Allocation	Masking
France, Spain	N/A	Single Group Assignment

NCT02318277	A Study of Epacadostat (INCB024360) in Combination With Durvalumab (MEDI4736) in Subjects With Selected Advanced Solid Tumors (ECHO-203)

Active recruiting

Line	Phase	Compounds
2-10	1-2	INCB024360, MEDI4736

Countries	Allocation	Masking
United States	N/A	Single Group Assignment

NCT01714739	A Phase 1/2 Study of the Combination of Lirilumab (Anti-KIR) Plus Nivolumab (Anti-PD-1) or Lirilumab Plus Nivolumab and Ipilimumab in Advanced Refractory Solid Tumors

Active (not recruiting)

Line	Phase	Compounds
2-6	1-2	IPILIMUMAB, LIRILUMAB, LIRILUMAB, NIVOLUMAB, NIVOLUMAB

Countries	Allocation	Masking
Germany, Singapore	Randomized	Double Blind

Active (not recruiting)

Line	Phase	Compounds
2-6	1-2	IPILIMUMAB, LIRILUMAB, LIRILUMAB, NIVOLUMAB, NIVOLUMAB

Countries	Allocation	Masking
Switzerland, Italy, France, United States, Spain, Canada	Randomized	Double Blind

Einsiedlerstrasse 23, 8834 Schindellegi, SWITZERLAND
E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

AVAILABLE CLINICAL TRIALS

NCT02130466 — A Study of the Safety and Efficacy of Pembrolizumab (MK-3475) in Combination With Trametinib and Dabrafenib in Participants With Advanced Melanoma (MK-3475-022/KEYNOTE-022)

Active recruiting

Line	Phase	Compounds
Neoadjuvant-10	1-2	DABRAFENIB, DABRAFENIB, DABRAFENIB, PEMBROLIZUMAB, PEMBROLIZUMAB, PEMBROLIZUMAB, PLACEBO, TRAMETINIB, TRAMETINIB, TRAMETINIB

Countries	Allocation	Masking
Australia, Italy, Canada, United States	Randomized	Double Blind

Inclusive Biomarkers

BRAF-V600E, BRAF-V600K

Active recruiting

Line	Phase	Compounds
Neoadjuvant-10	1-2	PEMBROLIZUMAB, TRAMETINIB

Countries	Allocation	Masking
Australia, Italy, Canada, United States	N/A	Single Group Assignment

Inclusive Biomarkers

BRAF wild-type

NCT01953926 — AN OPEN-LABEL, PHASE 2 STUDY OF NERATINIB IN PATIENTS WITH SOLID TUMORS WITH SOMATIC HUMAN EPIDERMAL GROWTH FACTOR RECEPTOR (EGFR, HER2, HER3) MUTATIONS OR EGFR GENE AMPLIFICATION

Active recruiting

Line	Phase	Compounds
2-10	2	FULVESTRANT, NERATINIB, TRASTUZUMAB

Countries	Allocation	Masking
Finland, Israel, Australia, Korea, Republic of, Denmark, Italy, United Kingdom, Spain, United States	N/A	Single Group Assignment

Inclusive Biomarkers

ERBB2 ngs mutant, ESR1 protein overexpression, PGR protein overexpression

Active recruiting

Line	Phase	Compounds
2-10	2	NERATINIB, PACLITAXEL

Countries	Allocation	Masking
Finland, Israel, Australia, Korea, Republic of, Denmark, Italy, United Kingdom, Spain, United States	N/A	Single Group Assignment

Inclusive Biomarkers

ERBB2 ngs mutant

Active recruiting

Line	Phase	Compounds
2-10	2	NERATINIB, TRASTUZUMAB

Countries	Allocation	Masking
Finland, Israel, Australia, Korea, Republic of, Denmark, Italy, United Kingdom, Spain, United States	N/A	Single Group Assignment

Inclusive Biomarkers

EGFR ngs mutant, EGFR amplification presence, ERBB2 ngs mutant, ERBB3 ngs mutant

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

AVAILABLE CLINICAL TRIALS

NCT02758587 Study of FAK (Defactinib) and PD-1 (Pembrolizumab) Inhibition in Advanced Solid Malignancies (FAK-PD1)

Active recruiting

Line	Phase	Compounds
Neoadjuvant-10	2	DEFACTINIB, PEMBROLIZUMAB

Countries	Allocation	Masking
United Kingdom	N/A	Single Group Assignment

Active recruiting

Line	Phase	Compounds
Neoadjuvant-10	2	DEFACTINIB, PEMBROLIZUMAB

Countries	Allocation	Masking
United Kingdom	N/A	Single Group Assignment

Active recruiting

Line	Phase	Compounds
Neoadjuvant-10	2	DEFACTINIB, PEMBROLIZUMAB

Countries	Allocation	Masking
United Kingdom	N/A	Single Group Assignment

Active recruiting

Line	Phase	Compounds
Neoadjuvant-10	1a-1b	DEFACTINIB, PEMBROLIZUMAB

Countries	Allocation	Masking
United Kingdom	N/A	Single Group Assignment

NCT02664935 National Lung Matrix Trial: Multi-drug Phase II Trial in Non-Small Cell Lung Cancer

Active recruiting

Line	Phase	Compounds
2-10	2	AZD2014, AZD4547, AZD5363, AZD9291, CRIZOTINIB, DOCETAXEL, MEDI4736, PALBOCICLIB, SELUMETINIB

Countries	Allocation	Masking
United Kingdom	Non Randomized	Single Group Assignment

NCT03090737 Safety Study of Nivolumab to Treat Advanced or Metastatic Non-small Cell Lung Cancer (CheckMate 907)

Not yet recruiting

Line	Phase	Compounds
2-10	2	NIVOLUMAB

Countries	Allocation	Masking
Japan, Romania	N/A	Single Group Assignment

Active recruiting

Line	Phase	Compounds
2-10	2	NIVOLUMAB

Countries	Allocation	Masking
Canada	N/A	Single Group Assignment

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

AVAILABLE CLINICAL TRIALS

NCT02583165 A Study in Adult Subjects With Select Advanced Solid Tumors

Active (not recruiting)

Line	Phase	Compounds
1-10	1a-1b	MEDI1873

Countries	Allocation	Masking
Spain, United States	N/A	Single Group Assignment

NCT02917993 An Open-Label Phase 1/2 Study of INCB039110 in Combination With Osimertinib in Subjects With Locally Advanced or Metastatic Non-Small Cell Lung Cancer

Active recruiting

Line	Phase	Compounds
2	2	Itacitinib, OSIMERTINIB

Countries	Allocation	Masking
United States	N/A	Single Group Assignment

Inclusive Biomarkers

EGFR-G719A, EGFR-G719C, EGFR-G719D, EGFR-G719S, EGFR-G719V, EGFR-L858R, EGFR-L861Q

Active recruiting

Line	Phase	Compounds
2-10	1a-1b	Itacitinib, OSIMERTINIB

Countries	Allocation	Masking
United States	N/A	Single Group Assignment

Inclusive Biomarkers

EGFR-G719A, EGFR-G719C, EGFR-G719D, EGFR-G719S, EGFR-G719V, EGFR-L858R, EGFR-L861Q

Einsiedlerstrasse 23, 8834 Schindellegi, SWITZERLAND
E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

AVAILABLE CLINICAL TRIALS

NCT02627274 — A Study Evaluating Safety, Pharmacokinetics, and Therapeutic Activity of RO6874281 as a Single Agent (Part A) or in Combination With Trastuzumab or Cetuximab (Part B or C)

Active recruiting

Line	Phase	Compounds
Neoadjuvant-10	1a-1b	RO6874281

Countries	Allocation	Masking
Italy	N/A	Single Group Assignment

Active recruiting

Line	Phase	Compounds
3-10	1a-1b	RO6874281, TRASTUZUMAB

Countries	Allocation	Masking
Italy	N/A	Single Group Assignment

Inclusive Biomarkers

ERBB2 protein overexpression, ERBB2 amplification presence

Active recruiting

Line	Phase	Compounds
3-10	1a-1b	RO6874281, TRASTUZUMAB

Countries	Allocation	Masking
Denmark, United Kingdom, Spain	N/A	Single Group Assignment

Inclusive Biomarkers

ERBB2 protein overexpression, ERBB2 amplification presence

Active recruiting

Line	Phase	Compounds
Neoadjuvant-10	1a-1b	RO6874281

Countries	Allocation	Masking
Denmark, United Kingdom, France, Spain, Netherlands, United States	N/A	Single Group Assignment

Active recruiting

Line	Phase	Compounds
2-10	1a-1b	CETUXIMAB, RO6874281

Countries	Allocation	Masking
Denmark, United Kingdom, France, Spain, Netherlands, United States	N/A	Single Group Assignment

Active recruiting

Line	Phase	Compounds
2-10	1a-1b	CETUXIMAB, RO6874281

Countries	Allocation	Masking
Italy	N/A	Single Group Assignment

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

AVAILABLE CLINICAL TRIALS

NCT03133546 Osimertinib and Bevacizumab Versus Osimertinib Alone as Second-line Treatment in Stage IIIb-IVb NSCLC With Confirmed EGFRm and T790M (BOOSTER)

Active recruiting

Line	Phase	Compounds
2-10		BEVACIZUMAB, OSIMERTINIB, OSIMERTINIB

Countries	Allocation	Masking
Singapore, Switzerland, Korea, Republic of, Ireland, Spain, Netherlands	Randomized	Open Label

Inclusive Biomarkers

EGFR-L858R, EGFR-T790M

NCT02504346 AZD9291, an Irreversible EGFR-TKI, in Relapsed EGFR-mutated Non-small Cell Lung Cancer Patients Previously Treated With an EGFR-TKI, Coupled to Extensive Translational Studies

Active recruiting

Line	Phase	Compounds
Neoadjuvant-10	2	AZD9291

Countries	Allocation	Masking
Norway, Sweden, Finland, Denmark, Lithuania	N/A	Single Group Assignment

NCT03379441 Pembrolizumab (MK-3475) as Maintainance in Treated Patients With Unresectable Stage III NSCLC

Not yet recruiting

Line	Phase	Compounds
Neoadjuvant-10	2	PEMBROLIZUMAB

Countries	Allocation	Masking
Italy	N/A	Single Group Assignment

NCT02143466 AZD9291 in Combination With Ascending Doses of Novel Therapeutics

Active recruiting

Line	Phase	Compounds
Neoadjuvant-10	1b	AZD6094, AZD6094, AZD9291, AZD9291, AZD9291, MEDI4736, SELUMETINIB

Countries	Allocation	Masking
Taiwan, Province of China, Russian Federation, Japan, Korea, Republic of, China, Poland, Ukraine, Canada, United States	Non Randomized	Single Group Assignment

Inclusive Biomarkers

EGFR ngs mutant

This list of clinical trials has been generated by the Realtime Oncology Molecular Treatment Calculator by matching the clinical and molecular profile of the patient with inclusion and exclusion criteria of trials recorded in the system. Search criteria have been manually set to filter matching clinical trials but do not necessarily cover all screening parameters. Oncompass Medicine cannot take responsibility for the validity of the recorded clinical trial data concerning inclusion and exclusion criteria and status, and cannot guarantee that the patient is going to be enrolled in any of the trials included in the list provided.

Einsiedlerstrasse 23, 8834 Schindellegi, SWITZERLAND
E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

DETAILED MOLECULAR PROFILE

MUTANT GENES

EGFR-L858R

WILD TYPE GENES

ABL1, AKT1, ALK, APC, ATM, BRAF, CDH1, CDKN2A, CSF1R, CTNNB1, ERBB2, ERBB4, EZH2, FBXW7, FGFR1, FGFR2, FGFR3, FLT3, GNA11, GNAQ, GNAS, HNF1A, HRAS, IDH1, IDH2, JAK2, JAK3, KDR, KIT, KRAS, MET, MLH1, MPL, NOTCH1, NPM1, NRAS, PDGFRA, PIK3CA, PTEN, PTPN11, RB1, RET, SMAD4, SMARCB1, SMO, SRC, STK11, TP53, VHL

FISH/CNA/IHC POSITIVE GENES	FISH/CNA/IHC NEGATIVE GENES
PDL1 PROTEIN OVEREXPRESSION	

BIOINFORMATICAL AND FUNCTIONAL ANALYSIS

MOLECULAR ALTERATIONS	TARGET GENES
EGFR-L858R driver (AEL: 3968.12, AF/TR: 60.89%/30%), PDL1 protein overexpression driver (AEL: 23.97, AF/TR: NA/30%), TP53 wild-type biomarker (AEL: 0.00)	EGFR wild-type (AEL: 4821.26), • EGFR-L858R driver (AEL: 3968.12) AXL wild-type (AEL: 3976.82), • EGFR-L858R driver (AEL: 3968.12) Hsp90 wild-type (AEL: 3969.88), • EGFR-L858R driver (AEL: 3968.12) EGFR ngs mutant (AEL: 3969.12), • EGFR-L858R driver (AEL: 3968.12) PDL1 wild-type (AEL: 101.64), • PDL1 protein overexpression driver (AEL: 23.97) PDCD1 wild-type (AEL: 45.24), • PDL1 protein overexpression driver (AEL: 23.97) MDM2 wild-type (AEL: 0.46)

BIOINFORMATICAL AND FUNCTIONAL ANALYSIS

Previous therapies: palliative radiotherapies and

1st line: ERLOTINIB, ZOLEDRONIC ACID (22.05.2017. - 21.11.2017.)

Oncompass tumor molecular profiling was performed on histology sample of the primary tumor of the patient.
Tumor cell ratio: 30% on the area selected for molecular diagnostic test
Tumor location and histology: lung adenocarcinoma

Results of the next generation sequencing

L858R (2573T>G) mutation in the EGFR gene was detected in the sample.

EGFR-L858R (61% of the DNA examined):
This mutation is listed in the COSMIC database. The alteration is in exon 21, according to the scientific literature it is a known driver variant in non-small cell lung cancer (1). The L858R alteration increases sensitivity to EGFR inhibitors (2-5).

Registered EGFR inhibitors include GEFITINIB and AFATINIB in case of activating EGFR mutation. ERLOTINIB is approved as first line treatment in the presence of EGFR mutation, as well EGFR wild-type patients in second line.

In a phase 1/2 study, among the 126 patients who received the combination of afatinib and cetuximab, the ORR was 29%, and 18% of patients had tumor shrinkage of at least 50%. The ORR was not significantly different between T790M-positive (32%) and T790M-negative (25%) tumors . The median duration of response to afatinib and cetuximab was 5.7 months. The median PFS for all patients was 4.7 months (6).

AZD9291 was investigated in phase 1 dose-escalation study. The ORR among all patients was 53%, including an ORR of 64% in T790M-positive patients and 22% in T790M-negative patients (6).

Further registered EGFR inhibitors are CETUXIMAB, PANITUMUMAB, NECITUMUMAB, LAPATINIB and the FDA approved NERATINIB, which are not registered in the indication of the patient's tumor.

OSIMERTINIB is approved in the presence of EGFR-T790M mutation.

(1) Lynch TJ et al., Activating mutations in the epidermal growth factor receptor underlying responsiveness of non-small-cell lung cancer to gefitinib. N Engl J Med. 2004 May 20;350(21):2129-39. Epub 2004 Apr 29. PubMed PMID: 15118073

BIOINFORMATICAL AND FUNCTIONAL ANALYSIS

(2) Mitsudomi T et al., West Japan Oncology Group.. Gefitinib versus cisplatin plus docetaxel in patients with non-small-cell lung cancer harbouring mutations of the epidermal growth factor receptor (WJTOG3405): an open label, randomised phase 3 trial. Lancet Oncol. 2010 Feb;11 (2):121-8. Epub 2009 Dec 18. PubMed PMID: 20022809
(3) Maemondo M et al., North-East Japan Study Group.. Gefitinib or chemotherapy for non-small-cell lung cancer with mutated EGFR. N Engl J Med. 2010 Jun 24;362(25):2380-8. PubMed PMID: 20573926
(4) Rosell R et al., Spanish Lung Cancer Group in collaboration with Groupe Français de Pneumo-Cancérologie and Associazione Italiana Oncologia Toracica. Erlotinib versus standard chemotherapy as first-line treatment for European patients with advanced EGFR mutation-positive non-small-cell lung cancer (EURTAC): a multicentre, open-label, randomised phase 3 trial. Lancet Oncol. 2012 Mar;13(3):239-46. PubMed PMID: 22285168
(5) Sequist LV et al., Phase III study of afatinib or cisplatin plus pemetrexed in patients with metastatic lung adenocarcinoma with EGFR mutations. J Clin Oncol. 2013 Sep 20;31(27):3327-34. Epub 2013 Jul 1. PubMed PMID: 23816960
(6) Patrick M. Forde et al., Managing Acquired Resistance in EGFRMutated Non–Small Cell Lung Cancer. Clinical Advances in Hematology & Oncology August 2015, Volume 13, Issue 8

The LUX-Lung 3 study investigated the efficacy of chemotherapy compared with afatinib as a frist-line treatment. According to the subgroup analysis of progression-free survival (PFS), afatinib was associated with prolonged PFS in L858R mutant and Del19 mutant subgroups as well. Hazard ratios were 0.73 and 0.28 respectively (1).

In the LUX-Lung 6 study afatinib was tested versus cisplatin plus gemcitabine for first-line treatment of Asian patients with advanced non-small-cell lung cancer harbouring EGFR mutations. According to the subgroup analysis of progression-free survival (PFS), afatinib was associated with prolonged PFS in L858R mutant and Del19 mutant subgroups as well. Hazard ratios were 0.32 and 0.20 respectively (2).

The Lux-Lung 7 study investigated efficacy of afatinib versus gefitinib as a frist-line treatment. According to the subgroup analysis of median progression-free survival (PFS), afatinib was associated with prolonged PFS in L858R mutant and Del19 mutant subgroups as well.

(1) Sequist LV et al., Phase III study of afatinib or cisplatin plus pemetrexed in patients with metastatic lung adenocarcinoma with EGFR mutations. J Clin Oncol. 2013 Sep 20;31(27):3327-34. doi: 10.1200/JCO.2012.44.2806. Epub 2013 Jul 1. PubMed PMID: 23816960.
(2) Wu YL et al., Afatinib versus cisplatin plus gemcitabine for first-line treatment of Asian patients with advanced non-small-cell lung cancer harbouring EGFR mutations (LUX-Lung 6): an open-label, randomised phase 3 trial. Lancet Oncol. 2014 Feb;15(2):213-22. doi: 10.1016/S1470-2045 (13)70604-1. Epub 2014 Jan 15. PubMed PMID: 24439929.
(3) Park K et al., Afatinib versus gefitinib as first-line treatment of patients with EGFR mutation-positive non-small-cell lung cancer (LUX-Lung 7): a phase 2B, open-label, randomised controlled trial. Lancet
Oncol. 2016 May;17(5):577-89. doi: 10.1016/S1470-2045(16)30033-X. Epub 2016 Apr 12. PubMed PMID: 27083334.

Silent mutations were detected in the FGFR3 (1953G>A), PDGFRA (1701A>G), APC (4479G>A), EGFR (2361G>A), HRAS (81T>C) and in the RET (2307G>T and 2712C>G) genes, that do not cause amino acid changes within the protein.
No hotspot mutations were detected in the successfully examined regions of the following genes: ABL1, AKT1, ALK, APC, ATM, BRAF, CDH1, CDKN2A, CSF1R, CTNNB1, ERBB2, ERBB4, EZH2, FBXW7, FGFR1, FGFR2, FGFR3, FLT3, GNA11, GNAQ, GNAS, HNF1A, HRAS, IDH1, IDH2, JAK2, JAK3, KDR, KIT, KRAS, MET, MLH1, MPL, NOTCH1, NPM1, NRAS, PDGFRA, PIK3CA, PTEN, PTPN11, RB1, RET, SMAD4, SMARCB1, SMO, SRC, STK11, TP53, VHL .

Wild type TP53 is considered to be in positive association with MDM2/HDM2 inhibitors, which may only be available in clinical trials (1).

(1) Mir R et al., Mdm2 antagonists induce apoptosis and synergize with cisplatin overcoming chemoresistance in TP53 wild-type ovarian cancer cells. Int J Cancer. 2013 Apr 1;132(7):1525-36. PubMed PMID: 22961628

Results of the FISH analysis:
The FISH analysis was unsuccessfull.

Result of the PD-L1 immunhistochemistry analysis:
The sample was analysed with PD-L1 22C3 pharmDx antibody using immunohistochemistry (IHC). 10% of the tumor cells were positive.

NIVOLUMAB (PD-1 inhibitor) is approved for NSCLC patients after systematic treatment. PEMBROLIZUMAB (PD-1 inhibitor) is approved for the treatment of locally advanced or metastatic NSCLC in patients whose tumors express PD-L1 with a 1% tumor proportion score (TPS) and who have received at least one prior chemotherapy regimen. It is also indicated for the first-line treatment of metastatic non-small cell lung carcinoma in adults whose tumors express PD-L1 with a 50% TPS with no EGFR mutation or ALK translocation. ATEZOLIZUMAB (PD-L1 inhibitor) is approved only by the FDA for the treatment of patients with locally advanced or metastatic non-small cell lung cancer after they have been previously treated with chemotherapy regardless of PD-L1 status. Several studies demonstrated that use of checkpoint inhibitors results in enhanced response in patients with higher PD-L1 expression in their tumors, compared to patients with lower or no PD-L1 expression in their tumors (1, 2).

In a randomized, international phase III study patients were enrolled with non-squamous non-small cell lung cancer to receive nivolumab or docetaxel. The median overall survival was 12.2 months among 292 patients in the nivolumab group and 9.4 months among 290 patients in the docetaxel group (3). Among patients with PD-L1 positive tumors PFS and OS was significantly better in the nivolumab group compared to the docetaxel group (4).

In patients with previously treated, PD-L1-positive, advanced non-small-cell lung cancer the overall survival was 14.9 months with pembrolizumab therapy, while with docetaxel monotherapy overall survival was 8.2 months (5). Among NSCLC patients with less than 50% PD-L1 expression, median overall survival was 9 months with pembrolizumab therapy, while in patients with at least 50% PD-L1 expression median overall survival was not reached during the 26 months of follow-up (6).
Atezolizumab significantly improved survival compared with docetaxel (4.2 months vs 2.9 months) according to the OAK and POLAR clinical trials, involving 1137 NSCLC patients (7, 8). The demonstrated promising response rates in NSCLC correlated with PD-L1 expression (9).

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

BIOINFORMATICAL AND FUNCTIONAL ANALYSIS

RAMUCIRUMAB (VEGFR-2 inhibitor) is not associated with the patient's molecular profile, but it is a registered compound in NSCLC indication in combination with docetaxel after prior platinum-containing chemotherapy. BEVACIZUMAB (VEGF inhibitor) and NINTEDANIB (receptor tyrosine kinase inhibitor) are registered drugs in lung adenocarcinoma. They are indicated in combination with chemotherapy in first or second line, respectively.

The addition of bevacizumab to paclitaxel plus carboplatin in the treatment of selected patients with non-small-cell lung cancer has a significant survival benefit. The median survival was 12.3 months in the group assigned to chemotherapy plus bevacizumab, as compared with 10.3 months in the chemotherapy-alone group (10).
According to a study, involving 1314 patients, nintedanib in combination with docetaxel is an effective second-line option for patients with advanced NSCLC previously treated with one line of platinum-based therapy, especially for patients with adenocarcinoma. PFS was significantly improved in the docetaxel plus nintedanib group compared with the docetaxel plus placebo group (median 3.4 months vs 2.7 months (11).
Ramucirumab plus docetaxel improves survival as second-line treatment of patients with stage IV NSCLC. Median overall survival was 10.5 months for 628 patients allocated ramucirumab plus docetaxel and 9.1 months for 625 patients who received placebo plus docetaxel (12).

(1) Kerr KM et al., Programmed Death-Ligand 1 Immunohistochemistry in Lung Cancer: In what state is this art? J Thorac Oncol. 2015 Jul;10(7):985-9. Review. PubMed PMID: 26134220
(2) Herbst RS et al., Predictive correlates of response to the anti-PD-L1 antibody MPDL3280A in cancer patients. Nature. 2014 Nov 27;515(7528):563-7. PubMed PMID: 25428504
(3) Borghaei H et al., Nivolumab versus Docetaxel in Advanced Nonsquamous Non-Small-Cell Lung Cancer. N Engl J Med. 2015 Oct 22;373(17):1627-39. PubMed PMID: 26412456
(4) Luis Paz-Ares et al., Phase III, randomized trial (CheckMate 057) of nivolumab (NIVO) versus docetaxel (DOC) in advanced non-squamous cell (non-SQ) non-small cell lung cancer (NSCLC). J Clin Oncol 33, 2015 (suppl; abstr LBA109)
(5) Herbst RS et al., Pembrolizumab versus docetaxel for previously treated, PD-L1-positive, advanced non-small-cell lung cancer (KEYNOTE-010): a randomised controlled trial. Lancet. 2016 Apr 9;387(10027):1540-50. PubMed PMID: 26712084
(6) Garon EB et al., Pembrolizumab for the treatment of non-small-cell lung cancer. N Engl J Med. 2015 May 21;372 (21):2018-28. PubMed PMID: 25891174
(7) Fehrenbacher L et al., Atezolizumab versus docetaxel for patients with previously treated non-small-cell lung cancer (POPLAR): a multicentre, open-label, phase 2 randomised controlled trial. Lancet. 2016 Apr 30;387(10030):1837-46. PubMed PMID: 26970723
(8) http://www.fda.gov/Drugs/InformationOnDrugs/ApprovedDrugs/ucm525780.html
(9) Spira AI et al., Efficacy, safety and predictive biomarker results from a randomized phase II study comparing MPDL3280A vs docetaxel in 2L /3L NSCLC (POPLAR) [abstract 8010]. J Clin Oncol. 2015;33(suppl).
(10) Sandler A et al., Paclitaxel-carboplatin alone or with bevacizumab for non-small-cell lung cancer. N Engl J Med. 2007 Jan 18;356(3):318. PubMed PMID: 17167137
(11) Reck M et al., Docetaxel plus nintedanib versus docetaxel plus placebo in patients with previously treated non-small-cell lung cancer (LUME-Lung 1): a phase 3, double-blind, randomised controlled trial. Lancet Oncol. 2014 Feb;15(2):143-55. PubMed PMID: 24411639
(12) Garon EB et al., Ramucirumab plus docetaxel versus placebo plus docetaxel for second-line treatment of stage IV non-small-cell lung cancer after disease progression on platinum-based therapy (REVEL): a multicentre, double-blind, randomised phase 3 trial. Lancet. 2014 Aug 23;384 (9944): 665-73. PubMed PMID: 24933332

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

COMPOUND NAME	REFERENCES
AFATINIB	" Yu HA, Riely GJ. Second-generation epidermal growth factor receptor tyrosine kinase inhibitors in lung cancers. J Natl Compr Canc Netw. 2013 Feb 1;11(2):161-9. PubMed PMID: 23411383; PubMed Central PMCID: PMC3673302." Li D, Ambrogio L, Shimamura T, Kubo S, Takahashi M, Chirieac LR, Padera RF, Shapiro GI, Baum A, Himmelsbach F, Rettig WJ, Meyerson M, Solca F, Greulich H, Wong KK. BIBW2992, an irreversible EGFR/HER2 inhibitor highly effective in preclinical lung cancer models. Oncogene. 2008 Aug 7;27(34):4702-11. doi: 10.1038/onc.2008.109. Epub 2008 Apr 14. PubMed PMID: 18408761; PubMed Central PMCID: PMC2748240. Soria JC, Felip E, Cobo M, Lu S, Syrigos K, Lee KH, Göker E, Georgoulias V, Li W, Isla D, Guclu SZ, Morabito A, Min YJ, Ardizzoni A, Gadgeel SM, Wang B, Chand VK, Goss GD; LUX-Lung 8 Investigators. Afatinib versus erlotinib as second-line treatment of patients with advanced squamous cell carcinoma of the lung (LUX-Lung 8): an open-label randomised controlled phase 3 trial. Lancet Oncol. 2015 Aug;16(8):897-907. doi: 10.1016/S1470-2045(15)00006-6. Epub 2015 Jul 5. PubMed PMID: 26156651. Eskens FA, Mom CH, Planting AS, Gietema JA, Amelsberg A, Huisman H, van Doorn L, Burger H, Stopfer P, Verweij J, de Vries EG. A phase I dose escalation study of BIBW 2992, an irreversible dual inhibitor of epidermal growth factor receptor 1 (EGFR) and 2 (HER2) tyrosine kinase in a 2-week on, 2-week off schedule in patients with advanced solid tumours. Br J Cancer. 2008 Jan 15;98(1):80-5. Epub 2007 Nov 20. PubMed PMID: 18026190; PubMed Central PMCID: PMC2359721. Sequist LV, Yang JC, Yamamoto N, O'Byrne K, Hirsh V, Mok T, Geater SL, Orlov S, Tsai CM, Boyer M, Su WC, Bennouna J, Kato T, Gorbunova V, Lee KH, Shah R, Massey D, Zazulina V, Shahidi M, Schuler M. Phase III study of afatinib or cisplatin plus pemetrexed in patients with metastatic lung adenocarcinoma with EGFR mutations. J Clin Oncol. 2013 Sep 20;31(27):3327-34. doi: 10.1200/JCO.2012.44.2806. Epub 2013 Jul 1. PubMed PMID: 23816960.
DACOMITINIB	Ramalingam SS, Blackhall F, Krzakowski M, Barrios CH, Park K, Bover I, Seog Heo D, Rosell R, Talbot DC, Frank R, Letrent SP, Ruiz-Garcia A, Taylor I, Liang JQ, Campbell AK, O'Connell J, Boyer M. Randomized phase II study of dacomitinib (PF-00299804), an irreversible pan-human epidermal growth factor receptor inhibitor, versus erlotinib in patients with advanced non-small-cell lung cancer. J Clin Oncol. 2012 Sep 20;30(27):3337-44. doi: 10.1200/JCO.2011.40.9433. Epub 2012 Jul 2. PubMed PMID: 22753918. Echarri MJ, Lopez-Martin A, Hitt R. Targeted Therapy in Locally Advanced and Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma (LA-R/M HNSCC). Cancers (Basel). 2016 Feb 26;8(3). pii: E27. doi: 10.3390/cancers8030027. Review. PubMed PMID: 26927178; PubMed Central PMCID: PMC4810111. Gonzales AJ, Hook KE, Althaus IW, Ellis PA, Trachet E, Delaney AM, Harvey PJ, Ellis TA, Amato DM, Nelson JM, Fry DW, Zhu T, Loi CM, Fakhoury SA, Schlosser KM, Sexton KE, Winters RT, Reed JE, Bridges AJ, Lettiere DJ, Baker DA, Yang J, Lee HT, Tecle H, Vincent PW. Antitumor activity and pharmacokinetic properties of PF-00299804, a second-generation irreversible pan-erbB receptor tyrosine kinase inhibitor. Mol Cancer Ther. 2008 Jul;7(7):1880-9. doi: 10.1158/1535-7163.MCT-07-2232. Epub 2008 Jul 7. PubMed PMID: 18606718. Reckamp KL, Giaccone G, Camidge DR, Gadgeel SM, Khuri FR, Engelman JA, Koczywas M, Rajan A, Campbell AK, Gernhardt D, Ruiz-Garcia A, Letrent S, Liang J, Taylor I, O'Connell JP, Jänne PA. A phase 2 trial of dacomitinib (PF-00299804), an oral, irreversible pan-HER (human epidermal growth factor receptor) inhibitor, in patients with advanced non-small cell lung cancer after failure of prior chemotherapy and erlotinib. Cancer. 2014 Apr 15;120(8):1145-54. doi: 10.1002/cncr.28561. Epub 2014 Feb 5. PubMed PMID: 24501009; PubMed Central PMCID: PMC4164026. Jänne PA, Ou SH, Kim DW, Oxnard GR, Martins R, Kris MG, Dunphy F, Nishio M, O'Connell J, Paweletz C, Taylor I, Zhang H, Goldberg Z, Mok T. Dacomitinib as first-line treatment in patients with clinically or molecularly selected advanced non-small-cell lung cancer: a multicentre, open-label, phase 2 trial. Lancet Oncol. 2014 Dec;15(13):1433-41. doi: 10.1016/S1470-2045(14)70461-9. Epub 2014 Nov 5. PubMed PMID: 25456362.
GEFITINIB	Xu W, Soga S, Beebe K, Lee MJ, Kim YS, Trepel J, Neckers L. Sensitivity of epidermal growth factor receptor and ErbB2 exon 20 insertion mutants to Hsp90 inhibition. Br J Cancer. 2007 Sep 17;97(6):741-4. Epub 2007 Aug 21. PubMed PMID: 17712310; PubMed Central PMCID: PMC2360392. Jakob JA, Kies MS, Glisson BS, Kupferman ME, Liu DD, Lee JJ, El-Naggar AK, Gonzalez-Angulo AM, Blumenschein GR Jr. Phase II study of gefitinib in patients with advanced salivary gland cancers. Head Neck. 2015 May;37(5):644-9. doi: 10.1002/hed.23647. Epub 2015 Mar 30. PubMed PMID: 24585506. Montagut C, Dalmases A, Bellosillo B, Crespo M, Pairet S, Iglesias M, Salido M, Gallen M, Marsters S, Tsai SP, Minoche A, Seshagiri S, Serrano S, Himmelbauer H, Bellmunt J, Rovira A, Settleman J, Bosch F, Albanell J. Identification of a mutation in the extracellular domain of the Epidermal Growth Factor Receptor conferring cetuximab resistance in colorectal cancer. Nat Med. 2012 Jan 22;18(2):221-3. doi: 10.1038/nm.2609. Erratum in: Nat Med. 2012 Sep;18(9):1445. Somasekar, Seshagiri [corrected to Seshagiri, Somasekar]. PubMed PMID: 22270724. Baselga J, Albanell J, Ruiz A, Lluch A, Gascón P, Guillém V, González S, Sauleda S, Marimón I, Tabernero JM, Koehler MT, Rojo F. Phase II and tumor pharmacodynamic study of gefitinib in patients with advanced breast cancer. J Clin Oncol. 2005 Aug 10;23(23):5323-33. Epub 2005 Jun 6. PubMed PMID: 15939921. Wheeler DL, Dunn EF, Harari PM. Understanding resistance to EGFR inhibitors-impact on future treatment strategies. Nat Rev Clin Oncol. 2010 Sep;7(9):493-507. doi: 10.1038/nrclinonc.2010.97. Epub 2010 Jun 15. Review. PubMed PMID: 20551942; PubMed Central PMCID: PMC2929287.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

COMPOUND NAME	REFERENCES
ERLOTINIB	Sequist LV, Waltman BA, Dias-Santagata D, Digumarthy S, Turke AB, Fidias P, Bergethon K, Shaw AT, Gettinger S, Cosper AK, Akhavanfard S, Heist RS, Temel J, Christensen JG, Wain JC, Lynch TJ, Vernovsky K, Mark EJ, Lanuti M, Iafrate AJ, Mino-Kenudson M, Engelman JA. Genotypic and histological evolution of lung cancers acquiring resistance to EGFR inhibitors. Sci Transl Med. 2011 Mar 23;3(75):75ra26. doi: 10.1126/scitranslmed.3002003. PubMed PMID: 21430269; PubMed Central PMCID: PMC3132801. Garassino MC, Martelli O, Broggini M, Farina G, Veronese S, Rulli E, Bianchi F, Bettini A, Longo F, Moscetti L, Tomirotti M, Marabese M, Ganzinelli M, Lauricella C, Labianca R, Floriani I, Giaccone G, Torri V, Scanni A, Marsoni S; TAILOR trialists. Erlotinib versus docetaxel as second-line treatment of patients with advanced non-small-cell lung cancer and wild-type EGFR tumours (TAILOR): a randomised controlled trial. Lancet Oncol. 2013 Sep;14(10):981-8. doi: 10.1016/S1470-2045(13)70310-3. Epub 2013 Jul 22. PubMed PMID: 23883922. Dickler MN, Cobleigh MA, Miller KD, Klein PM, Winer EP. Efficacy and safety of erlotinib in patients with locally advanced or metastatic breast cancer. Breast Cancer Res Treat. 2009 May;115(1):115-21. doi: 10.1007/s10549-008-0055-9. Epub 2008 May 22. PubMed PMID: 18496750. Philip PA, Mahoney MR, Allmer C, Thomas J, Pitot HC, Kim G, Donehower RC, Fitch T, Picus J, Erlichman C. Phase II study of erlotinib in patients with advanced biliary cancer. J Clin Oncol. 2006 Jul 1;24(19):3069-74. PubMed PMID: 16809731. Rosell R, Carcereny E, Gervais R, Vergnenegre A, Massuti B, Felip E, Palmero R, Garcia-Gomez R, Pallares C, Sanchez JM, Porta R, Cobo M, Garrido P, Longo F, Moran T, Insa A, De Marinis F, Corre R, Bover I, Illiano A, Dansin E, de Castro J, Milella M, Reguart N, Altavilla G, Jimenez U, Provencio M, Moreno MA, Terrasa J, Muñoz-Langa J, Valdivia J, Isla D, Domine M, Molinier O, Mazieres J, Baize N, Garcia-Campelo R, Robinet G, Rodriguez-Abreu D, Lopez-Vivanco G, Gebbia V, Ferrera-Delgado L, Bombaron P, Bernabe R, Bearz A, Artal A, Cortesi E, Rolfo C, Sanchez-Ronco M, Drozdowskyj A, Queralt C, de Aguirre I, Ramirez JL, Sanchez JJ, Molina MA, Taron M, Paz-Ares L; Spanish Lung Cancer Group in collaboration with Groupe Français de Pneumo-Cancérologie and Associazione Italiana Oncologia Toracica. Erlotinib versus standard chemotherapy as first-line treatment for European patients with advanced EGFR mutation-positive non-small-cell lung cancer (EURTAC): a multicentre, open-label, randomised phase 3 trial. Lancet Oncol. 2012 Mar;13(3):239-46. doi: 10.1016/S1470-2045(11)70393-X. Epub 2012 Jan 26. PubMed PMID: 22285168.
PANITUMUMAB	Vanderbilt Medical Center, Nashville, TN; Kansas City Cancer Center, Overland Park, KS; Hematology Oncology Associates, Port S. Lucie, FL; Utah Cancer Specialists, Salt Lake City, UT; Tennessee Oncology, Nashville, TN; UCLA School of Medicine, Los Angeles, CA; Amgen, Inc., Thousand Oaks, CA. Panitumumab antitumor activity in patients (pts) with metastatic colorectal cancer (mCRC) expressing 10% epidermal growth factor receptor (EGFr). J Clin Oncol (Meeting Abstracts) June 2006 vol. 24 no. 18_suppl 3548. Echarri MJ, Lopez-Martin A, Hitt R. Targeted Therapy in Locally Advanced and Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma (LA-R/M HNSCC). Cancers (Basel). 2016 Feb 26;8(3). pii: E27. doi: 10.3390/cancers8030027. Review. PubMed PMID: 26927178; PubMed Central PMCID: PMC4810111. Shaib W, Mahajan R, El-Rayes B. Markers of resistance to anti-EGFR therapy in colorectal cancer. J Gastrointest Oncol. 2013 Sep;4(3):308-18. doi: 10.3978/j.issn.2078-6891.2013.029. PubMed PMID: 23997942; PubMed Central PMCID: PMC3712296. Amado RG, Wolf M, Peeters M, Van Cutsem E, Siena S, Freeman DJ, Juan T, Sikorski R, Suggs S, Radinsky R, Patterson SD, Chang DD. Wild-type KRAS is required for panitumumab efficacy in patients with metastatic colorectal cancer. J Clin Oncol. 2008 Apr 1;26(10):1626-34. doi: 10.1200/JCO.2007.14.7116. Epub 2008 Mar 3. PubMed PMID: 18316791. Montagut C, Dalmases A, Bellosillo B, Crespo M, Pairet S, Iglesias M, Salido M, Gallen M, Marsters S, Tsai SP, Minoche A, Seshagiri S, Serrano S, Himmelbauer H, Bellmunt J, Rovira A, Settleman J, Bosch F, Albanell J. Identification of a mutation in the extracellular domain of the Epidermal Growth Factor Receptor conferring cetuximab resistance in colorectal cancer. Nat Med. 2012 Jan 22;18(2):221-3. doi: 10.1038/nm.2609. Erratum in: Nat Med. 2012 Sep;18(9):1445. Somasekar, Seshagiri [corrected to Seshagiri, Somasekar]. PubMed PMID: 22270724.
BRIGATINIB	" Yu HA, Riely GJ. Second-generation epidermal growth factor receptor tyrosine kinase inhibitors in lung cancers. J Natl Compr Canc Netw. 2013 Feb 1;11(2):161-9. PubMed PMID: 23411383; PubMed Central PMCID: PMC3673302." NCI Drug Dictionary
OSIMERTINIB	Cross DA, Ashton SE, Ghiorghiu S, Eberlein C, Nebhan CA, Spitzler PJ, Orme JP, Finlay MR, Ward RA, Mellor MJ, Hughes G, Rahi A, Jacobs VN, Red Brewer M, Ichihara E, Sun J, Jin H, Ballard P, Al-Kadhimi K, Rowlinson R, Klinowska T, Richmond GH, Cantarini M, Kim DW, Ranson MR, Pao W. AZD9291, an irreversible EGFR TKI, overcomes T790M-mediated resistance to EGFR inhibitors in lung cancer. Cancer Discov. 2014 Sep;4(9):1046-61. doi: 10.1158/2159-8290.CD-14-0337. Epub 2014 Jun 3. PubMed PMID: 24893891. Remon J, Planchard D. AZD9291 in EGFR-mutant advanced non-small-cell lung cancer patients. Future Oncol. 2015 Nov;11(22):3069-81. doi: 10.2217/fon.15.250. Epub 2015 Oct 9. PubMed PMID: 26450446. http://www.onclive.com/web-exclusives/fda-approves-osimertinib-for-egfr-t790m-positive-nsclc
MP-470	Zhang Z, Lee JC, Lin L, Olivas V, Au V, LaFramboise T, Abdel-Rahman M, Wang X, Levine AD, Rho JK, Choi YJ, Choi CM, Kim SW, Jang SJ, Park YS, Kim WS, Lee DH, Lee JS, Miller VA, Arcila M, Ladanyi M, Moonsamy P, Sawyers C, Boggon TJ, Ma PC, Costa C, Taron M, Rosell R, Halmos B, Bivona TG. Activation of the AXL kinase causes resistance to EGFR-targeted therapy in lung cancer. Nat Genet. 2012 Jul 1;44(8):852-60. doi: 10.1038/ng.2330. PubMed PMID: 22751098; PubMed Central PMCID: PMC3408577.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

COMPOUND NAME	REFERENCES
17-AAG	Xu W, Soga S, Beebe K, Lee MJ, Kim YS, Trepel J, Neckers L. Sensitivity of epidermal growth factor receptor and ErbB2 exon 20 insertion mutants to Hsp90 inhibition. Br J Cancer. 2007 Sep 17;97(6):741-4. Epub 2007 Aug 21. PubMed PMID: 17712310; PubMed Central PMCID: PMC2360392. Ying W, Du Z, Sun L, Foley KP, Proia DA, Blackman RK, Zhou D, Inoue T, Tatsuta N, Sang J, Ye S, Acquaviva J, Ogawa LS, Wada Y, Barsoum J, Koya K. Ganetespib, a unique triazolone-containing Hsp90 inhibitor, exhibits potent antitumor activity and a superior safety profile for cancer therapy. Mol Cancer Ther. 2012 Feb;11(2):475-84. doi: 10.1158/1535-7163.MCT-11-0755. Epub 2011 Dec 5. PubMed PMID: 22144665.
AP32788	Francois Gonzalvez, Xiaotian Zhu, Wei-Sheng Huang, Theresa E. Baker, Yaoyu Ning, Scott D. Wardwell, Sara Nadworny, Sen Zhang, Biplab Das, Yongjin Gong, Matthew T. Greenfield, Hyun G. Jang, Anna Kohlmann, Feng Li, Paul M. Taslimi, Meera Tugnait, Yongjin Xu, Emily Y. Ye, Willmen W. Youngsaye, Stephan G. Zech, Yun Zhang, Tianjun Zhou, Narayana I. Narasimhan, David C. Dalgarno, William C. Shakespeare and Victor M. Rivera, DOI: 10.1158/1538-7445.AM2016-2644 Published July 2016, Abstract 2644: AP32788, a potent, selective inhibitor of EGFR and HER2 oncogenic mutants, including exon 20 insertions, in preclinical models
NECITUMUMAB	" Kuenen B, Witteveen PO, Ruijter R, Giaccone G, Dontabhaktuni A, Fox F, Katz T, Youssoufian H, Zhu J, Rowinsky EK, Voest EE. A phase I pharmacologic study of necitumumab (IMC-11F8), a fully human IgG1 monoclonal antibody directed against EGFR in patients with advanced solid malignancies. Clin Cancer Res. 2010 Mar 15;16(6):1915-23. doi: 10.1158/1078-0432.CCR-09-2425. Epub 2010 Mar 2. Erratum in: Clin Cancer Res. 2010 Sep 15;16(18):4681. Dosage error in article text. PubMed PMID: 20197484. " Garnock-Jones KP. Necitumumab: First Global Approval. Drugs. 2016 Feb;76(2):283-9. doi: 10.1007/s40265-015-0537-0. PubMed PMID: 26729188. Paz-Ares L, Socinski MA, Shahidi J, Hozak RR, Soldatenkova V, Kurek R, Varella-Garcia M, Thatcher N, Hirsch FR. Correlation of EGFR-expression with safety and efficacy outcomes in SQUIRE: a randomized, multicenter, open-label, phase III study of gemcitabine-cisplatin plus necitumumab versus gemcitabine-cisplatin alone in the first-line treatment of patients with stage IV squamous non-small-cell lung cancer. Ann Oncol. 2016 Aug;27(8):1573-9. doi: 10.1093/annonc/mdw214. Epub 2016 May 20. PubMed PMID: 27207107; PubMed Central PMCID: PMC4959928. Thatcher N, Hirsch FR, Luft AV, Szczesna A, Ciuleanu TE, Dediu M, Ramlau R, Galiulin RK, Bálint B, Losonczy G, Kazarnowicz A, Park K, Schumann C, Reck M, Depenbrock H, Nanda S, Kruljac-Letunic A, Kurek R, Paz-Ares L, Socinski MA; SQUIRE Investigators. Necitumumab plus gemcitabine and cisplatin versus gemcitabine and cisplatin alone as first-line therapy in patients with stage IV squamous non-small-cell lung cancer (SQUIRE): an open-label, randomised, controlled phase 3 trial. Lancet Oncol. 2015 Jul;16(7):763-74. doi: 10.1016/S1470-2045(15)00021-2. Epub 2015 Jun 1. PubMed PMID: 26045340.
Zalutumumab	Saloura V, Cohen EE, Licitra L, Billan S, Dinis J, Lisby S, Gauler TC. An open-label single-arm, phase II trial of zalutumumab, a human monoclonal anti-EGFR antibody, in patients with platinum-refractory squamous cell carcinoma of the head and neck. Cancer Chemother Pharmacol. 2014 Jun;73(6):1227-39. doi: 10.1007/s00280-014-2459-z. Epub 2014 Apr 9. PubMed PMID: 24714973. Echarri MJ, Lopez-Martin A, Hitt R. Targeted Therapy in Locally Advanced and Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma (LA-R/M HNSCC). Cancers (Basel). 2016 Feb 26;8(3). pii: E27. doi: 10.3390/cancers8030027. Review. PubMed PMID: 26927178; PubMed Central PMCID: PMC4810111.
Simotinib	He L, Li S, Xie F, Cheng Z, Ran L, Liu X, Yu P. LC-ESI-MS/MS determination of simotinib, a novel epidermal growth factor receptor tyrosine kinase inhibitor: application to a pharmacokinetic study. J Chromatogr B Analyt Technol Biomed Life Sci. 2014 Feb 1;947-948:168-72. doi: 10.1016/j.jchromb.2013.12.021. Epub 2013 Dec 27. PubMed PMID: 24440798.
Matuzumab	Schmiedel J, Blaukat A, Li S, Knöchel T, Ferguson KM. Matuzumab binding to EGFR prevents the conformational rearrangement required for dimerization. Cancer Cell. 2008 Apr;13(4):365-73. doi: 10.1016/j.ccr.2008.02.019. PubMed PMID: 18394559; PubMed Central PMCID: PMC2725356.
H 447	Fury MG, Lipton A, Smith KM, Winston CB, Pfister DG. A phase-I trial of the epidermal growth factor receptor directed bispecific antibody MDX-447 without and with recombinant human granulocyte-colony stimulating factor in patients with advanced solid tumors. Cancer Immunol Immunother. 2008 Feb;57(2):155-63. Epub 2007 Jun 30. PubMed PMID: 17602224.
Imgatuzumab	Gerdes CA, Nicolini VG, Herter S, van Puijenbroek E, Lang S, Roemmele M, Moessner E, Freytag O, Friess T, Ries CH, Bossenmaier B, Mueller HJ, Umaña P. GA201 (RG7160): a novel, humanized, glycoengineered anti-EGFR antibody with enhanced ADCC and superior in vivo efficacy compared with cetuximab. Clin Cancer Res. 2013 Mar 1;19(5):1126-38. doi: 10.1158/1078-0432.CCR-12-0989. Epub 2012 Dec 3. PubMed PMID: 23209031.
BIBX 1382	Solca FF, Baum A, Langkopf E, Dahmann G, Heider KH, Himmelsbach F, van Meel JC. Inhibition of epidermal growth factor receptor activity by two pyrimidopyrimidine derivatives. J Pharmacol Exp Ther. 2004 Nov;311(2):502-9. Epub 2004 Jun 15. PubMed PMID: 15199094.
PKI 166	Bruns CJ, Solorzano CC, Harbison MT, Ozawa S, Tsan R, Fan D, Abbruzzese J, Traxler P, Buchdunger E, Radinsky R, Fidler IJ. Blockade of the epidermal growth factor receptor signaling by a novel tyrosine kinase inhibitor leads to apoptosis of endothelial cells and therapy of human pancreatic carcinoma. Cancer Res. 2000 Jun 1;60(11):2926-35. PubMed PMID: 10850439.
Theliatinib	Ren Y, Zheng J, Fan S, Wang L, Cheng M, Shi D, Zhang W, Tang R, Yu Y, Jiao L, Ni J, Yang H, Cai H, Yin F, Chen Y, Zhou F, Zhang W, Qing W, Su W. Anti-tumor efficacy of theliatinib in esophageal cancer patient-derived xenografts models with epidermal growth factor receptor (EGFR) overexpression and gene amplification. Oncotarget. 2017 Apr 19. doi: 10.18632/oncotarget.17243. [Epub ahead of print] PubMed PMID: 28472779.
Tesevatinib	Gendreau SB, Ventura R, Keast P, Laird AD, Yakes FM, Zhang W, Bentzien F, Cancilla B, Lutman J, Chu F, Jackman L, Shi Y, Yu P, Wang J, Aftab DT, Jaeger CT, Meyer SM, De Costa A, Engell K, Chen J, Martini JF, Joly AH. Inhibition of the T790M gatekeeper mutant of the epidermal growth factor receptor by EXEL-7647. Clin Cancer Res. 2007 Jun 15;13(12):3713-23. PubMed PMID: 17575237.

COMPOUND NAME	REFERENCES
BMS-690514	Soria JC, Baselga J, Hanna N, Laurie SA, Bahleda R, Felip E, Calvo E, Armand JP, Shepherd FA, Harbison CT, Berman D, Park JS, Zhang S, Vakkalagadda B, Kurland JF, Pathak AK, Herbst RS. Phase I-IIa study of BMS-690514, an EGFR, HER-2 and -4 and VEGFR-1 to -3 oral tyrosine kinase inhibitor, in patients with advanced or metastatic solid tumours. Eur J Cancer. 2013 May;49(8):1815-24. doi: 10.1016/j.ejca.2013.02.012. Epub 2013 Mar 13. PubMed PMID: 23490650.
JNJ-26483327	Konings IR, de Jonge MJ, Burger H, van der Gaast A, van Beijsterveldt LE, Winkler H, Verweij J, Yuan Z, Hellemans P, Eskens FA. Phase I and pharmacological study of the broad-spectrum tyrosine kinase inhibitor JNJ-26483327 in patients with advanced solid tumours. Br J Cancer. 2010 Sep 28;103(7):987-92. doi: 10.1038/sj.bjc.6605867. Epub 2010 Sep 7. PubMed PMID: 20823884; PubMed Central PMCID: PMC2965873.
S-222611	Spicer J, Baird R, Suder A, Cresti N, Corbacho JG, Hogarth L, Frenkel E, Matsumoto S, Kawabata I, Donaldson K, Posner J, Sarker D, Jodrell D, Plummer R. Phase 1 dose-escalation study of S-222611, an oral reversible dual tyrosine kinase inhibitor of EGFR and HER2, in patients with solid tumours. Eur J Cancer. 2015 Jan;51(2):137-45. doi: 10.1016/j.ejca.2014.11.003. Epub 2014 Nov 27. PubMed PMID: 25434923.
ABT-414	NCI Drug Dictionary
NIMOTUZUMAB	"Chen YJ, Chi CW, Su WC, Huang HL. Lapatinib induces autophagic cell death and inhibits growth of human hepatocellular carcinoma. Oncotarget. 2014 Jul 15;5(13):4845-54. PubMed PMID: 24947784; PubMed Central PMCID: PMC4148104." "Huang Y, Yu T, Fu X, Chen J, Liu Y, Li C, Xia Y, Zhang Z, Li L. EGFR inhibition prevents in vitro tumor growth of salivary adenoid cystic carcinoma. BMC Cell Biol. 2013 Mar 9;14:13. doi: 10.1186/1471-2121-14-13. PubMed PMID: 23496982; PubMed Central PMCID: PMC3610144." " Su D, Jiao SC, Wang LJ, Shi WW, Long YY, Li J, Bai L. Efficacy of nimotuzumab plus gemcitabine usage as first-line treatment in patients with advanced pancreatic cancer. Tumour Biol. 2014 Mar;35(3):2313-8. doi: 10.1007/s13277-013-1306-x. Epub 2013 Oct 19. PubMed PMID: 24142531. "
MEHD7945A	Huang S, Li C, Armstrong EA, Peet CR, Saker J, Amler LC, Sliwkowski MX, Harari PM. Dual targeting of EGFR and HER3 with MEHD7945A overcomes acquired resistance to EGFR inhibitors and radiation. Cancer Res. 2013 Jan 15; 73(2):824-33. doi: 10.1158/0008-5472.CAN-12-1611. Epub 2012 Nov 20. PubMed PMID: 23172311.
HM61713	NCI Drug Dictionary
ROCILETINIB	NCI Drug Dictionary
VANDETANIB	Sarkar S, Mazumdar A, Dash R, Sarkar D, Fisher PB, Mandal M. ZD6474, a dual tyrosine kinase inhibitor of EGFR and VEGFR-2, inhibits MAPK/ERK and AKT/PI3-K and induces apoptosis in breast cancer cells. Cancer Biol Ther. 2010 Apr 15;9(8):592-603. Epub 2010 Apr 4. PubMed PMID: 20139705.
TAK-285	Ishikawa T, Seto M, Banno H, Kawakita Y, Oorui M, Taniguchi T, Ohta Y, Tamura T, Nakayama A, Miki H, Kamiguchi H, Tanaka T, Habuka N, Sogabe S, Yano J, Aertgeerts K, Kamiyama K. Design and synthesis of novel human epidermal growth factor receptor 2 (HER2)/epidermal growth factor receptor (EGFR) dual inhibitors bearing a pyrrolo[3,2-d]pyrimidine scaffold. J Med Chem. 2011 Dec 8;54(23):8030-50. doi: 10.1021/jm2008634. Epub 2011 Nov 4. PubMed PMID: 22003817.
NERATINIB	Li D, Ambrogio L, Shimamura T, Kubo S, Takahashi M, Chirieac LR, Padera RF, Shapiro GI, Baum A, Himmelsbach F, Rettig WJ, Meyerson M, Solca F, Greulich H, Wong KK. BIBW2992, an irreversible EGFR/HER2 inhibitor highly effective in preclinical lung cancer models. Oncogene. 2008 Aug 7;27(34):4702-11. doi: 10.1038/onc.2008.109. Epub 2008 Apr 14. PubMed PMID: 18408761; PubMed Central PMCID: PMC2748240. Rabindran SK, Discafani CM, Rosfjord EC, Baxter M, Floyd MB, Golas J, Hallett WA, Johnson BD, Nilakantan R, Overbeek E, Reich MF, Shen R, Shi X, Tsou HR, Wang YF, Wissner A. Antitumor activity of HKI-272, an orally active, irreversible inhibitor of the HER-2 tyrosine kinase. Cancer Res. 2004 Jun 1;64(11):3958-65. PubMed PMID: 15173008.
PELITINIB	Li D, Ambrogio L, Shimamura T, Kubo S, Takahashi M, Chirieac LR, Padera RF, Shapiro GI, Baum A, Himmelsbach F, Rettig WJ, Meyerson M, Solca F, Greulich H, Wong KK. BIBW2992, an irreversible EGFR/HER2 inhibitor highly effective in preclinical lung cancer models. Oncogene. 2008 Aug 7;27(34):4702-11. doi: 10.1038/onc.2008.109. Epub 2008 Apr 14. PubMed PMID: 18408761; PubMed Central PMCID: PMC2748240.
CUDC-101	Cai X, Zhai HX, Wang J, Forrester J, Qu H, Yin L, Lai CJ, Bao R, Qian C. Discovery of 7-(4-(3-ethynylphenylamino)-7-methoxyquinazolin-6-yloxy)-N-hydroxyheptanamide (CUDc-101) as a potent multi-acting HDAC, EGFR, and HER2 inhibitor for the treatment of cancer. J Med Chem. 2010 Mar 11;53(5):2000-9. doi: 10.1021/jm901453q. PubMed PMID: 20143778.
SAPITINIB	"Barlaam B, Anderton J, Ballard P, Bradbury RH, Hennequin LF, Hickinson DM, Kettle JG, Kirk G, Klinowska T, Lambert-van der Brempt C, Trigwell C, Vincent J, Ogilvie D. Discovery of AZD8931, an Equipotent, Reversible Inhibitor of Signaling by EGFR, HER2, and HER3 Receptors. ACS Med Chem Lett. 2013 May 31;4(8):742-6. doi: 10.1021/ml400146c. eCollection 2013 Aug 8. PubMed PMID: 24900741; PubMed Central PMCID: PMC4027407. "
AV-412	Suzuki T, Fujii A, Ohya J, Nakamura H, Fujita F, Koike M, Fujita M. Antitumor activity of a dual epidermal growth factor receptor and ErbB2 kinase inhibitor MP-412 (AV-412) in mouse xenograft models. Cancer Sci. 2009 Aug;100 (8):1526-31. doi: 10.1111/j.1349-7006.2009.01197.x. Epub 2009 May 13. PubMed PMID: 19459856.
Allitinib	Silva-Oliveira RJ, Silva VA, Martinho O, Cruvinel-Carloni A, Melendez ME, Rosa MN, de Paula FE, de Souza Viana L, Carvalho AL, Reis RM. Cytotoxicity of allitinib, an irreversible anti-EGFR agent, in a large panel of human cancer-derived cell lines: KRAS mutation status as a predictive biomarker. Cell Oncol (Dordr). 2016 Jun;39(3):253-63. doi: 10.1007/s13402-016-0270-z. Epub 2016 Feb 26. PubMed PMID: 26920031.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

COMPOUND NAME	REFERENCES
AEE788	Traxler P, Allegrini PR, Brandt R, Brueggen J, Cozens R, Fabbro D, Grosios K, Lane HA, McSheehy P, Mestan J, Meyer T, Tang C, Wartmann M, Wood J, Caravatti G. AEE788: a dual family epidermal growth factor receptor/ErbB2 and vascular endothelial growth factor receptor tyrosine kinase inhibitor with antitumor and antiangiogenic activity. Cancer Res. 2004 Jul 15;64(14):4931-41. PubMed PMID: 15256466. "Baselga J, Mita AC, Schöffski P, Dumez H, Rojo F, Tabernero J, DiLea C, Mietlowski W, Low C, Huang J, Dugan M, Parker K, Walk E, van Oosterom A, Martinelli E, Takimoto CH. Using pharmacokinetic and pharmacodynamic data in early decision making regarding drug development: a phase I clinical trial evaluating tyrosine kinase inhibitor, AEE788. Clin Cancer Res. 2012 Nov 15;18(22):6364-72. doi: 10.1158/1078-0432.CCR-12-1499. Epub 2012 Sep 26. PubMed PMID: 23014528." "Meco D, Servidei T, Zannonit GF, Martinelli E, Prisco MG, Waure Cd, Riccardi R. Dual Inhibitor AEE78 Reduces Tumor Growth in Preclinical Models of Medulloblastoma. Transl Oncol. 2010 Oct;3(5):326-35. doi: 10.1593/tlo.10163. Epub 2014 Mar 5. PubMed PMID: 24670630."
FORETINIB	Zillhardt M, Park SM, Romero IL, Sawada K, Montag A, Krausz T, Yamada SD, Peter ME, Lengyel E. Foretinib (GSK1363089), an orally available multikinase inhibitor of c-Met and VEGFR-2, blocks proliferation, induces anoikis, and impairs ovarian cancer metastasis. Clin Cancer Res. 2011 Jun 15;17(12):4042-51. doi: 10.1158/1078-0432.CCR-10-3387. Epub 2011 May 6. PubMed PMID: 21551255; PubMed Central PMCID: PMC3169439. Zhang Z, Lee JC, Lin L, Olivas V, Au V, LaFramboise T, Abdel-Rahman M, Wang X, Levine AD, Rho JK, Choi YJ, Choi CM, Kim SW, Jang SJ, Park YS, Kim WS, Lee DH, Lee JS, Miller VA, Arcila M, Ladanyi M, Moonsamy P, Sawyers C, Boggon TJ, Ma PC, Costa C, Taron M, Rosell R, Halmos B, Bivona TG. Activation of the AXL kinase causes resistance to EGFR-targeted therapy in lung cancer. Nat Genet. 2012 Jul 1;44(8):852-60. doi: 10.1038/ng.2330. PubMed PMID: 22751098; PubMed Central PMCID: PMC3408577.
AT13387	Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736. Zhao Y, Bernard D and Wang S. Small Molecule inhibitors of MDM2-p53 and MDMX-p53 interaction as new cancer therapeutics. BioDiscovery2013; 8: 4; DOI: 10.7750/BioDiscovery.2013.8.4
Onalespib	Ferraldeschi R, Welti J, Powers MV, Yuan W, Smyth T, Seed G, Riisnaes R, Hedayat S, Wang H, Crespo M, Nava Rodrigues D, Figueiredo I, Miranda S, Carreira S, Lyons JF, Sharp S, Plymate SR, Attard G, Wallis N, Workman P, de Bono JS. Second-Generation HSP90 Inhibitor Onalespib Blocks mRNA Splicing of Androgen Receptor Variant 7 in Prostate Cancer Cells. Cancer Res. 2016 May 1;76(9):2731-42. doi: 10.1158/0008-5472.CAN-15-2186. PubMed PMID: 27197266; PubMed Central PMCID: PMC4874658.
XL888	Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.
SNX-5422	Reddy N, Voorhees PM, Houk BE, Brega N, Hinson JM Jr, Jillela A. Phase I trial of the HSP90 inhibitor PF-04929113 (SNX5422) in adult patients with recurrent, refractory hematologic malignancies. Clin Lymphoma Myeloma Leuk. 2013 Aug;13(4):385-91. doi: 10.1016/j.clml.2013.03.010. Epub 2013 Jun 10. PubMed PMID: 23763921. Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.
PU-H71	NCI Drug Dictionary
MPC-3100	Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.
KW-2478	Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.
RETASPIMYCIN HYDROCHLORIDE	NCI Drug Dictionary
IPI-493	Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.
HSP990	Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.
DS-2248	NCI Drug Dictionary
DEBIO 932	Bao R, Lai CJ, Qu H, Wang D, Yin L, Zifcak B, Atoyan R, Wang J, Samson M, Forrester J, DellaRocca S, Xu GX, Tao X, Zhai HX, Cai X, Qian C. CUDC-305, a novel synthetic HSP90 inhibitor with unique pharmacologic properties for cancer therapy. Clin Cancer Res. 2009 Jun 15;15(12):4046-57. doi: 10.1158/1078-0432.CCR-09-0152. Epub 2009 Jun 9. PubMed PMID: 19509149.
TANESPIMYCIN	Vali S, Pallavi R, Kapoor S, Tatu U. Virtual prototyping study shows increased ATPase activity of Hsp90 to be the key determinant of cancer phenotype. Syst Synth Biol. 2010 Mar;4(1):25-33. doi: 10.1007/s11693-009-9046-3. Epub 2009 Oct 24. PubMed PMID: 19856130; PubMed Central PMCID: PMC2816227. Sausville EA, Tomaszewski JE, Ivy P. Clinical development of 17-allylamino, 17-demethoxygeldanamycin. Curr Cancer Drug Targets. 2003 Oct;3(5):377-83. Review. PubMed PMID: 14529389.
BIIB028	Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

COMPOUND NAME	REFERENCES
BIIB021	Lundgren K, Kamal A, Lough R, Timple N, Sensintaffar J, Yang C, et al. CNF2024 - The first clinical stage synthetic oral Hsp90 inhibitor. Cancer Res. 2006 Apr 15;66(8 Supplement):1142–1142. Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.
AUY922	Taniguchi H, Hasegawa H, Sasaki D, Ando K, Sawayama Y, Imanishi D, Taguchi J, Imaizumi Y, Hata T, Tsukasaki K, Uno N, Morinaga Y, Yanagihara K, Miyazaki Y. Heat shock protein 90 inhibitor NVP-AUY922 exerts potent activity against adult T-cell leukemia-lymphoma cells. Cancer Sci. 2014 Sep 29. doi: 10.1111/cas.12540. [Epub ahead of print] PubMed PMID: 25263741. Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.
ABI-010	Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.
GANETESPIB	Ying W, Du Z, Sun L, Foley KP, Proia DA, Blackman RK, Zhou D, Inoue T, Tatsuta N, Sang J, Ye S, Acquaviva J, Ogawa LS, Wada Y, Barsoum J, Koya K. Ganetespib, a unique triazolone-containing Hsp90 inhibitor, exhibits potent antitumor activity and a superior safety profile for cancer therapy. Mol Cancer Ther. 2012 Feb;11(2):475-84. doi: 10.1158/1535-7163.MCT-11-0755. Epub 2011 Dec 5. PubMed PMID: 22144665. Trepel J, Mollapour M, Giaccone G, Neckers L. Targeting the dynamic HSP90 complex in cancer. Nat Rev Cancer. 2010 Aug;10(8):537-49. doi: 10.1038/nrc2887. Review. PubMed PMID: 20651736.
EGF816	Jia Y, Juarez J, Li J, Manuia M, Niederst MJ, Tompkins C, Timple N, Vaillancourt MT, Pferdekamper AC, Lockerman EL, Li C, Anderson J, Costa C, Liao D, Murphy E, DiDonato M, Bursulaya B, Lelais G, Barretina J, McNeill M, Epple R, Marsilje TH, Pathan N, Engelman JA, Michellys PY, McNamara P, Harris J, Bender S, Kasibhatla S. EGF816 Exerts Anticancer Effects in Non-Small Cell Lung Cancer by Irreversibly and Selectively Targeting Primary and Acquired Activating Mutations in the EGF Receptor. Cancer Res. 2016 Mar 15;76(6):1591-602. doi: 10.1158/0008-5472.CAN-15-2581. Epub 2016 Jan 29. PubMed PMID: 26825170.
AMG 595	Hamblett KJ, Kozlosky CJ, Siu S, Chang WS, Liu H, Foltz IN, Trueblood ES, Meininger D, Arora T, Twomey B, Vonderfecht SL, Chen Q, Hill JS, Fanslow WC. AMG 595, an Anti-EGFRvIII Antibody-Drug Conjugate, Induces Potent Antitumor Activity against EGFRvIII-Expressing Glioblastoma. Mol Cancer Ther. 2015 Jul;14(7):1614-24. doi: 10.1158/1535-7163.MCT-14-1078. Epub 2015 Apr 30. PubMed PMID: 25931519.
PEMBROLIZUMAB	Langer CJ, Gadgeel SM, Borghaei H, Papadimitrakopoulou VA, Patnaik A, Powell SF, Gentzler RD, Martins RG, Stevenson JP, Jalal SI, Panwalkar A, Yang JC, Gubens M, Sequist LV, Awad MM, Fiore J, Ge Y, Raftopoulos H, Gandhi L; KEYNOTE-021 investigators.. Carboplatin and pemetrexed with or without pembrolizumab for advanced, non-squamous non-small-cell lung cancer: a randomised, phase 2 cohort of the open-label KEYNOTE-021 study. Lancet Oncol. 2016 Nov;17(11):1497-1508. doi: 10.1016/S1470-2045(16)30498-3. Epub 2016 Oct 10. PubMed PMID: 27745820. Echarri MJ, Lopez-Martin A, Hitt R. Targeted Therapy in Locally Advanced and Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma (LA-R/M HNSCC). Cancers (Basel). 2016 Feb 26;8(3). pii: E27. doi: 10.3390/cancers8030027. Review. PubMed PMID: 26927178; PubMed Central PMCID: PMC4810111. Bellmunt J, de Wit R, Vaughn DJ, Fradet Y, Lee JL, Fong L, Vogelzang NJ, Climent MA, Petrylak DP, Choueiri TK, Necchi A, Gerritsen W, Gurney H, Quinn DI, Culine S, Sternberg CN, Mai Y, Poehlein CH, Perini RF, Bajorin DF; KEYNOTE-045 Investigators. Pembrolizumab as Second-Line Therapy for Advanced Urothelial Carcinoma. N Engl J Med. 2017 Mar 16;376(11):1015-1026. doi: 10.1056/NEJMoa1613683. Epub 2017 Feb 17. PubMed PMID: 28212060; PubMed Central PMCID: PMC5635424. Giaccone G, Thompson J, McGuire C, Manning M, Kallakury B, Chahine JJ, et al. Pembrolizumab in patients with recurrent thymic carcinoma: Results of a phase II study. JCO. 2017 May 20;35(15_suppl):8573–8573. Aguiar PN Jr, De Mello RA, Hall P, Tadokoro H, Lima Lopes G. PD-L1 expression as a predictive biomarker in advanced non-small-cell lung cancer: updated survival data. Immunotherapy. 2017 May;9(6):499-506. doi: 10.2217/imt-2016-0150. PubMed PMID: 28472902.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

COMPOUND NAME	REFERENCES
ATEZOLIZUMAB	Fehrenbacher L, Spira A, Ballinger M, Kowanetz M, Vansteenkiste J, Mazieres J, Park K, Smith D, Artal-Cortes A, Lewanski C, Braiteh F, Waterkamp D, He P, Zou W, Chen DS, Yi J, Sandler A, Rittmeyer A; POPLAR Study Group.. Atezolizumab versus docetaxel for patients with previously treated non-small-cell lung cancer (POPLAR): a multicentre, open-label, phase 2 randomised controlled trial. Lancet. 2016 Apr 30;387(10030):1837-46. doi: 10.1016/S0140-6736(16)00587-0. Epub 2016 Mar 10. PubMed PMID: 26970723. Balar AV, Galsky MD, Rosenberg JE, Powles T, Petrylak DP, Bellmunt J, Loriot Y, Necchi A, Hoffman-Censits J, Perez-Gracia JL, Dawson NA, van der Heijden MS, Dreicer R, Srinivas S, Retz MM, Joseph RW, Drakaki A, Vaishampayan UN, Sridhar SS, Quinn DI, Durán I, Shaffer DR, Eigl BJ, Grivas PD, Yu EY, Li S, Kadel EE 3rd, Boyd Z, Bourgon R, Hegde PS, Mariathasan S, Thåström A, Abidoye OO, Fine GD, Bajorin DF; IMvigor210 Study Group. Atezolizumab as first-line treatment in cisplatin-ineligible patients with locally advanced and metastatic urothelial carcinoma: a single-arm, multicentre, phase 2 trial. Lancet. 2017 Jan 7;389(10064):67-76. doi: 10.1016/S0140-6736(16)32455-2. Epub 2016 Dec 8. PubMed PMID: 27939400; PubMed Central PMCID: PMC5568632. NCI Drug Dictionary Rosenberg JE, Hoffman-Censits J, Powles T, van der Heijden MS, Balar AV, Necchi A, Dawson N, O'Donnell PH, Balmanoukian A, Loriot Y, Srinivas S, Retz MM, Grivas P, Joseph RW, Galsky MD, Fleming MT, Petrylak DP, Perez-Gracia JL, Burris HA, Castellano D, Canil C, Bellmunt J, Bajorin D, Nickles D, Bourgon R, Frampton GM, Cui N, Mariathasan S, Abidoye O, Fine GD, Dreicer R. Atezolizumab in patients with locally advanced and metastatic urothelial carcinoma who have progressed following treatment with platinum-based chemotherapy: a single-arm, multicentre, phase 2 trial. Lancet. 2016 May 7;387(10031):1909-20. doi: 10.1016/S0140-6736(16)00561-4. Epub 2016 Mar 4. PubMed PMID: 26952546; PubMed Central PMCID: PMC5480242. Rittmeyer A, Barlesi F, Waterkamp D, Park K, Ciardiello F, von Pawel J, Gadgeel SM, Hida T, Kowalski DM, Dols MC, Cortinovis DL, Leach J, Polikoff J, Barrios C, Kabbinavar F, Frontera OA, De Marinis F, Turna H, Lee JS, Ballinger M, Kowanetz M, He P, Chen DS, Sandler A, Gandara DR; OAK Study Group. Atezolizumab versus docetaxel in patients with previously treated non-small-cell lung cancer (OAK): a phase 3, open-label, multicentre randomised controlled trial. Lancet. 2017 Jan 21;389(10066):255-265. doi: 10.1016/S0140-6736(16)32517-X. Epub 2016 Dec 13. PubMed PMID: 27979383.
CETUXIMAB	Zhang X, Xu J, Liu H, Yang L, Liang J, Xu N, Bai Y, Wang J, Shen L. Predictive biomarkers for the efficacy of cetuximab combined with cisplatin and capecitabine in advanced gastric or esophagogastric junction adenocarcinoma: a prospective multicenter phase 2 trial. Med Oncol. 2014 Oct;31(10):226. doi: 10.1007/s12032-014-0226-y. Epub 2014 Sep 19. PubMed PMID: 25234930. Kwon J, Yoon HJ, Kim JH, Lee TS, Song IH, Lee HW, Kang MC, Park JH. Cetuximab inhibits cisplatin-induced activation of EGFR signaling in esophageal squamous cell carcinoma. Oncol Rep. 2014 Sep;32(3):1188-92. doi: 10.3892/or.2014.3302. Epub 2014 Jul 3. PubMed PMID: 24993015. Trédan O, Campone M, Jassem J, Vyzula R, Coudert B, Pacilio C, Prausova J, Hardy-Bessard AC, Arance A, Mukhopadhyay P, Aloe A, Roché H. Ixabepilone alone or with cetuximab as first-line treatment for advanced/metastatic triple-negative breast cancer. Clin Breast Cancer. 2015 Feb;15(1):8-15. doi: 10.1016/j.clbc.2014.07.007. Epub 2014 Aug 15. PubMed PMID: 25218708. Echarri MJ, Lopez-Martin A, Hitt R. Targeted Therapy in Locally Advanced and Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma (LA-R/M HNSCC). Cancers (Basel). 2016 Feb 26;8(3). pii: E27. doi: 10.3390/cancers8030027. Review. PubMed PMID: 26927178; PubMed Central PMCID: PMC4810111. Shaib W, Mahajan R, El-Rayes B. Markers of resistance to anti-EGFR therapy in colorectal cancer. J Gastrointest Oncol. 2013 Sep;4(3):308-18. doi: 10.3978/j.issn.2078-6891.2013.029. PubMed PMID: 23997942; PubMed Central PMCID: PMC3712296.
AVELUMAB	Andrea B. Apolo, John Allan Ellerton, Jeffrey R. Infante, Manish Agrawal, Michael S. Gordon, Raid Aljumaily, Carolyn D. Britten, Luc Yves Dirix, Keun-Wook Lee, Matthew H. Taylor, Patrick Schöffski, Ding Wang, Alain Ravaud, Arnold Gelb, Junyuan Xiong, Galit Rosen, Manish R. Patel. Updated efficacy and safety of avelumab in metastatic urothelial carcinoma (mUC): Pooled analysis from 2 cohorts of the phase 1b Javelin solid tumor study. Journal of Clinical Oncology 2017 35:15_suppl, 4528-4528. Aguiar PN Jr, De Mello RA, Hall P, Tadokoro H, Lima Lopes G. PD-L1 expression as a predictive biomarker in advanced non-small-cell lung cancer: updated survival data. Immunotherapy. 2017 May;9(6):499-506. doi: 10.2217/imt-2016-0150. PubMed PMID: 28472902. Dirix LY, Takacs I, Jerusalem G, Nikolinakos P, Arkenau HT, Forero-Torres A, Boccia R, Lippman ME, Somer R, Smakal M, Emens LA, Hrinczenko B, Edenfield W, Gurtler J, von Heydebreck A, Grote HJ, Chin K, Hamilton EP. Avelumab, an anti-PD-L1 antibody, in patients with locally advanced or metastatic breast cancer: a phase 1b JAVELIN Solid Tumor study. Breast Cancer Res Treat. 2017 Oct 23. doi: 10.1007/s10549-017-4537-5. [Epub ahead of print] PubMed PMID: 29063313. Patel, Manish R., John Allan Ellerton, Jeffrey R. Infante, Manish Agrawal, Michael S. Gordon, Raid Aljumaliy, Carolyn D. Britten, Luc Dirix, Keun-Wook Lee, Matthew H. Taylor, Patrick Schöffski, Ding Wang, Alain Ravaud, Arnold Gelb, Junyuan Xiong, Galit Rosen, and Andrea B. Apolo. Avelumab in patients with metastatic urothelial carcinoma: Pooled results from two cohorts of the phase 1b JAVELIN Solid Tumor trial. Journal of Clinical Oncology 2017 35: 6_suppl, 330-330

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

COMPOUND NAME	REFERENCES
DURVALUMAB	Thomas Powles, Peter H. O'Donnell, Christophe Massard, Hendrik-Tobias Arkenau, Terence W. Friedlander, Chris Hoimes, Jae-Lyun Lee, Michael Ong, Srikala S. Sridhar, Nicholas J. Vogelzang, Mayer N. Fishman, Jingsong Zhang, Sandy Srinivas, Jigar Parikh, Joyce Antal, Xiaoping Jin, Ashok Kumar Gupta, Noah M. Hahn. Updated efficacy and tolerability of durvalumab in locally advanced or metastatic urothelial carcinoma (UC). Journal of Clinical Oncology 2017 35:6_suppl, 286-286. Aguiar PN Jr, De Mello RA, Hall P, Tadokoro H, Lima Lopes G. PD-L1 expression as a predictive biomarker in advanced non-small-cell lung cancer: updated survival data. Immunotherapy. 2017 May;9(6):499-506. doi: 10.2217/imt-2016-0150. PubMed PMID: 28472902.
NIVOLUMAB	Sharma P, Retz M, Siefker-Radtke A, Baron A, Necchi A, Bedke J, Plimack ER, Vaena D, Grimm MO, Bracarda S, Arranz JÁ, Pal S, Ohyama C, Saci A, Qu X, Lambert A, Krishnan S, Azrilevich A, Galsky MD. Nivolumab in metastatic urothelial carcinoma after platinum therapy (CheckMate 275): a multicentre, single-arm, phase 2 trial. Lancet Oncol. 2017 Mar;18(3):312-322. doi: 10.1016/S1470-2045(17)30065-7. Epub 2017 Jan 26. PubMed PMID: 28131785. ANTONIA, Scott Joseph, et al. Phase I/II study of nivolumab with or without ipilimumab for treatment of recurrent small cell lung cancer (SCLC): CA209-032. 2015. Echarri MJ, Lopez-Martin A, Hitt R. Targeted Therapy in Locally Advanced and Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma (LA-R/M HNSCC). Cancers (Basel). 2016 Feb 26;8(3). pii: E27. doi: 10.3390/cancers8030027. Review. PubMed PMID: 26927178; PubMed Central PMCID: PMC4810111. Robert C, Long GV, Brady B, Dutriaux C, Maio M, Mortier L, Hassel JC, Rutkowski P, McNeil C, Kalinka-Warzocha E, Savage KJ, Hernberg MM, Lebbé C, Charles J, Mihalcioiu C, Chiarion-Sileni V, Mauch C, Cognetti F, Arance A, Schmidt H, Schadendorf D, Gogas H, Lundgren-Eriksson L, Horak C, Sharkey B, Waxman IM, Atkinson V, Ascierto PA. Nivolumab in previously untreated melanoma without BRAF mutation. N Engl J Med. 2015 Jan 22;372(4):320-30. doi: 10.1056/NEJMoa1412082. Epub 2014 Nov 16. PubMed PMID: 25399552. Borghaei H, Paz-Ares L, Horn L, Spigel DR, Steins M, Ready NE, Chow LQ, Vokes EE, Felip E, Holgado E, Barlesi F, Kohlhäufl M, Arrieta O, Burgio MA, Fayette J, Lena H, Poddubskaya E, Gerber DE, Gettinger SN, Rudin CM, Rizvi N, Crinò L, Blumenschein GR Jr, Antonia SJ, Dorange C, Harbison CT, Graf Finckenstein F, Brahmer JR. Nivolumab versus Docetaxel in Advanced Nonsquamous Non-Small-Cell Lung Cancer. N Engl J Med. 2015 Oct 22;373(17):1627-39. doi: 10.1056/NEJMoa1507643. Epub 2015 Sep 27. PubMed PMID: 26412456.
RAMUCIRUMAB	Rouanne M, Loriot Y, Lebret T, Soria JC. Novel therapeutic targets in advanced urothelial carcinoma. Crit Rev Oncol Hematol. 2016 Feb;98:106-15. doi: 10.1016/j.critrevonc.2015.10.021. Epub 2015 Nov 9. Review. PubMed PMID: 26589398. Hansjochen Wilke, Eric Van Cutsem, Sang Cheul Oh, Gyorgy Bodoky, Yasuhiro Shimada, Shuichi Hironaka, Naotoshi Sugimoto, Oleg N. Lipatov, Tae-You Kim, David Cunningham, Atsushi Ohtsu, Philippe Rougier, Michael Emig, Roberto Carlesi, Kumari Chandrawansa, and Kei Muro. RAINBOW: A global, phase III, randomized, double-blind study of ramucirumab plus paclitaxel versus placebo plus paclitaxel in the treatment of metastatic gastroesophageal junction (GEJ) and gastric adenocarcinoma following disease progression on first-line platinum- and fluoropyrimidine-containing combination therapy rainbow IMCL CP12-0922 (I4T-IE-JVBE). Journal of Clinical Oncology 2014 32:3_suppl, LBA7-LBA7 Garon EB, Ciuleanu TE, Arrieta O, Prabhash K, Syrigos KN, Goksel T, Park K, Gorbunova V, Kowalyszyn RD, Pikiel J, Czyzewicz G, Orlov SV, Lewanski CR, Thomas M, Bidoli P, Dakhil S, Gans S, Kim JH, Grigorescu A, Karaseva N, Reck M, Cappuzzo F, Alexandris E, Sashegyi A, Yurasov S, Pérol M. Ramucirumab plus docetaxel versus placebo plus docetaxel for second-line treatment of stage IV non-small-cell lung cancer after disease progression on platinum-based therapy (REVEL): a multicentre, double-blind, randomised phase 3 trial. Lancet. 2014 Aug 23;384(9944):665-73. doi: 10.1016/S0140-6736(14)60845-X. Epub 2014 Jun 2. PubMed PMID: 24933332. Fuchs CS, Tomasek J, Yong CJ, Dumitru F, Passalacqua R, Goswami C, Safran H, dos Santos LV, Aprile G, Ferry DR, Melichar B, Tehfe M, Topuzov E, Zalcberg JR, Chau I, Campbell W, Sivanandan C, Pikiel J, Koshiji M, Hsu Y, Liepa AM, Gao L, Schwartz JD, Tabernero J; REGARD Trial Investigators. Ramucirumab monotherapy for previously treated advanced gastric or gastro-oesophageal junction adenocarcinoma (REGARD): an international, randomised, multicentre, placebo-controlled, phase 3 trial. Lancet. 2014 Jan 4;383(9911):31-9. doi: 10.1016/S0140-6736(13)61719-5. Epub 2013 Oct 3. PubMed PMID: 24094768.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

COMPOUND NAME	REFERENCES
CABOZANTINIB	Yakes FM, Chen J, Tan J, Yamaguchi K, Shi Y, Yu P, Qian F, Chu F, Bentzien F, Cancilla B, Orf J, You A, Laird AD, Engst S, Lee L, Lesch J, Chou YC, Joly AH. Cabozantinib (XL184), a novel MET and VEGFR2 inhibitor, simultaneously suppresses metastasis, angiogenesis, and tumor growth. Mol Cancer Ther. 2011 Dec;10(12):2298-308. doi: 10.1158/1535-7163.MCT-11-0264. Epub 2011 Sep 16. PubMed PMID: 21926191. Elisei R, Schlumberger MJ, Müller SP, Schöffski P, Brose MS, Shah MH, Licitra L, Jarzab B, Medvedev V, Kreissl MC, Niederle B, Cohen EE, Wirth LJ, Ali H, Hessel C, Yaron Y, Ball D, Nelkin B, Sherman SI. Cabozantinib in progressive medullary thyroid cancer. J Clin Oncol. 2013 Oct 10;31(29):3639-46. doi: 10.1200/JCO.2012.48.4659. Epub 2013 Sep 3. Erratum in: J Clin Oncol. 2014 Jun 10;32(17):1864. PubMed PMID: 24002501; PubMed Central PMCID: PMC4164813. Kurzrock R, Sherman SI, Ball DW, Forastiere AA, Cohen RB, Mehra R, Pfister DG, Cohen EE, Janisch L, Nauling F, Hong DS, Ng CS, Ye L, Gagel RF, Frye J, Müller T, Ratain MJ, Salgia R. Activity of XL184 (Cabozantinib), an oral tyrosine kinase inhibitor, in patients with medullary thyroid cancer. J Clin Oncol. 2011 Jul 1;29(19):2660-6. doi: 10.1200/JCO.2010.32.4145. Epub 2011 May 23. PubMed PMID: 21606412; PubMed Central PMCID: PMC3646303. Choueiri TK, Escudier B, Powles T, Mainwaring PN, Rini BI, Donskov F, Hammers H, Hutson TE, Lee JL, Peltola K, Roth BJ, Bjarnason GA, Géczi L, Keam B, Maroto P, Heng DY, Schmidinger M, Kantoff PW, Borgman-Hagey A, Hessel C, Scheffold C, Schwab GM, Tannir NM, Motzer RJ; METEOR Investigators. Cabozantinib versus Everolimus in Advanced Renal-Cell Carcinoma. N Engl J Med. 2015 Nov 5;373(19):1814-23. doi: 10.1056/NEJMoa1510016. Epub 2015 Sep 25. PubMed PMID: 26406150.
BEVACIZUMAB	Della Pepa C, Banerjee S. Bevacizumab in combination with chemotherapy in platinum-sensitive ovarian cancer. Onco Targets Ther. 2014 Jun 19;7:1025-32. doi: 10.2147/OTT.S40527. eCollection 2014. Review. Erratum in: Onco Targets Ther. 2014;7:1473. PubMed PMID: 24971016; PubMed Central PMCID: PMC4069138. Echarri MJ, Lopez-Martin A, Hitt R. Targeted Therapy in Locally Advanced and Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma (LA-R/M HNSCC). Cancers (Basel). 2016 Feb 26;8(3). pii: E27. doi: 10.3390/cancers8030027. Review. PubMed PMID: 26927178; PubMed Central PMCID: PMC4810111. Coleman RL, Brady MF, Herzog TJ, Sabbatini P, Armstrong DK, Walker JL, et al. A phase III randomized controlled clinical trial of carboplatin and paclitaxel alone or in combination with bevacizumab followed by bevacizumab and secondary cytoreductive surgery in platinum-sensitive, recurrent ovarian, peritoneal primary and fallopian tube cancer (Gynecologic Oncology Group 0213). Gynecologic Oncology. 2015 Apr 1;137:3–4. Nunes FP, Merker VL, Jennings D, Caruso PA, di Tomaso E, Muzikansky A, Barker FG 2nd, Stemmer-Rachamimov A, Plotkin SR. Bevacizumab treatment for meningiomas in NF2: a retrospective analysis of 15 patients. PLoS One. 2013;8(3):e59941. doi: 10.1371/journal.pone.0059941. Epub 2013 Mar 21. PubMed PMID: 23555840; PubMed Central PMCID: PMC3605344. Aghajanian C, Goff B, Nycum LR, Wang YV, Husain A, Blank SV. Final overall survival and safety analysis of OCEANS, a phase 3 trial of chemotherapy with or without bevacizumab in patients with platinum-sensitive recurrent ovarian cancer. Gynecol Oncol. 2015 Oct;139(1):10-6. doi: 10.1016/j.ygyno.2015.08.004. Epub 2015 Aug 10. PubMed PMID: 26271155; PubMed Central PMCID: PMC4993045.
EVEROLIMUS	Franz DN. Everolimus in the treatment of subependymal giant cell astrocytomas, angiomyolipomas, and pulmonary and skin lesions associated with tuberous sclerosis complex. Biologics. 2013;7:211-21. doi: 10.2147/BTT.S25095. Epub 2013 Oct 10. Review. PubMed PMID: 24143074; PubMed Central PMCID: PMC3797614. Seront E, Rottey S, Sautois B, Kerger J, D'Hondt LA, Verschaeve V, Canon JL, Dopchie C, Vandenbulcke JM, Whenham N, Goeminne JC, Clausse M, Verhoeven D, Glorieux P, Branders S, Dupont P, Schoonjans J, Feron O, Machiels JP. Phase II study of everolimus in patients with locally advanced or metastatic transitional cell carcinoma of the urothelial tract: clinical activity, molecular response, and biomarkers. Ann Oncol. 2012 Oct;23(10):2663-70. Epub 2012 Apr 3. PubMed PMID: 22473592. Franz DN, Belousova E, Sparagana S, Bebin EM, Frost M, Kuperman R, Witt O, Kohrman MH, Flamini JR, Wu JY, Curatolo P, de Vries PJ, Berkowitz N, Anak O, Niolat J, Jozwiak S. Everolimus for subependymal giant cell astrocytoma in patients with tuberous sclerosis complex: 2-year open-label extension of the randomised EXIST-1 study. Lancet Oncol. 2014 Dec;15(13):1513-20. doi: 10.1016/S1470-2045(14)70489-9. Epub 2014 Nov 10. PubMed PMID: 25456370. Franz DN, Belousova E, Sparagana S, Bebin EM, Frost M, Kuperman R, Witt O, Kohrman MH, Flamini JR, Wu JY, Curatolo P, de Vries PJ, Whittemore VH, Thiele EA, Ford JP, Shah G, Cauwel H, Lebwohl D, Sahmoud T, Jozwiak S. Efficacy and safety of everolimus for subependymal giant cell astrocytomas associated with tuberous sclerosis complex (EXIST-1): a multicentre, randomised, placebo-controlled phase 3 trial. Lancet. 2013 Jan 12;381(9861):125-32. doi: 10.1016/S0140-6736(12)61134-9. Epub 2012 Nov 14. Erratum in: Lancet. 2013 Jan 12;381(9861):116. PubMed PMID: 23158522. Yao JC, Fazio N, Singh S, Buzzoni R, Carnaghi C, Wolin E, Tomasek J, Raderer M, Lahner H, Voi M, Pacaud LB, Rouyrre N, Sachs C, Valle JW, Fave GD, Van Cutsem E, Tesselaar M, Shimada Y, Oh DY, Strosberg J, Kulke MH, Pavel ME; RAD001 in Advanced Neuroendocrine Tumours, Fourth Trial (RADIANT-4) Study Group. Everolimus for the treatment of advanced, non-functional neuroendocrine tumours of the lung or gastrointestinal tract (RADIANT-4): a randomised, placebo-controlled, phase 3 study. Lancet. 2016 Mar 5;387(10022):968-977. doi: 10.1016/S0140-6736(15)00817-X. Epub 2015 Dec 17. PubMed PMID: 26703889.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

COMPOUND NAME	REFERENCES
REGORAFENIB	Eric Van Cutsem, Alberto F. Sobrero, Salvatore Siena, Alfredo Falcone, Marc Ychou, Yves Humblet, Olivier Bouche, Laurent Mineur, Carlo Barone, Antoine Adenis, Josep Tabernero, Takayuki Yoshino, Heinz-Josef Lenz, Richard M. Goldberg, Daniel J. Sargent, Frank Cihon, Andrea Wagner, Dirk Laurent, Axel Grothey. Phase III CORRECT trial of regorafenib in metastatic colorectal cancer (mCRC). Journal of Clinical Oncology, 2012 ASCO Annual Meeting Abstracts. Vol 30, No 15_suppl (May 20 Supplement), 2012: 3502 Yan Y, Grothey A. Molecular profiling in the treatment of colorectal cancer: focus on regorafenib. Onco Targets Ther. 2015 Oct 15;8:2949-57. doi: 10.2147/OTT.S79145. Review. PubMed PMID: 26508880; PubMed Central PMCID: PMC4610887. Yoshino T, Komatsu Y, Yamada Y, Yamazaki K, Tsuji A, Ura T, Grothey A, Van Cutsem E, Wagner A, Cihon F, Hamada Y, Ohtsu A. Randomized phase III trial of regorafenib in metastatic colorectal cancer: analysis of the CORRECT Japanese and non-Japanese subpopulations. Invest New Drugs. 2015 Jun;33(3):740-50. doi: 10.1007/s10637-014-0154-x. PubMed PMID: 25213161; PubMed Central PMCID: PMC4434855. Strumberg D, Schultheis B. Regorafenib for cancer. Expert Opin Investig Drugs. 2012 Jun;21(6):879-89. doi: 10.1517/13543784.2012.684752. Review. PubMed PMID: 22577890. George S, Wang Q, Heinrich MC, Corless CL, Zhu M, Butrynski JE, Morgan JA, Wagner AJ, Choy E, Tap WD, Yap JT, Van den Abbeele AD, Manola JB, Solomon SM, Fletcher JA, von Mehren M, Demetri GD. Efficacy and safety of regorafenib in patients with metastatic and/or unresectable GI stromal tumor after failure of imatinib and sunitinib: a multicenter phase II trial. J Clin Oncol. 2012 Jul 1;30(19):2401-7. doi: 10.1200/JCO.2011.39.9394. Epub 2012 May 21. PubMed PMID: 22614970; PubMed Central PMCID: PMC3675695.
PAZOPANIB	Hashimoto A, Takada K, Takimoto R, Horiguchi H, Sato T, Iyama S, Murase K, Ono K, Tatekoshi A, Hayashi T, Miyanishi K, Sato Y, Kobune M, Hirayama Y, Kitamura H, Nakanishi K, Masumori N, Hasegawa T, Kato J. [Effective treatment of metastatic rhabdomyosarcoma with pazopanib]. Gan To Kagaku Ryoho. 2014 Aug;41(8):1041-4. Japanese. PubMed PMID: 25132042. Nguyen DT, Shayahi S. Pazopanib: approval for soft-tissue sarcoma. J Adv Pract Oncol. 2013 Jan;4(1):53-7. Review. PubMed PMID: 25031981; PubMed Central PMCID: PMC4093375. Glade Bender JL, Lee A, Reid JM, Baruchel S, Roberts T, Voss SD, Wu B, Ahern CH, Ingle AM, Harris P, Weigel BJ, Blaney SM. Phase I pharmacokinetic and pharmacodynamic study of pazopanib in children with soft tissue sarcoma and other refractory solid tumors: a children's oncology group phase I consortium report. J Clin Oncol. 2013 Aug 20;31(24):3034-43. doi: 10.1200/JCO.2012.47.0914. Epub 2013 Jul 15. PubMed PMID: 23857966; PubMed Central PMCID: PMC3739862. Monk BJ, Mas Lopez L, Zarba JJ, Oaknin A, Tarpin C, Termrungruanglert W, Alber JA, Ding J, Stutts MW, Pandite LN. Phase II, open-label study of pazopanib or lapatinib monotherapy compared with pazopanib plus lapatinib combination therapy in patients with advanced and recurrent cervical cancer. J Clin Oncol. 2010 Aug 1;28(22):3562-9. doi: 10.1200/JCO.2009.26.9571. Epub 2010 Jul 6. PubMed PMID: 20606083. Necchi A, Mariani L, Zaffaroni N, Schwartz LH, Giannatempo P, Crippa F, Morosi C, Lanocita R, Sava T, Ortega C, Messina C, Sacco C, Pennati M, Daidone MG, Nicolai N, De Braud F, Gianni AM, Salvioni R. Pazopanib in advanced and platinum-resistant urothelial cancer: an open-label, single group, phase 2 trial. Lancet Oncol. 2012 Aug;13(8):810-6. doi: 10.1016/S1470-2045(12)70294-2. Epub 2012 Jul 20. PubMed PMID: 22819172.
NINTEDANIB	Reck M, Kaiser R, Mellemgaard A, Douillard JY, Orlov S, Krzakowski M, von Pawel J, Gottfried M, Bondarenko I, Liao M, Gann CN, Barrueco J, Gaschler-Markefski B, Novello S; LUME-Lung 1 Study Group. Docetaxel plus nintedanib versus docetaxel plus placebo in patients with previously treated non-small-cell lung cancer (LUME-Lung 1): a phase 3, double-blind, randomised controlled trial. Lancet Oncol. 2014 Feb;15(2):143-55. doi: 10.1016/S1470-2045(13)70586-2. Epub 2014 Jan 9. PubMed PMID: 24411639.
TAS-102	Yoshino T, Mizunuma N, Yamazaki K, Nishina T, Komatsu Y, Baba H, Tsuji A, Yamaguchi K, Muro K, Sugimoto N, Tsuji Y, Moriwaki T, Esaki T, Hamada C, Tanase T, Ohtsu A. TAS-102 monotherapy for pretreated metastatic colorectal cancer: a double-blind, randomised, placebo-controlled phase 2 trial. Lancet Oncol. 2012 Oct;13(10):993-1001. doi: 10.1016/S1470-2045(12)70345-5. PubMed PMID: 22951287.
ENZALUTAMIDE	Sternberg CN, de Bono JS, Chi KN, Fizazi K, Mulders P, Cerbone L, Hirmand M, Forer D, Scher HI. Improved outcomes in elderly patients with metastatic castration-resistant prostate cancer treated with the androgen receptor inhibitor enzalutamide: results from the phase III AFFIRM trial. Ann Oncol. 2014 Feb;25(2):429-34. doi: 10.1093/annonc/mdt571. PubMed PMID: 24478320. Beer TM, Armstrong AJ, Rathkopf DE, Loriot Y, Sternberg CN, Higano CS, Iversen P, Bhattacharya S, Carles J, Chowdhury S, Davis ID, de Bono JS, Evans CP, Fizazi K, Joshua AM, Kim CS, Kimura G, Mainwaring P, Mansbach H, Miller K, Noonberg SB, Perabo F, Phung D, Saad F, Scher HI, Taplin ME, Venner PM, Tombal B; PREVAIL Investigators.. Enzalutamide in metastatic prostate cancer before chemotherapy. N Engl J Med. 2014 Jul 31;371(5):424-33. doi: 10.1056/NEJMoa1405095. PubMed PMID: 24881730; PubMed Central PMCID: PMC4418931.
NIRAPARIB	Mirza MR, Monk BJ, Herrstedt J, Oza AM, Mahner S, Redondo A, Fabbro M, Ledermann JA, Lorusso D, Vergote I, Ben-Baruch NE, Marth C, Mądry R, Christensen RD, Berek JS, Dørum A, Tinker AV, du Bois A, González-Martín A, Follana P, Benigno B, Rosenberg P, Gilbert L, Rimel BJ, Buscema J, Balser JP, Agarwal S, Matulonis UA; ENGOT-OV16/NOVA Investigators. Niraparib Maintenance Therapy in Platinum-Sensitive, Recurrent Ovarian Cancer. N Engl J Med. 2016 Dec 1;375(22):2154-2164. Epub 2016 Oct 7. PubMed PMID: 27717299.
LENVATINIB	Schlumberger M, Tahara M, Wirth LJ, Robinson B, Brose MS, Elisei R, Habra MA, Newbold K, Shah MH, Hoff AO, Gianoukakis AG, Kiyota N, Taylor MH, Kim SB, Krzyzanowska MK, Dutcus CE, de las Heras B, Zhu J, Sherman SI. Lenvatinib versus placebo in radioiodine-refractory thyroid cancer. N Engl J Med. 2015 Feb 12;372(7):621-30. doi: 10.1056/NEJMoa1406470. PubMed PMID: 25671254.

Einsiedlerstrasse 23, 8834 Schindellegi, SWITZERLAND
E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

COMPOUND NAME	REFERENCES
ABIRATERONE	Ryan CJ, Smith MR, de Bono JS, Molina A, Logothetis CJ, de Souza P, Fizazi K, Mainwaring P, Piulats JM, Ng S, Carles J, Mulders PF, Basch E, Small EJ, Saad F, Schrijvers D, Van Poppel H, Mukherjee SD, Suttmann H, Gerritsen WR, Flaig TW, George DJ, Yu EY, Efstathiou E, Pantuck A, Winquist E, Higano CS, Taplin ME, Park Y, Kheoh T, Griffin T, Scher HI, Rathkopf DE; COU-AA-302 Investigators.. Abiraterone in metastatic prostate cancer without previous chemotherapy. N Engl J Med. 2013 Jan 10;368(2):138-48. doi: 10.1056/NEJMoa1209096. Erratum in: N Engl J Med. 2013 Feb 7;368(6):584. PubMed PMID: 23228172; PubMed Central PMCID: PMC3683570.
NAB-PACLITAXEL	Von Hoff DD, Ervin T, Arena FP, Chiorean EG, Infante J, Moore M, Seay T, Tjulandin SA, Ma WW, Saleh MN, Harris M, Reni M, Dowden S, Laheru D, Bahary N, Ramanathan RK, Tabernero J, Hidalgo M, Goldstein D, Van Cutsem E, Wei X, Iglesias J, Renschler MF. Increased survival in pancreatic cancer with nab-paclitaxel plus gemcitabine. N Engl J Med. 2013 Oct 31;369(18):1691-703. doi: 10.1056/NEJMoa1304369. Epub 2013 Oct 16. PubMed PMID: 24131140; PubMed Central PMCID: PMC4631139.
BORTEZOMIB	Robak T, Huang H, Jin J, Zhu J, Liu T, Samoilova O, Pylypenko H, Verhoef G, Siritanaratkul N, Osmanov E, Alexeeva J, Pereira J, Drach J, Mayer J, Hong X, Okamoto R, Pei L, Rooney B, van de Velde H, Cavalli F; LYM-3002 Investigators. Bortezomib-based therapy for newly diagnosed mantle-cell lymphoma. N Engl J Med. 2015 Mar 5;372 (10):944-53. doi: 10.1056/NEJMoa1412096. PubMed PMID: 25738670.
FOLFIRINOX	Conroy T, Desseigne F, Ychou M, Bouché O, Guimbaud R, Bécouarn Y, Adenis A, Raoul JL, Gourgou-Bourgade S, de la Fouchardière C, Bennouna J, Bachet JB, Khemissa-Akouz F, Péré-Vergé D, Delbaldo C, Assenat E, Chauffert B, Michel P, Montoto-Grillot C, Ducreux M; Groupe Tumeurs Digestives of Unicancer; PRODIGE Intergroup. FOLFIRINOX versus gemcitabine for metastatic pancreatic cancer. N Engl J Med. 2011 May 12;364(19):1817-25. doi: 10.1056/NEJMoa1011923. PubMed PMID: 21561347.
VISMODEGIB	Sekulic A, Migden MR, Oro AE, Dirix L, Lewis KD, Hainsworth JD, Solomon JA, Yoo S, Arron ST, Friedlander PA, Marmur E, Rudin CM, Chang AL, Low JA, Mackey HM, Yauch RL, Graham RA, Reddy JC, Hauschild A. Efficacy and safety of vismodegib in advanced basal-cell carcinoma. N Engl J Med. 2012 Jun 7;366(23):2171-9. doi: 10.1056 /NEJMoa1113713. PubMed PMID: 22670903; PubMed Central PMCID: PMC5278761.
CEDIRANIB	Ledermann JA, Embleton AC, Raja F, Perren TJ, Jayson GC, Rustin GJS, Kaye SB, Hirte H, Eisenhauer E, Vaughan M, Friedlander M, González-Martín A, Stark D, Clark E, Farrelly L, Swart AM, Cook A, Kaplan RS, Parmar MKB; ICON6 collaborators. Cediranib in patients with relapsed platinum-sensitive ovarian cancer (ICON6): a randomised, double-blind, placebo-controlled phase 3 trial. Lancet. 2016 Mar 12;387(10023):1066-1074. doi: 10.1016/S0140-6736(15) 01167-8. Erratum in: Lancet. 2016 Apr 23;387(10029):1722. PubMed PMID: 27025186.
DENOSUMAB	Fizazi K, Carducci M, Smith M, Damião R, Brown J, Karsh L, Milecki P, Shore N, Rader M, Wang H, Jiang Q, Tadros S, Dansey R, Goessl C. Denosumab versus zoledronic acid for treatment of bone metastases in men with castration-resistant prostate cancer: a randomised, double-blind study. Lancet. 2011 Mar 5;377(9768):813-22. doi: 10.1016 /S0140-6736(10)62344-6. Epub 2011 Feb 25. PubMed PMID: 21353695; PubMed Central PMCID: PMC3090685.
SUNITINIB	George S, Blay JY, Casali PG, Le Cesne A, Stephenson P, Deprimo SE, Harmon CS, Law CN, Morgan JA, Ray-Coquard I, Tassell V, Cohen DP, Demetri GD. Clinical evaluation of continuous daily dosing of sunitinib malate in patients with advanced gastrointestinal stromal tumour after imatinib failure. Eur J Cancer. 2009 Jul;45(11):1959-68. doi: 10.1016/j.ejca.2009.02.011. Epub 2009 Mar 11. PubMed PMID: 19282169. Reichardt P, Kang YK, Rutkowski P, Schuette J, Rosen LS, Seddon B, Yalcin S, Gelderblom H, Williams CC Jr, Fumagalli E, Biasco G, Hurwitz HI, Kaiser PE, Fly K, Matczak E, Chen L, Lechuga MJ, Demetri GD. Clinical outcomes of patients with advanced gastrointestinal stromal tumors: safety and efficacy in a worldwide treatment-use trial of sunitinib. Cancer. 2015 May 1;121(9):1405-13. doi: 10.1002/cncr.29220. Epub 2015 Jan 13. PubMed PMID: 25641662; PubMed Central PMCID: PMC4442000. Ready NE, Pang HH, Gu L, Otterson GA, Thomas SP, Miller AA, Baggstrom M, Masters GA, Graziano SL, Crawford J, Bogart J, Vokes EE. Chemotherapy With or Without Maintenance Sunitinib for Untreated Extensive-Stage Small-Cell Lung Cancer: A Randomized, Double-Blind, Placebo-Controlled Phase II Study-CALGB 30504 (Alliance). J Clin Oncol. 2015 May 20;33(15):1660-5. doi: 10.1200/JCO.2014.57.3105. Epub 2015 Mar 2. PubMed PMID: 25732163; PubMed Central PMCID: PMC4429175.
GSK2879552	Mohammad HP, Smitheman KN, Kamat CD, Soong D, Federowicz KE, Van Aller GS, Schneck JL, Carson JD, Liu Y, Butticello M, Bonnette WG, Gorman SA, Degenhardt Y, Bai Y, McCabe MT, Pappalardi MB, Kasparec J, Tian X, McNulty KC, Rouse M, McDevitt P, Ho T, Crouthamel M, Hart TK, Concha NO, McHugh CF, Miller WH, Dhanak D, Tummino PJ, Carpenter CL, Johnson NW, Hann CL, Kruger RG. A DNA Hypomethylation Signature Predicts Antitumor Activity of LSD1 Inhibitors in SCLC. Cancer Cell. 2015 Jul 13;28(1):57-69. doi: 10.1016/j.ccell.2015.06.002. PubMed PMID: 26175415.
TREBANANIB	Marth C, Vergote I, Scambia G, Oberaigner W, Clamp A, Berger R, Kurzeder C, Colombo N, Vuylsteke P, Lorusso D, Hall M, Renard V, Pignata S, Kristeleit R, Altintas S, Rustin G, Wenham RM, Mirza MR, Fong PC, Oza A, Monk BJ, Ma H, Vogl FD, Bach BA. ENGOT-ov-6/TRINOVA-2: Randomised, double-blind, phase 3 study of pegylated liposomal doxorubicin plus trebananib or placebo in women with recurrent partially platinum-sensitive or resistant ovarian cancer. Eur J Cancer. 2017 Jan;70:111-121. doi: 10.1016/j.ejca.2016.09.004. Epub 2016 Dec 1. PubMed PMID: 27914241. Monk BJ, Poveda A, Vergote I, Raspagliesi F, Fujiwara K, Bae DS, Oaknin A, Ray-Coquard I, Provencher DM, Karlan BY, Lhommé C, Richardson G, Rincón DG, Coleman RL, Herzog TJ, Marth C, Brize A, Fabbro M, Redondo A, Bamias A, Tassoudji M, Navale L, Warner DJ, Oza AM. Anti-angiopoietin therapy with trebananib for recurrent ovarian cancer (TRINOVA-1): a randomised, multicentre, double-blind, placebo-controlled phase 3 trial. Lancet Oncol. 2014 Jul;15(8):799-808. doi: 10.1016/S1470-2045(14)70244-X. Epub 2014 Jun 17. PubMed PMID: 24950985.

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

COMPOUND NAME	REFERENCES
IMATINIB	Demestre M, Herzberg J, Holtkamp N, Hagel C, Reuss D, Friedrich RE, Kluwe L, Von Deimling A, Mautner VF, Kurtz A. Imatinib mesylate (Glivec) inhibits Schwann cell viability and reduces the size of human plexiform neurofibroma in a xenograft model. J Neurooncol. 2010 May;98(1):11-9. doi: 10.1007/s11060-009-0049-4. Epub 2009 Nov 17. PubMed PMID: 19921098. Zalcberg JR, Verweij J, Casali PG, Le Cesne A, Reichardt P, Blay JY, Schlemmer M, Van Glabbeke M, Brown M, Judson IR; EORTC Soft Tissue and Bone Sarcoma Group, the Italian Sarcoma Group; Australasian Gastrointestinal Trials Group. Outcome of patients with advanced gastro-intestinal stromal tumours crossing over to a daily imatinib dose of 800 mg after progression on 400 mg. Eur J Cancer. 2005 Aug;41(12):1751-7. PubMed PMID: 16098458. Blanke CD, Demetri GD, von Mehren M, Heinrich MC, Eisenberg B, Fletcher JA, Corless CL, Fletcher CD, Roberts PJ, Heinz D, Wehre E, Nikolova Z, Joensuu H. Long-term results from a randomized phase II trial of standard- versus higher-dose imatinib mesylate for patients with unresectable or metastatic gastrointestinal stromal tumors expressing KIT. J Clin Oncol. 2008 Feb 1;26(4):620-5. doi: 10.1200/JCO.2007.13.4403. PubMed PMID: 18235121.
ORTERONEL	Saad F, Fizazi K, Jinga V, Efstathiou E, Fong PC, Hart LL, Jones R, McDermott R, Wirth M, Suzuki K, MacLean DB, Wang L, Akaza H, Nelson J, Scher HI, Dreicer R, Webb IJ, de Wit R; ELM-PC 4 investigators.. Orteronel plus prednisone in patients with chemotherapy-naive metastatic castration-resistant prostate cancer (ELM-PC 4): a double-blind, multicentre, phase 3, randomised, placebo-controlled trial. Lancet Oncol. 2015 Mar;16(3):338-48. doi: 10.1016/S1470-2045(15)70027-6. PubMed PMID: 25701170.
ZIV-AFLIBERCEPT	Coleman RL, Duska LR, Ramirez PT, Heymach JV, Kamat AA, Modesitt SC, Schmeler KM, Iyer RB, Garcia ME, Miller DL, Jackson EF, Ng CS, Kundra V, Jaffe R, Sood AK. Phase 1-2 study of docetaxel plus aflibercept in patients with recurrent ovarian, primary peritoneal, or fallopian tube cancer. Lancet Oncol. 2011 Nov;12(12):1109-17. doi: 10.1016/S1470-2045(11)70244-3. Epub 2011 Oct 10. PubMed PMID: 21992853; PubMed Central PMCID: PMC3444811.
VELIPARIB	Owonikoko, Taofeek Kunle, Suzanne Eleanor Dahlberg, Gabriel Sica, Lynne I. Wagner, James Lloyd Wade, Gordan Srkalovic, Bradley Walter Lash et al. "Randomized trial of cisplatin and etoposide in combination with veliparib or placebo for extensive stage small cell lung cancer: ECOG-ACRIN 2511 study." (2017): 8505-8505. Pietanza, Maria Catherine, Lee M. Krug, Saiama Naheed Waqar, Afshin Dowlati, Christine L. Hann, Alberto Chiappori, Taofeek Kunle Owonikoko et al. "A multi-center, randomized, double-blind phase II study comparing temozolomide (TMZ) plus either veliparib (ABT-888), a PARP inhibitor, or placebo as 2nd or 3rd-line therapy for patients (Pts) with relapsed small cell lung cancers (SCLCs)." (2016): 8512-8512. Owonikoko TK. A phase 1 study of veliparib, a poly (ADP-ribose) polymerase (PARP) inhibitor, in combination with cisplatin and etoposide in extensive-stage small cell lung cancer (SCLC) patients: An Eastern Cooperative Oncology Group study (E2511). J Clin Oncol. 2014;32:5s. Abstract 7523.
SORAFENIB	Echarri MJ, Lopez-Martin A, Hitt R. Targeted Therapy in Locally Advanced and Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma (LA-R/M HNSCC). Cancers (Basel). 2016 Feb 26;8(3). pii: E27. doi: 10.3390/cancers8030027. Review. PubMed PMID: 26927178; PubMed Central PMCID: PMC4810111. Herzog TJ, Scambia G, Kim BG, Lhommé C, Markowska J, Ray-Coquard I, Sehouli J, Colombo N, Shan M, Petrenciuc O, Oza A. A randomized phase II trial of maintenance therapy with Sorafenib in front-line ovarian carcinoma. Gynecol Oncol. 2013 Jul;130(1):25-30. doi: 10.1016/j.ygyno.2013.04.011. Epub 2013 Apr 13. PubMed PMID: 23591401. Matei D, Sill MW, Lankes HA, DeGeest K, Bristow RE, Mutch D, Yamada SD, Cohn D, Calvert V, Farley J, Petricoin EF, Birrer MJ. Activity of sorafenib in recurrent ovarian cancer and primary peritoneal carcinomatosis: a gynecologic oncology group trial. J Clin Oncol. 2011 Jan 1;29(1):69-75. doi: 10.1200/JCO.2009.26.7856. Epub 2010 Nov 22. PubMed PMID: 21098323; PubMed Central PMCID: PMC3055861. Brose MS, Nutting CM, Jarzab B, Elisei R, Siena S, Bastholt L, de la Fouchardiere C, Pacini F, Paschke R, Shong YK, Sherman SI, Smit JW, Chung J, Kappeler C, Peña C, Molnár I, Schlumberger MJ; DECISION investigators. Sorafenib in radioactive iodine-refractory, locally advanced or metastatic differentiated thyroid cancer: a randomised, double-blind, phase 3 trial. Lancet. 2014 Jul 26;384(9940):319-28. doi: 10.1016/S0140-6736(14)60421-9. Epub 2014 Apr 24. PubMed PMID: 24768112; PubMed Central PMCID: PMC4366116.
MI-212	Bill KL, Garnett J, Meaux I, Ma X, Creighton CJ, Bolshakov S, Barriere C, Debussche L, Lazar AJ, Prudner BC, Casadei L, Braggio D, Lopez G, Zewdu A, Bid H, Lev D, Pollock RE. SAR405838: A Novel and Potent Inhibitor of the MDM2:p53 Axis for the Treatment of Dedifferentiated Liposarcoma. Clin Cancer Res. 2016 Mar 1;22(5):1150-60. doi: 10.1158/1078-0432.CCR-15-1522. Epub 2015 Oct 16. PubMed PMID: 26475335; PubMed Central PMCID: PMC4775372.
SAR405838	Bill KL, Garnett J, Meaux I, Ma X, Creighton CJ, Bolshakov S, Barriere C, Debussche L, Lazar AJ, Prudner BC, Casadei L, Braggio D, Lopez G, Zewdu A, Bid H, Lev D, Pollock RE. SAR405838: A Novel and Potent Inhibitor of the MDM2:p53 Axis for the Treatment of Dedifferentiated Liposarcoma. Clin Cancer Res. 2016 Mar 1;22(5):1150-60. doi: 10.1158/1078-0432.CCR-15-1522. Epub 2015 Oct 16. PubMed PMID: 26475335; PubMed Central PMCID: PMC4775372.
APALUTAMIDE	Smith MR, Antonarakis ES, Ryan CJ, Berry WR, Shore ND, Liu G, Alumkal JJ, Higano CS, Chow Maneval E, Bandekar R, de Boer CJ, Yu MK, Rathkopf DE. Phase 2 Study of the Safety and Antitumor Activity of Apalutamide (ARN-509), a Potent Androgen Receptor Antagonist, in the High-risk Nonmetastatic Castration-resistant Prostate Cancer Cohort. Eur Urol. 2016 Dec;70(6):963-970. doi: 10.1016/j.eururo.2016.04.023. PubMed PMID: 27160947.
AMG-232	Tisato V, Voltan R, Gonelli A, Secchiero P, Zauli G. MDM2/X inhibitors under clinical evaluation: perspectives for the management of hematological malignancies and pediatric cancer. J Hematol Oncol. 2017 Jul 3;10(1):133. doi: 10.1186/s13045-017-0500-5. Review. PubMed PMID: 28673313; PubMed Central PMCID: PMC5496368.
MK-8284	Tisato V, Voltan R, Gonelli A, Secchiero P, Zauli G. MDM2/X inhibitors under clinical evaluation: perspectives for the management of hematological malignancies and pediatric cancer. J Hematol Oncol. 2017 Jul 3;10(1):133. doi: 10.1186/s13045-017-0500-5. Review. PubMed PMID: 28673313; PubMed Central PMCID: PMC5496368.

COMPOUND NAME	REFERENCES
ALRN 6924	Tisato V, Voltan R, Gonelli A, Secchiero P, Zauli G. MDM2/X inhibitors under clinical evaluation: perspectives for the management of hematological malignancies and pediatric cancer. J Hematol Oncol. 2017 Jul 3;10(1):133. doi: 10.1186/s13045-017-0500-5. Review. PubMed PMID: 28673313; PubMed Central PMCID: PMC5496368.
HDM201	http://www.cancer.gov/publications/dictionaries/cancer-drug?CdrID=761551
IDASANUTLIN	Khoo KH, Verma CS, Lane DP. Drugging the p53 pathway: understanding the route to clinical efficacy. Nat Rev Drug Discov. 2014 Mar;13(3):217-36. doi: 10.1038/nrd4236. Review. Erratum in: Nat Rev Drug Discov. 2014 Apr;13(4):314. Hoe, Khoo Kian [corrected to Khoo, Kian Hoe]. PubMed PMID: 24577402. Tisato V, Voltan R, Gonelli A, Secchiero P, Zauli G. MDM2/X inhibitors under clinical evaluation: perspectives for the management of hematological malignancies and pediatric cancer. J Hematol Oncol. 2017 Jul 3;10(1):133. doi: 10.1186/s13045-017-0500-5. Review. PubMed PMID: 28673313; PubMed Central PMCID: PMC5496368.
RO5045337	Khoo KH, Verma CS, Lane DP. Drugging the p53 pathway: understanding the route to clinical efficacy. Nat Rev Drug Discov. 2014 Mar;13(3):217-36. doi: 10.1038/nrd4236. Review. Erratum in: Nat Rev Drug Discov. 2014 Apr;13(4):314. Hoe, Khoo Kian [corrected to Khoo, Kian Hoe]. PubMed PMID: 24577402. Yuan Y, Liao YM, Hsueh CT, Mirshahidi HR. Novel targeted therapeutics: inhibitors of MDM2, ALK and PARP. J Hematol Oncol. 2011 Apr 20;4:16. doi: 10.1186/1756-8722-4-16. Review. PubMed PMID: 21504625; PubMed Central PMCID: PMC3103487. Tisato V, Voltan R, Gonelli A, Secchiero P, Zauli G. MDM2/X inhibitors under clinical evaluation: perspectives for the management of hematological malignancies and pediatric cancer. J Hematol Oncol. 2017 Jul 3;10(1):133. doi: 10.1186/s13045-017-0500-5. Review. PubMed PMID: 28673313; PubMed Central PMCID: PMC5496368.
JNJ-26854165	Lehman JA, Hauck PM, Gendron JM, Batuello CN, Eitel JA, Albig A, Kadakia MP, Mayo LD. Serdemetan antagonizes the Mdm2-HIF1 axis leading to decreased levels of glycolytic enzymes. PLoS One. 2013 Sep 6;8(9):e74741. doi: 10.1371/journal.pone.0074741. eCollection 2013. PubMed PMID: 24040331; PubMed Central PMCID: PMC3765416. Yuan Y, Liao YM, Hsueh CT, Mirshahidi HR. Novel targeted therapeutics: inhibitors of MDM2, ALK and PARP. J Hematol Oncol. 2011 Apr 20;4:16. doi: 10.1186/1756-8722-4-16. Review. PubMed PMID: 21504625; PubMed Central PMCID: PMC3103487.
DS-3032B	http://www.cancer.gov/publications/dictionaries/cancer-drug?cdrid=750863 Tisato V, Voltan R, Gonelli A, Secchiero P, Zauli G. MDM2/X inhibitors under clinical evaluation: perspectives for the management of hematological malignancies and pediatric cancer. J Hematol Oncol. 2017 Jul 3;10(1):133. doi: 10.1186/s13045-017-0500-5. Review. PubMed PMID: 28673313; PubMed Central PMCID: PMC5496368. Khoo KH, Verma CS, Lane DP. Drugging the p53 pathway: understanding the route to clinical efficacy. Nat Rev Drug Discov. 2014 Mar;13(3):217-36. doi: 10.1038/nrd4236. Review. Erratum in: Nat Rev Drug Discov. 2014 Apr;13(4):314. Hoe, Khoo Kian [corrected to Khoo, Kian Hoe]. PubMed PMID: 24577402.
CGM097	Tisato V, Voltan R, Gonelli A, Secchiero P, Zauli G. MDM2/X inhibitors under clinical evaluation: perspectives for the management of hematological malignancies and pediatric cancer. J Hematol Oncol. 2017 Jul 3;10(1):133. doi: 10.1186/s13045-017-0500-5. Review. PubMed PMID: 28673313; PubMed Central PMCID: PMC5496368. Weisberg E, Halilovic E, Cooke VG, Nonami A, Ren T, Sanda T, Simkin I, Yuan J, Antonakos B, Barys L, Ito M, Stone R, Galinsky I, Cowens K, Nelson E, Sattler M, Jeay S, Wuerthner JU, McDonough SM, Wiesmann M, Griffin JD. Inhibition of Wild-Type p53-Expressing AML by the Novel Small Molecule HDM2 Inhibitor CGM097. Mol Cancer Ther. 2015 Oct;14(10):2249-59. doi: 10.1158/1535-7163.MCT-15-0429. Epub 2015 Jul 23. PubMed PMID: 26206331; PubMed Central PMCID: PMC4596780. Valat T, Masuya K, Baysang F, Albrecht G, Buschmann N, Erdmann D, et al. Abstract 1798: Mechanistic study of NVP-CGM097: a potent, selective and species specific inhibitor of p53-Mdm2. Cancer Res. 2014 Oct 1;74(19 Supplement):1798–1798.
MK-8242	http://www.cancer.gov/publications/dictionaries/cancer-drug?CdrID=714504 Zhao Y, Bernard D and Wang S. Small Molecule inhibitors of MDM2-p53 and MDMX-p53 interaction as new cancer therapeutics. BioDiscovery2013; 8: 4; DOI: 10.7750/BioDiscovery.2013.8.4
METFORMIN	Tan XL, Bhattacharyya KK, Dutta SK, Bamlet WR, Rabe KG, Wang E, Smyrk TC, Oberg AL, Petersen GM, Mukhopadhyay D. Metformin suppresses pancreatic tumor growth with inhibition of NFB/STAT3 inflammatory signaling. Pancreas. 2015 May;44(4):636-47. doi: 10.1097/MPA.0000000000000308. PubMed PMID: 25875801; PubMed Central PMCID: PMC4399019. Zi FM, He JS, Li Y, Wu C, Yang L, Yang Y, Wang LJ, He DH, Zhao Y, Wu WJ, Zheng GF, Han XY, Huang H, Yi Q, Cai Z. Metformin displays anti-myeloma activity and synergistic effect with dexamethasone in vitro and in xenograft models. Cancer Lett. 2014 Oct 8. pii: S0304-3835(14)00591-6. doi: 10.1016/j.canlet.2014.09.050. [Epub ahead of print] PubMed PMID: 25305450. Sadeghi N, Abbruzzese JL, Yeung SC, Hassan M, Li D. Metformin use is associated with better survival of diabetic patients with pancreatic cancer. Clin Cancer Res. 2012 May 15;18(10):2905-12. doi: 10.1158/1078-0432.CCR-11-2994. Epub 2012 Mar 31. PubMed PMID: 22465831; PubMed Central PMCID: PMC3381457.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

COMPOUND NAME	REFERENCES
TALAZOPARIB	Mamdani H, Induru R, Jalal SI. Novel therapies in small cell lung cancer. Transl Lung Cancer Res. 2015 Oct;4(5):533-44. doi: 10.3978/j.issn.2218-6751.2015.07.20. Review. PubMed PMID: 26629422; PubMed Central PMCID: PMC4630526. Wainberg ZA, Rafii S, Ramanathan RK, et al. Safety and antitumor activity of the PARP inhibitor BMN673 in a phase 1 trial recruiting metastatic small-cell lung cancer (SCLC) and germline BRCA-mutation carrier cancer patients. J Clin Oncol 2014;32:abstr 7522.
CAPECITABINE	Bennouna J, Lang I, Valladares-Ayerbes M, Boer K, Adenis A, Escudero P, Kim TY, Pover GM, Morris CD, Douillard JY. A Phase II, open-label, randomised study to assess the efficacy and safety of the MEK1/2 inhibitor AZD6244 (ARRY-142886) versus capecitabine monotherapy in patients with colorectal cancer who have failed one or two prior chemotherapeutic regimens. Invest New Drugs. 2011 Oct;29(5):1021-8. doi: 10.1007/s10637-010-9392-8. PubMed PMID: 20127139.
CABAZITAXEL	Oudard S. TROPIC: Phase III trial of cabazitaxel for the treatment of metastatic castration-resistant prostate cancer. Future Oncol. 2011 Apr;7(4):497-506. doi: 10.2217/fon.11.23. PubMed PMID: 21463139. Bahl A, Oudard S, Tombal B, Ozgüroglu M, Hansen S, Kocak I, Gravis G, Devin J, Shen L, de Bono JS, Sartor AO; TROPIC Investigators.. Impact of cabazitaxel on 2-year survival and palliation of tumour-related pain in men with metastatic castration-resistant prostate cancer treated in the TROPIC trial. Ann Oncol. 2013 Sep;24(9):2402-8. doi: 10.1093/annonc/mdt194. PubMed PMID: 23723295; PubMed Central PMCID: PMC3755329.
SONIDEGIB	Rodon J, Tawbi HA, Thomas AL, Stoller RG, Turtschi CP, Baselga J, Sarantopoulos J, Mahalingam D, Shou Y, Moles MA, Yang L, Granvil C, Hurh E, Rose KL, Amakye DD, Dummer R, Mita AC. A phase I, multicenter, open-label, first-in-human, dose-escalation study of the oral smoothened inhibitor Sonidegib (LDE225) in patients with advanced solid tumors. Clin Cancer Res. 2014 Apr 1;20(7):1900-9. doi: 10.1158/1078-0432.CCR-13-1710. Epub 2014 Feb 12. PubMed PMID: 24523439.
GEMCITABINE	Infante JR, Somer BG, Park JO, Li CP, Scheulen ME, Kasubhai SM, Oh DY, Liu Y, Redhu S, Steplewski K, Le N. A randomised, double-blind, placebo-controlled trial of trametinib, an oral MEK inhibitor, in combination with gemcitabine for patients with untreated metastatic adenocarcinoma of the pancreas. Eur J Cancer. 2014 Aug;50(12):2072-81. doi: 10.1016/j.ejca.2014.04.024. Epub 2014 Jun 7. PubMed PMID: 24915778.
NUTLIN-3A	Bill KL, Garnett J, Meaux I, Ma X, Creighton CJ, Bolshakov S, Barriere C, Debussche L, Lazar AJ, Prudner BC, Casadei L, Braggio D, Lopez G, Zewdu A, Bid H, Lev D, Pollock RE. SAR405838: A Novel and Potent Inhibitor of the MDM2:p53 Axis for the Treatment of Dedifferentiated Liposarcoma. Clin Cancer Res. 2016 Mar 1;22(5):1150-60. doi: 10.1158/1078-0432.CCR-15-1522. Epub 2015 Oct 16. PubMed PMID: 26475335; PubMed Central PMCID: PMC4775372.
SIROLIMUS	Patwardhan PP, Surriga O, Beckman MJ, de Stanchina E, Dematteo RP, Tap WD, Schwartz GK. Sustained inhibition of receptor tyrosine kinases and macrophage depletion by PLX3397 and rapamycin as a potential new approach for the treatment of MPNSTs. Clin Cancer Res. 2014 Jun 15;20(12):3146-58. doi: 10.1158/1078-0432.CCR-13-2576. Epub 2014 Apr 9. PubMed PMID: 24718867; PubMed Central PMCID: PMC4060793.
THALIDOMIDE	Lee SM, James L, Buchler T, Snee M, Ellis P, Hackshaw A. Phase II trial of thalidomide with chemotherapy and as maintenance therapy for patients with poor prognosis small-cell lung cancer. Lung Cancer. 2008 Mar;59(3):364-8. Epub 2007 Oct 24. PubMed PMID: 17920723.
RUCAPARIB	Mamdani H, Induru R, Jalal SI. Novel therapies in small cell lung cancer. Transl Lung Cancer Res. 2015 Oct;4(5):533-44. doi: 10.3978/j.issn.2218-6751.2015.07.20. Review. PubMed PMID: 26629422; PubMed Central PMCID: PMC4630526.
OLARATUMAB	Tobias A, O'brien MP, Agulnik M. Olaratumab for advanced soft tissue sarcoma. Expert Rev Clin Pharmacol. 2017 Jul;10(7):699-705. doi: 10.1080/17512433.2017.1324295. Epub 2017 May 5. Review. PubMed PMID: 28447475.
XELIRI	Cui C, Shu C, Yang Y, Liu J, Shi S, Shao Z, Wang N, Yang T, Hu S. XELIRI compared with FOLFIRI as a second-line treatment in patients with metastatic colorectal cancer. Oncol Lett. 2014 Oct;8(4):1864-1872. Epub 2014 Jul 10. PubMed PMID: 25202427; PubMed Central PMCID: PMC4156196.
MEDI-573	Zhong H, Fazenbaker C, Breen S, Chen C, Huang J, Morehouse C, Yao Y, Hollingsworth RE. MEDI-573, alone or in combination with mammalian target of rapamycin inhibitors, targets the insulin-like growth factor pathway in sarcomas. Mol Cancer Ther. 2014 Nov;13(11):2662-73. doi: 10.1158/1535-7163.MCT-14-0144. Epub 2014 Sep 5. Erratum in: Mol Cancer Ther. 2015 Mar;14(3):844. PubMed PMID: 25193511.
RXDX-101	Iyer R, Wehrmann L, Golden RL, Naraparaju K, Croucher JL, MacFarland SP, Guan P, Kolla V, Wei G, Cam N, Li G, Hornby Z, Brodeur GM. Entrectinib is a potent inhibitor of Trk-driven neuroblastomas in a xenograft mouse model. Cancer Lett. 2016 Mar 28;372(2):179-86. doi: 10.1016/j.canlet.2016.01.018. Epub 2016 Jan 18. PubMed PMID: 26797418; PubMed Central PMCID: PMC4792275.
DINUTUXIMAB	Ploessl C, Pan A, Maples KT, Lowe DK. Dinutuximab: An Anti-GD2 Monoclonal Antibody for High-Risk Neuroblastoma. Ann Pharmacother. 2016 May;50(5):416-22. doi: 10.1177/1060028016632013. Epub 2016 Feb 25. Review. PubMed PMID: 26917818.
FOLFOX	Jin CH, Wang AH, Chen JM, Li RX, Liu XM, Wang GP, Xing LQ. Observation of curative efficacy and prognosis following combination chemotherapy with celecoxib in the treatment of advanced colorectal cancer. J Int Med Res. 2011;39(6):2129-40. PubMed PMID: 22289528.
NILOTINIB	Wei J, Freytag M, Schober Y, Nockher WA, Mautner VF, Friedrich RE, Manley PW, Kluwe L, Kurtz A. Nilotinib is more potent than imatinib for treating plexiform neurofibroma in vitro and in vivo. PLoS One. 2014 Oct 23;9(10):e107760. doi: 10.1371/journal.pone.0107760. eCollection 2014. PubMed PMID: 25340526; PubMed Central PMCID: PMC4207688.
PACLITAXEL	Della Pepa C, Banerjee S. Bevacizumab in combination with chemotherapy in platinum-sensitive ovarian cancer. Onco Targets Ther. 2014 Jun 19;7:1025-32. doi: 10.2147/OTT.S40527. eCollection 2014. Review. Erratum in: Onco Targets Ther. 2014;7:1473. PubMed PMID: 24971016; PubMed Central PMCID: PMC4069138.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

COMPOUND NAME	REFERENCES
OLAPARIB	https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/208558s000lbl.pdf Mamdani H, Induru R, Jalal SI. Novel therapies in small cell lung cancer. Transl Lung Cancer Res. 2015 Oct;4(5):533-44. doi: 10.3978/j.issn.2218-6751.2015.07.20. Review. PubMed PMID: 26629422; PubMed Central PMCID: PMC4630526. Choy E, Butrynski JE, Harmon DC, Morgan JA, George S, Wagner AJ, D'Adamo D, Cote GM, Flamand Y, Benes CH, Haber DA, Baselga JM, Demetri GD. Phase II study of olaparib in patients with refractory Ewing sarcoma following failure of standard chemotherapy. BMC Cancer. 2014 Nov 5;14:813. doi: 10.1186/1471-2407-14-813. PubMed PMID: 25374341; PubMed Central PMCID: PMC4230717.
PALBOCICLIB	Konecny GE, Wahner Hendrickson AE, Jatoi A, Burton JK, Paroly J, Glaspy JA, et al. A multicenter open-label phase II study of the efficacy and safety of palbociclib a cyclin-dependent kinases 4 and 6 inhibitor in patients with recurrent ovarian cancer. JCO. 2016 May 20;34(15_suppl):5557–5557.
Iobenguane	Riad R, Kotb M, Omar W, Zaher A, Khalafalla K, Fawzy M, El-Wakil M, Ebeid E. Role of 131-I MIBG Therapy in the Treatment of Advanced Neuroblastoma. J Egypt Natl Canc Inst. 2009 Mar;21(1):51-8. PubMed PMID: 20601971.
LAPATINIB	Leslie KK, Sill MW, Lankes HA, Fischer EG, Godwin AK, Gray H, Schilder RJ, Walker JL, Tewari K, Hanjani P, Abulafia O, Rose PG. Lapatinib and potential prognostic value of EGFR mutations in a Gynecologic Oncology Group phase II trial of persistent or recurrent endometrial cancer. Gynecol Oncol. 2012 Nov;127(2):345-50. doi: 10.1016/j.ygyno.2012.07.127. Epub 2012 Aug 7. PubMed PMID: 22885469; PubMed Central PMCID: PMC3518448.
S49076	Burbridge MF, Bossard CJ, Saunier C, Fejes I, Bruno A, Léonce S, Ferry G, Da Violante G, Bouzom F, Cattan V, Jacquet-Bescond A, Comoglio PM, Lockhart BP, Boutin JA, Cordi A, Ortuno JC, Pierré A, Hickman JA, Cruzalegui FH, Depil S. S49076 is a novel kinase inhibitor of MET, AXL, and FGFR with strong preclinical activity alone and in association with bevacizumab. Mol Cancer Ther. 2013 Sep;12(9):1749-62. doi: 10.1158/1535-7163.MCT-13-0075. Epub 2013 Jun 26. PubMed PMID: 23804704.
VOLITINIB	Gavine PR, Ren Y, Han L, Lv J, Fan S, Zhang W, Xu W, Liu YJ, Zhang T, Fu H, Yu Y, Wang H, Xu S, Zhou F, Su X, Yin X, Xie L, Wang L, Qing W, Jiao L, Su W, Wang QM. Volitinib, a potent and highly selective c-Met inhibitor, effectively blocks c-Met signaling and growth in c-MET amplified gastric cancer patient-derived tumor xenograft models. Mol Oncol. 2014 Sep 10. pii: S1574-7891(14)00210-5. doi: 10.1016/j.molonc.2014.08.015. [Epub ahead of print] PubMed PMID: 25248999.
CAPMATINIB	Liu X, Wang Q, Yang G, Marando C, Koblish HK, Hall LM, Fridman JS, Behshad E, Wynn R, Li Y, Boer J, Diamond S, He C, Xu M, Zhuo J, Yao W, Newton RC, Scherle PA. A novel kinase inhibitor, INCB28060, blocks c-MET-dependent signaling, neoplastic activities, and cross-talk with EGFR and HER-3. Clin Cancer Res. 2011 Nov 15;17(22):7127-38. doi: 10.1158/1078-0432.CCR-11-1157. Epub 2011 Sep 14. PubMed PMID: 21918175.
SGX523	Buchanan SG, Hendle J, Lee PS, Smith CR, Bounaud PY, Jessen KA, Tang CM, Huser NH, Felce JD, Froning KJ, Peterman MC, Aubol BE, Gessert SF, Sauder JM, Schwinn KD, Russell M, Rooney IA, Adams J, Leon BC, Do TH, Blaney JM, Sprengeler PA, Thompson DA, Smyth L, Pelletier LA, Atwell S, Holme K, Wasserman SR, Emtage S, Burley SK, Reich SH. SGX523 is an exquisitely selective, ATP-competitive inhibitor of the MET receptor tyrosine kinase with antitumor activity in vivo. Mol Cancer Ther. 2009 Dec;8(12):3181-90. doi: 10.1158/1535-7163.MCT-09-0477. Epub . PubMed PMID: 19934279.
SAR125844	Laurent Schio1, Conception Nemecek1, Antonio Ugolini1, Sylvie Wentzler1, Sandrine Grapinet1, Jean Khider1, Eva Albert1, Nathalie Dischamps1, Frédéric Gay1, Véronique Sonnefraud1, Eric Bacqué1, Mireille Kenigsberg1, Hélène Goulaouic1, Anne Dagallier2, François Vallée2, Fabrice Bonche3, and Christoph Lengauer1. SAR125844: a potent and selective ATP-competitive inhibitor of MET kinase. Proceedings of the 103rd Annual Meeting of the American Association for Cancer Research; 2012 Mar 31-Apr 4; Chicago, IL. Philadelphia (PA): AACR; Cancer Res 2012;72(8 Suppl):Abstract nr 2911. doi:1538-7445.AM2012-2911.
ONARTUZUMAB	Merchant M, Ma X, Maun HR, Zheng Z, Peng J, Romero M, Huang A, Yang NY, Nishimura M, Greve J, Santell L, Zhang YW, Su Y, Kaufman DW, Billeci KL, Mai E, Moffat B, Lim A, Duenas ET, Phillips HS, Xiang H, Young JC, Vande Woude GF, Dennis MS, Reilly DE, Schwall RH, Starovasnik MA, Lazarus RA, Yansura DG. Monovalent antibody design and mechanism of action of onartuzumab, a MET antagonist with anti-tumor activity as a therapeutic agent. Proc Natl Acad Sci U S A. 2013 Aug 6;110(32):E2987-96. doi: 10.1073/pnas.1302725110. Epub 2013 Jul 23. PubMed PMID: 23882082; PubMed Central PMCID: PMC3740879.
PF-04217903	Zou HY, Li Q, Lee JH, Arango ME, Burgess K, Qiu M, Engstrom LD, Yamazaki S, Parker M, Timofeevski S, Cui JJ, McTigue M, Los G, Bender SL, Smeal T, Christensen JG. Sensitivity of selected human tumor models to PF-04217903, a novel selective c-Met kinase inhibitor. Mol Cancer Ther. 2012 Apr;11(4):1036-47. doi: 10.1158/1535-7163.MCT-11-0839. Epub 2012 Mar 2. PubMed PMID: 22389468.
EMD 1214063	Bladt F, Faden B, Friese-Hamim M, Knuehl C, Wilm C, Fittschen C, Grädler U, Meyring M, Dorsch D, Jaehrling F, Pehl U, Stieber F, Schadt O, Blaukat A. EMD 1214063 and EMD 1204831 constitute a new class of potent and highly selective c-Met inhibitors. Clin Cancer Res. 2013 Jun 1;19(11):2941-51. doi: 10.1158/1078-0432.CCR-12-3247. Epub 2013 Apr 3. PubMed PMID: 23553846.
EMD 1204831	Bladt F, Faden B, Friese-Hamim M, Knuehl C, Wilm C, Fittschen C, Grädler U, Meyring M, Dorsch D, Jaehrling F, Pehl U, Stieber F, Schadt O, Blaukat A. EMD 1214063 and EMD 1204831 constitute a new class of potent and highly selective c-Met inhibitors. Clin Cancer Res. 2013 Jun 1;19(11):2941-51. doi: 10.1158/1078-0432.CCR-12-3247. Epub 2013 Apr 3. PubMed PMID: 23553846.
GOLVATINIB	Wang W, Li Q, Takeuchi S, Yamada T, Koizumi H, Nakamura T, Matsumoto K, Mukaida N, Nishioka Y, Sone S, Nakagawa T, Uenaka T, Yano S. Met kinase inhibitor E7050 reverses three different mechanisms of hepatocyte growth factor-induced tyrosine kinase inhibitor resistance in EGFR mutant lung cancer. Clin Cancer Res. 2012 Mar 15;18(6):1663-71. doi: 10.1158/1078-0432.CCR-11-1171. Epub 2012 Feb 8. PubMed PMID: 22317763.
BMS-777607	Dai Y, Siemann DW. BMS-777607, a small-molecule met kinase inhibitor, suppresses hepatocyte growth factor-stimulated prostate cancer metastatic phenotype in vitro. Mol Cancer Ther. 2010 Jun;9(6):1554-61. doi: 10.1158/1535-7163.MCT-10-0359. Epub 2010 Jun 1. PubMed PMID: 20515943.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

COMPOUND NAME	REFERENCES
TIVANTINIB	Previdi S, Abbadessa G, Dalò F, France DS, Broggini M. Breast cancer-derived bone metastasis can be effectively reduced through specific c-MET inhibitor tivantinib (ARQ 197) and shRNA c-MET knockdown. Mol Cancer Ther. 2012 Jan;11(1):214-23. doi: 10.1158/1535-7163.MCT-11-0277. Epub 2011 Oct 25. PubMed PMID: 22027690.
AMG 337	Paul E. Hughes, Yajing Yang, Karen Rex, Yihong Zhang, Paula J. Kaplan-Lefko, Sean Caenepeel, Jodi Moriguchi, Martin Broome, Deborah Choquette, Robert Radinsky, Richard Kendall, Angela Coxon, and Isabelle Dussault. AMG 337, a novel, potent and selective MET kinase inhibitor, has robust growth inhibitory activity in MET-dependent cancer models. doi: 10.1158/1538-7445.AM2014-728 Cancer Res October 1, 2014 74; 728.
AMG 208	David S. Hong, Peter J. Rosen, A. Craig Lockhart, Siqing Fu, Filip Janku, Razelle Kurzrock, Rabia Khan, Benny Amore, Isaac Caudillo, Hongjie Deng, Yuying C. Hwang, Robert D. Loberg, Poornima Shubhakar, Stephen Zoog, Darrin M. Beaupre, Peter Lee; The University of Texas MD Anderson Cancer Center, Houston, TX; Tower Cancer Research Foundation, Beverly Hills, CA; Washington University School of Medicine, St. Louis, MO; Amgen Inc., Seattle, WA; Amgen Inc., Thousand Oaks, CA. First-in-human study of AMG 208, an oral MET inhibitor, in adult patients (pts) with advanced solid tumors. J Clin Oncol 31, 2013 (suppl 6; abstr 41)
RILOTUMUMAB	Burgess TL, Sun J, Meyer S, Tsuruda TS, Sun J, Elliott G, Chen Q, Haniu M, Barron WF, Juan T, Zhang K, Coxon A, Kendall RL. Biochemical characterization of AMG 102: a neutralizing, fully human monoclonal antibody to human and nonhuman primate hepatocyte growth factor. Mol Cancer Ther. 2010 Feb;9(2):400-9. doi: 10.1158/1535-7163.MCT-09-0824. Epub 2010 Feb 2. PubMed PMID: 20124448.
MASITINIB	Christiane R. Maroun1, Helene Ste-Croix1, Normand Beaulieu1, Claire Bonfils1, Marielle Fournel1, Isabelle Dupont1, Christian Lemoyne1, James Wand1, and Jeffrey M. Besterman1. Potent preclinical anti-tumor activity of MGCD265, an oral Met/VEGFR multitargeted kinase inhibitor in clinical development, in combination with taxanes. Proceedings of the 102nd Annual Meeting of the American Association for Cancer Research; 2011 Apr 2-6; Orlando, FL. Philadelphia (PA): AACR; Cancer Res 2011;71(8 Suppl):Abstract nr 3610. doi:10.1158/1538-7445.AM2011-3610.
CRIZOTINIB	Zou HY, Li Q, Lee JH, Arango ME, McDonnell SR, Yamazaki S, Koudriakova TB, Alton G, Cui JJ, Kung PP, Nambu MD, Los G, Bender SL, Mroczkowski B, Christensen JG. An orally available small-molecule inhibitor of c-Met, PF-2341066, exhibits cytoreductive antitumor efficacy through antiproliferative and antiangiogenic mechanisms. Cancer Res. 2007 May 1;67(9):4408-17. PubMed PMID: 17483355. Shaw AT, Hsu PP, Awad MM, Engelman JA. Tyrosine kinase gene rearrangements in epithelial malignancies. Nat Rev Cancer. 2013 Nov;13(11):772-87. doi: 10.1038/nrc3612. Epub 2013 Oct 17. Review. PubMed PMID: 24132104; PubMed Central PMCID: PMC3902129. Lennerz JK, Kwak EL, Ackerman A, Michael M, Fox SB, Bergethon K, Lauwers GY, Christensen JG, Wilner KD, Haber DA, Salgia R, Bang YJ, Clark JW, Solomon BJ, Iafrate AJ. MET amplification identifies a small and aggressive subgroup of esophagogastric adenocarcinoma with evidence of responsiveness to crizotinib. J Clin Oncol. 2011 Dec 20;29(36):4803-10. doi: 10.1200/JCO.2011.35.4928. Epub 2011 Oct 31. PubMed PMID: 22042947; PubMed Central PMCID: PMC3255989. Forde PM, Rudin CM. Crizotinib in the treatment of non-small-cell lung cancer. Expert Opin Pharmacother. 2012 Jun;13(8):1195-201. doi: 10.1517/14656566.2012.688029. Review. PubMed PMID: 22594847. Zhang Y, Wang W, Wang Y, Xu Y, Tian Y, Huang M, Lu Y. Response to Crizotinib Observed in Lung Adenocarcinoma with MET Copy Number Gain but without a High-Level MET/CEP7 Ratio, MET Overexpression, or Exon 14 Splicing Mutations. J Thorac Oncol. 2016 May;11(5):e59-62. doi: 10.1016/j.jtho.2015.12.102. Epub 2015 Dec 25. PubMed PMID: 26724472.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

BIOMARKERS AND DRIVERS	REFERENCES
EGFR-L858R	Wellcome Trust Sanger Institute
	Wellcome Trust Sanger Institute
	Wellcome Trust Sanger Institute
	Wellcome Trust Sanger Institute
	Wellcome Trust Sanger Institute
PDL1 protein overexpression	Zhu J, Wen H, Bi R, Wu Y, Wu X. Prognostic value of programmed death-ligand 1 (PD-L1) expression in ovarian clear cell carcinoma. J Gynecol Oncol. 2017 Nov;28(6):e77. doi: 10.3802/jgo.2017.28.e77. PubMed PMID: 29027395; PubMed Central PMCID: PMC5641527.
	Song M, Chen D, Lu B, Wang C, Zhang J, Huang L, Wang X, Timmons CL, Hu J, Liu B, Wu X, Wang L, Wang J, Liu H. PTEN loss increases PD-L1 protein expression and affects the correlation between PD-L1 expression and clinical parameters in colorectal cancer. PLoS One. 2013 Jun 13;8(6):e65821. doi: 10.1371/journal.pone.0065821. Print 2013. PubMed PMID: 23785454; PubMed Central PMCID: PMC3681867.
	Paz-Ares L, Horn L, Borghaei H, Spigel DR, Steins M, Ready N, Quan Man Chow L, Vokes EE, Felip E, Holgado E, Barlesi F, Kohlhaeufl M, Rodriguez O, Burgio MA, Fayette J, Gettinger SN, Harbison C, Dorange C, Graf Finckenstein F, Brahmer JR. Phase III, randomized trial (CheckMate 057) of nivolumab (NIVO) versus docetaxel (DOC) in advanced non-squamous cell (non-SQ) non-small cell lung cancer (NSCLC). J Clin Oncol 33, 2015 (suppl; abstr LBA109)
	Spira AI, Park K, Mazières J, Vansteenkiste JF, Rittmeyer A, Ballinger M, Waterkamp D, Kowanetz M, Mokatrin A, Fehrenbacher L. Efficacy, safety and predictive biomarker results from a randomized phase II study comparing MPDL3280A vs docetaxel in 2L/3L NSCLC (POPLAR). DOI: 10.1200/jco.2015.33.15_suppl.8010 Journal of Clinical Oncology 33, no. 15_suppl (May 2015) 8010-8010.
	Koganemaru S, Inoshita N, Miura Y, Miyama Y, Fukui Y, Ozaki Y, Tomizawa K, Hanaoka Y, Toda S, Suyama K, Tanabe Y, Moriyama J, Fujii T, Matoba S, Kuroyanagi H, Takano T. Prognostic value of programmed death-ligand 1 expression in patients with stage III colorectal cancer. Cancer Sci. 2017 May;108(5):853-858. doi: 10.1111/cas.13229. PubMed PMID: 28267224; PubMed Central PMCID: PMC5448596.
TP53 wild-type	Cerchietti LC, Polo JM, Da Silva GF, Farinha P, Shaknovich R, Gascoyne RD, Dowdy SF, Melnick A. Sequential transcription factor targeting for diffuse large B-cell lymphomas. Cancer Res. 2008 May 1;68(9):3361-9. doi: 10.1158/0008-5472.CAN-07-5817. PubMed PMID: 18451163; PubMed Central PMCID: PMC2748725.
	Mir R, Tortosa A, Martinez-Soler F, Vidal A, Condom E, Pérez-Perarnau A, Ruiz-Larroya T, Gil J, Giménez-Bonafé P. Mdm2 antagonists induce apoptosis and synergize with cisplatin overcoming chemoresistance in TP53 wild-type ovarian cancer cells. Int J Cancer. 2013 Apr 1;132(7):1525-36. doi: 10.1002/ijc.27832. Epub 2012 Oct 11. PubMed PMID: 22961628.

TARGET GENES	REFERENCES
EGFR wild-type	Bartolotti M, Franceschi E, Brandes AA. EGF receptor tyrosine kinase inhibitors in the treatment of brain metastases from non-small-cell lung cancer. Expert Rev Anticancer Ther. 2012 Nov;12(11):1429-35. doi: 10.1586/era.12.121. Review. PubMed PMID: 23249107.
	Yang M, Xu X, Cai J, Ning J, Wery JP, Li QX. NSCLC harboring EGFR exon-20 insertions after the regulatory C-helix of kinase domain responds poorly to known EGFR inhibitors. Int J Cancer. 2016 Jul 1;139(1):171-6. doi: 10.1002/ijc.30047. Epub 2016 Mar 25. PubMed PMID: 26891175.
	Lee JC, Vivanco I, Beroukhim R, Huang JH, Feng WL, DeBiasi RM, Yoshimoto K, King JC, Nghiemphu P, Yuza Y, Xu Q, Greulich H, Thomas RK, Paez JG, Peck TC, Linhart DJ, Glatt KA, Getz G, Onofrio R, Ziaugra L, Levine RL, Gabriel S, Kawaguchi T, O'Neill K, Khan H, Liau LM, Nelson SF, Rao PN, Mischel P, Pieper RO, Cloughesy T, Leahy DJ, Sellers WR, Sawyers CL, Meyerson M, Mellinghoff IK. Epidermal growth factor receptor activation in glioblastoma through novel missense mutations in the extracellular domain. PLoS Med. 2006 Dec;3(12):e485. PubMed PMID: 17177598; PubMed Central PMCID: PMC1702556.
	Bean J, Brennan C, Shih JY, Riely G, Viale A, Wang L, Chitale D, Motoi N, Szoke J, Broderick S, Balak M, Chang WC, Yu CJ, Gazdar A, Pass H, Rusch V, Gerald W, Huang SF, Yang PC, Miller V, Ladanyi M, Yang CH, Pao W. MET amplification occurs with or without T790M mutations in EGFR mutant lung tumors with acquired resistance to gefitinib or erlotinib. Proc Natl Acad Sci U S A. 2007 Dec 26;104(52):20932-7. Epub 2007 Dec 18. PubMed PMID: 18093943; PubMed Central PMCID: PMC2409244.
	Wheeler DL, Dunn EF, Harari PM. Understanding resistance to EGFR inhibitors-impact on future treatment strategies. Nat Rev Clin Oncol. 2010 Sep;7(9):493-507. doi: 10.1038/nrclinonc.2010.97. Epub 2010 Jun 15. Review. PubMed PMID: 20551942; PubMed Central PMCID: PMC2929287.

TARGET GENES	REFERENCES
AXL wild-type	Zhang Z, Lee JC, Lin L, Olivas V, Au V, LaFramboise T, Abdel-Rahman M, Wang X, Levine AD, Rho JK, Choi YJ, Choi CM, Kim SW, Jang SJ, Park YS, Kim WS, Lee DH, Lee JS, Miller VA, Arcila M, Ladanyi M, Moonsamy P, Sawyers C, Boggon TJ, Ma PC, Costa C, Taron M, Rosell R, Halmos B, Bivona TG. Activation of the AXL kinase causes resistance to EGFR-targeted therapy in lung cancer. Nat Genet. 2012 Jul 1;44(8):852-60. doi: 10.1038/ng.2330. PubMed PMID: 22751098; PubMed Central PMCID: PMC3408577.
Hsp90 wild-type	Xu W, Soga S, Beebe K, Lee MJ, Kim YS, Trepel J, Neckers L. Sensitivity of epidermal growth factor receptor and ErbB2 exon 20 insertion mutants to Hsp90 inhibition. Br J Cancer. 2007 Sep 17;97(6):741-4. Epub 2007 Aug 21. PubMed PMID: 17712310; PubMed Central PMCID: PMC2360392.
EGFR ngs mutant	Francois Gonzalvez, Xiaotian Zhu, Wei-Sheng Huang, Theresa E. Baker, Yaoyu Ning, Scott D. Wardwell, Sara Nadworny, Sen Zhang, Biplab Das, Yongjin Gong, Matthew T. Greenfield, Hyun G. Jang, Anna Kohlmann, Feng Li, Paul M. Taslimi, Meera Tugnait, Yongjin Xu, Emily Y. Ye, Willmen W. Youngsaye, Stephan G. Zech, Yun Zhang, Tianjun Zhou, Narayana I. Narasimhan, David C. Dalgarno, William C. Shakespeare and Victor M. Rivera, DOI: 10.1158/1538-7445.AM2016-2644 Published July 2016, Abstract 2644: AP32788, a potent, selective inhibitor of EGFR and HER2 oncogenic mutants, including exon 20 insertions, in preclinical models
PDL1 wild-type	Kerr KM, Tsao MS, Nicholson AG, Yatabe Y, Wistuba II, Hirsch FR; IASLC Pathology Committee. Programmed Death-Ligand 1 Immunohistochemistry in Lung Cancer: In what state is this art? J Thorac Oncol. 2015 Jul;10(7):985-9. doi: 10.1097/JTO.0000000000000526. Review. PubMed PMID: 26134220. Aguiar PN Jr, De Mello RA, Hall P, Tadokoro H, Lima Lopes G. PD-L1 expression as a predictive biomarker in advanced non-small-cell lung cancer: updated survival data. Immunotherapy. 2017 May;9(6):499-506. doi: 10.2217/imt-2016-0150. PubMed PMID: 28472902. Dirix LY, Takacs I, Jerusalem G, Nikolinakos P, Arkenau HT, Forero-Torres A, Boccia R, Lippman ME, Somer R, Smakal M, Emens LA, Hrinczenko B, Edenfield W, Gurtler J, von Heydebreck A, Grote HJ, Chin K, Hamilton EP. Avelumab, an anti-PD-L1 antibody, in patients with locally advanced or metastatic breast cancer: a phase 1b JAVELIN Solid Tumor study. Breast Cancer Res Treat. 2017 Oct 23. doi: 10.1007/s10549-017-4537-5. [Epub ahead of print] PubMed PMID: 29063313. Gaillard SL, Secord AA, Monk B. The role of immune checkpoint inhibition in the treatment of ovarian cancer. Gynecol Oncol Res Pract. 2016 Nov 24;3:11. eCollection 2016. Review. PubMed PMID: 27904752; PubMed Central PMCID: PMC5122024. Herbst RS, Soria JC, Kowanetz M, Fine GD, Hamid O, Gordon MS, Sosman JA, McDermott DF, Powderly JD, Gettinger SN, Kohrt HE, Horn L, Lawrence DP, Rost S, Leabman M, Xiao Y, Mokatrin A, Koeppen H, Hegde PS, Mellman I, Chen DS, Hodi FS. Predictive correlates of response to the anti-PD-L1 antibody MPDL3280A in cancer patients. Nature. 2014 Nov 27;515(7528):563-7. doi: 10.1038/nature14011. PubMed PMID: 25428504; PubMed Central PMCID: PMC4836193.
PDCD1 wild-type	Aguiar PN Jr, De Mello RA, Hall P, Tadokoro H, Lima Lopes G. PD-L1 expression as a predictive biomarker in advanced non-small-cell lung cancer: updated survival data. Immunotherapy. 2017 May;9(6):499-506. doi: 10.2217/imt-2016-0150. PubMed PMID: 28472902. HS Rugo, J-P Delord, S-A Im, PA Ott, SA Piha-Paul, PL Bedard, J Sachdev, C Le Tourneau, E van Brummelen, A Varga, S Saraf, D Pietrangelo, V Karantza and A Tan Kei Muro, Yung-Jue Bang, Veena Shankaran, Ravit Geva, Daniel Virgil Thomas Catenacci, Shilpa Gupta, Joseph Paul Eder, Raanan Berger, Edward J. Gonzalez, Archana Ray, Marisa Dolled-Filhart, Kenneth Emancipator, Kumudu Pathiraja, Jared K. Lunceford, Jonathan D. Cheng, Minori Koshiji, Hyun Cheol Chung. Relationship between PD-L1 expression and clinical outcomes in patients (Pts) with advanced gastric cancer treated with the anti-PD-1 monoclonal antibody pembrolizumab (Pembro; MK-3475) in KEYNOTE-012. DOI: 10.1200/jco.2015.33.3_suppl.3 Journal of Clinical Oncology 33, no. 3_suppl (January 2015) 3-3. Seiwert TY, Burtness B, Mehra R, Weiss J, Berger R, Eder JP, Heath K, McClanahan T, Lunceford J, Gause C, Cheng JD, Chow LQ. Safety and clinical activity of pembrolizumab for treatment of recurrent or metastatic squamous cell carcinoma of the head and neck (KEYNOTE-012): an open-label, multicentre, phase 1b trial. Lancet Oncol. 2016 Jul;17(7):956-965. doi: 10.1016/S1470-2045(16)30066-3. Epub 2016 May 27. PubMed PMID: 27247226. Bellmunt J, de Wit R, Vaughn DJ, Fradet Y, Lee JL, Fong L, Vogelzang NJ, Climent MA, Petrylak DP, Choueiri TK, Necchi A, Gerritsen W, Gurney H, Quinn DI, Culine S, Sternberg CN, Mai Y, Poehlein CH, Perini RF, Bajorin DF; KEYNOTE-045 Investigators. Pembrolizumab as Second-Line Therapy for Advanced Urothelial Carcinoma. N Engl J Med. 2017 Mar 16;376(11):1015-1026. doi: 10.1056/NEJMoa1613683. Epub 2017 Feb 17. PubMed PMID: 28212060; PubMed Central PMCID: PMC5635424.
MDM2 wild-type	Mir R, Tortosa A, Martinez-Soler F, Vidal A, Condom E, Pérez-Perarnau A, Ruiz-Larroya T, Gil J, Giménez-Bonafé P. Mdm2 antagonists induce apoptosis and synergize with cisplatin overcoming chemoresistance in TP53 wild-type ovarian cancer cells. Int J Cancer. 2013 Apr 1;132(7):1525-36. doi: 10.1002/ijc.27832. Epub 2012 Oct 11. PubMed PMID: 22961628.

DETAILED DESCRIPTION OF DRIVER AND TARGET GENES

DRIVER GENES

Name	Description

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

DETAILED DESCRIPTION OF DRIVER AND TARGET GENES

DRIVER GENES

Name	Description
EGFR	Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF-alpha, amphiregulin, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. Ligand binding triggers receptor homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues. The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades. Activates at least 4 major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PLCgamma-PKC and STATs modules. May also activate the NF-kappa-B signaling cascade. Also directly phosphorylates other proteins like RGS16, activating its GTPase activity and probably coupling the EGF receptor signaling to the G protein-coupled receptor signaling. Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin Isoform 2 may act as an antagonist of EGF action
PDL1	Involved in the costimulatory signal, essential for T-cell proliferation and production of IL10 and IFNG, in an IL2-dependent and a PDCD1-independent manner. Interaction with PDCD1 inhibits T-cell proliferation and cytokine production.
TP53	Acts as a tumor suppressor in many tumor types; induces growth arrest or apoptosis depending on the physiological circumstances and cell type. Involved in cell cycle regulation as a trans-activator that acts to negatively regulate cell division by controlling a set of genes required for this process. One of the activated genes is an inhibitor of cyclin-dependent kinases. Apoptosis induction seems to be mediated either by stimulation of BAX and FAS antigen expression, or by repression of Bcl-2 expression. In cooperation with mitochondrial PPIF is involved in activating oxidative stress-induced necrosis; the function is largely independent of transcription. Induces the transcription of long intergenic non-coding RNA p21 (lincRNA-p21) and lincRNA-Mkln1. LincRNA-p21 participates in TP53-dependent transcriptional repression leading to apoptosis and seem to have to effect on cell-cycle regulation. Implicated in Notch signaling cross-over. Prevents CDK7 kinase activity when associated to CAK complex in response to DNA damage, thus stopping cell cycle progression. Isoform 2 enhances the transactivation activity of isoform 1 from some but not all TP53-inducible promoters. Isoform 4 suppresses transactivation activity and impairs growth suppression mediated by isoform 1. Isoform 7 inhibits isoform 1-mediated apoptosis. Regulates the circadian clock by repressing CLOCK-ARNTL/BMAL1-mediated transcriptional activation of PER2 (PubMed: 24051492).

DETAILED DESCRIPTION OF DRIVER AND TARGET GENES

TARGET GENES

Name	Description
AXL	Receptor tyrosine kinase that transduces signals from the extracellular matrix into the cytoplasm by binding growth factor GAS6 and which is thus regulating many physiological processes including cell survival, cell proliferation, migration and differentiation. Ligand binding at the cell surface induces dimerization and autophosphorylation of AXL. Following activation by ligand, ALX binds and induces tyrosine phosphorylation of PI3-kinase subunits PIK3R1, PIK3R2 and PIK3R3; but also GRB2, PLCG1, LCK and PTPN11. Other downstream substrate candidates for AXL are CBL, NCK2, SOCS1 and TNS2. Recruitment of GRB2 and phosphatidylinositol 3 kinase regulatory subunits by AXL leads to the downstream activation of the AKT kinase. GAS6/AXL signaling plays a role in various processes such as endothelial cell survival during acidification by preventing apoptosis, optimal cytokine signaling during human natural killer cell development, hepatic regeneration, gonadotropin-releasing hormone neuron survival and migration, platelet activation, or regulation of thrombotic responses. Plays also an important role in inhibition of Toll-like receptors (TLRs)-mediated innate immune response. In case of filovirus infection, seems to function as a cell entry factor.
EGFR	Receptor tyrosine kinase binding ligands of the EGF family and activating several signaling cascades to convert extracellular cues into appropriate cellular responses. Known ligands include EGF, TGFA/TGF-alpha, amphiregulin, epigen/EPGN, BTC/betacellulin, epiregulin/EREG and HBEGF/heparin-binding EGF. Ligand binding triggers receptor homo- and/or heterodimerization and autophosphorylation on key cytoplasmic residues. The phosphorylated receptor recruits adapter proteins like GRB2 which in turn activates complex downstream signaling cascades. Activates at least 4 major downstream signaling cascades including the RAS-RAF-MEK-ERK, PI3 kinase-AKT, PLCgamma-PKC and STATs modules. May also activate the NF-kappa-B signaling cascade. Also directly phosphorylates other proteins like RGS16, activating its GTPase activity and probably coupling the EGF receptor signaling to the G protein-coupled receptor signaling. Also phosphorylates MUC1 and increases its interaction with SRC and CTNNB1/beta-catenin Isoform 2 may act as an antagonist of EGF action
MDM2	E3 ubiquitin-protein ligase that mediates ubiquitination of p53/TP53, leading to its degradation by the proteasome. Inhibits p53/TP53- and p73/TP73-mediated cell cycle arrest and apoptosis by binding its transcriptional activation domain. Also acts as a ubiquitin ligase E3 toward itself and ARRB1. Permits the nuclear export of p53/TP53. Promotes proteasome-dependent ubiquitin-independent degradation of retinoblastoma RB1 protein. Inhibits DAXX-mediated apoptosis by inducing its ubiquitination and degradation. Component of the TRIM28/KAP1-MDM2-p53 /TP53 complex involved in stabilizing p53/TP53. Also component of the TRIM28/KAP1-ERBB4-MDM2 complex which links growth factor and DNA damage response pathways. Mediates ubiquitination and subsequent proteasome degradation of DYRK2 in nucleus. Ubiquitinates IGF1R and SNAI1 and promotes them to proteasomal degradation.
PDCD1	Inhibitory cell surface receptor involved in the regulation of T-cell function during immunity and tolerance. Upon ligand binding, inhibits T-cell effector functions in an antigen-specific manner. Possible cell death inducer, in association with other factors.
PDL1	Involved in the costimulatory signal, essential for T-cell proliferation and production of IL10 and IFNG, in an IL2-dependent and a PDCD1-independent manner. Interaction with PDCD1 inhibits T-cell proliferation and cytokine production.

E-mail: info@realtimeoncology.com **Web:** www.realtimeoncology.com

Oncompass Report

powered by Realtime Oncology Molecular Treatment Calculator

ID	201003
NAME	Anonymous
RELEASE DATE	2018-10-19 09:44

APPENDIX

TARGETED COMPOUNDS

DRUGS IN CLINICAL USE (75): ABEMACICLIB, ACALABRUTINIB, AFATINIB, ALECTINIB, ATEZOLIZUMAB, AVELUMAB, AXITINIB, BELINOSTAT, BEVACIZUMAB, BORTEZOMIB, BOSUTINIB, BRIGATINIB, CABOZANTINIB, CARFILZOMIB, CEDIRANIB, CERITINIB, CETUXIMAB, COBIMETINIB, COPANLISIB, CRIZOTINIB, DABRAFENIB, DARATUMUMAB, DASATINIB, DURVALUMAB, ELOTUZUMAB, ENASIDENIB, ERLOTINIB, EVEROLIMUS, GEFITINIB, IBRUTINIB, IDELALISIB, IMATINIB, INOTUZUMAB OZOGAMICIN, IPILIMUMAB, IXAZOMIB, LAPATINIB, LENALIDOMIDE, LENVATINIB, METFORMIN, MIDOSTAURIN, NECITUMUMAB, NERATINIB, NILOTINIB, NINTEDANIB, NIRAPARIB, NIVOLUMAB, OLAPARIB, OLARATUMAB, OSIMERTINIB, PALBOCICLIB, PANITUMUMAB, PANOBINOSTAT, PAZOPANIB, PEMBROLIZUMAB, PERTUZUMAB, POMALIDOMIDE, PONATINIB, RAMUCIRUMAB, REGORAFENIB, RIBOCICLIB, ROMIDEPSIN, RUCAPARIB, SORAFENIB, SUNITINIB, T-DM1, TEMSIROLIMUS, THALIDOMIDE, TRAMETINIB, TRASTUZUMAB, VANDETANIB, VEMURAFENIB, VISMODEGIB, VORINOSTAT, ZIV-AFLIBERCEPT

DRUGS IN CLINICAL TRIAL STAGE (445): 17-AAG, 4SC-201, 4SC-202, 4SC-203, AAL881, AB-010, ABBV-221, ABT-414, ABT-494, ABT-700, ABT-767, ABT-806, ABTL0812, AC0010MA, AC-480, ACE-041, ACP-319, ACY-1215, ACY-241, ADU-623, AEB071, AEE788, AG-014699, AG-120, AG-881, AGI-5198, AKN-028, ALLITINIB, ALRN-6924, AMG208, AMG-232, AMG319, AMG337, AMG595, AMUVATINIB, ANLOTINIB, AP26113, AP32788, APRINOCARSEN, AR-42, ARGX-111, ARQ087, ARQ736, ARRY-380, ARRY382, ARX788, AS-703026, AS703988, ASP2215, ASP3026, ASP5878, ASP8273, AT13387, AT7519, AT9283, AUY922, AV-412, AVX901, AZ628, AZD0156, AZD1480, AZD2014, AZD2461, AZD3759, AZD4547, AZD5438, AZD6094, AZD6244, AZD6738, AZD-7762, AZD8055, AZD8186, AZD8330, AZD8835, B-701, BARICITINIB, BAY1000394, BAY1082439, BAY1163877, BAY1179470, BAY1187982, BAY1436032, BAY54-9085, BAY87-2243, BEZ235, BGB-283, BGB-290, BGJ398, BGT226, BI-2536, BI6727, BI847325, BI-847325, BI860585, BIIB021, BIIB028, BKM120, BLU-285, BMN673, BMS-599626, BMS-690514, BMS-777607, BMS-906024, BMS-911543, BMS-986115, BRIVANIB, BRONTICTUZUMAB, BYL719, CAL-263, CANERTINIB, CAPMATINIB, CC-223, CEP-32496, CEP-37440, CEP-9722, CG200745, CGM097, CH5424802, CHIAURANIB, CHIR-124, CHIR-265, CHR-2845, CHR-3996, CLR457, CM-082, CP-724714, CPI-1205, CRA-024781, CRENOLANIB, CT-707, CT-P6, CUCD-101, CUDC-101, CUDC-907, CXD101, CYC065, CYC116, DACOMITINIB, DANUSERTIB, DCC-2618, debio0932, debio1347, DECERNOTINIB, DEMCIZUMAB, DOVITINIB, DS-2248, DS-3032b, DS-6051b, DS-7423, DS-8201a, E6201, E7016, E7050, E7090, E7449, EDO-S101, EGF816, EMD1204831, EMD1214063, ENMD-2076, ENMD-981693, ENTRECTINIB, ENZASTAURIN, EPITINIB, EPZ-6438, ERTUMAXOMAB, EZN-2968, FAMITINIB, FEDRATINIB, FILGOTINIB, FLUZOPARIB, FLX925, FORETINIB, FPA008, FPA144, FRUQUINTINIB, FS102, GANDOTINIB, GC1118, GDC-0084, GDC-0425, GDC-0575, GDC-0623, GDC-0941, GDC-0980, GF109203X, GLESATINIB, GLPG-0555, GOLVATINIB, GS-9820, GSK1059615, GSK2126458, GSK2636771, GSK2816126, GSK-461364, HDM201, HEMAY022, HGS1036, HM61713, HMN-214, HMR1275, HS-10241, HSP990, ICOTINIB, ICRUCUMAB, IDH1R132H, IDH305, ILORASERTIB, IMC-CS4, IMGN289, IMU-131, INC280, INCB039110, INCB040093, INCB047986, INCB050465, INCB052793, INCB054828, INCB-47986, INIPARIB, INO-1001, IPI-145, IPI-493, IPI-504, IPI-549, ITF2357, JNJ-26481585, JNJ-26483327, JNJ-26854165, JNJ-38877605, JNJ-42756493, JNJ-61186372, KA2237, KAI-1678, KOS-1022, KTN0158, KU55933, KW-2478, LBT613, LDK378, LESTAURTINIB, LGX818, LINIFANIB, LOP628, LORLATINIB, LUCITANIB, LXS196, LY2606368, LY287445, LY-2874455, LY2875358, LY294002, LY3023414, LY3039478, LY3076226, LY3164530, M344, MASITINIB, MATUZUMAB, MC1568, ME-344, ME-401, MEDI4276, MEHD7945A, MEK162, MFGR1877S, MGAH22, MGCD0103, MGCD265, MI-773, MK0752, MK-1496, MK-1775, MK-2461, MK-7965, MK-8242, MK-8776, MLN0128, MLN1117, MM-111, MM-151, MM-302, MOMELOTINIB, MOTESANIB, MPC-3100, MPT0E028, MR1-1, MRX34, MSC2156119J, NIMESULIDE, NIMOTUZUMAB, NMS-1286937, NMS-E973, NMS-P937, NS-018, NS-398, NVP-BEP800, OBP-801, ODM-203, ON-01910, ONARTUZUMAB, ORANTINIB, OSI-027, OSI-930, P1446A-05, P276-00, P7170, PACRITINIB, PARECOXIB, PCI-34051, PD-0166285, PD0325901, PD184352, PD98059, PEFICITINIB, PEGDINETANIB, PELITINIB, PEPIDH1M, PEXIDARTINIB, PF-00337210, PF-02341066, PF-03084014, PF-03446962, PF-04217903, PF-04691502, PF-04965842, PF-06459988, PF-06463922, PF-06747775, PF-477736, PHA-793887, PHA-848125AC, PKI-166, PKI179, PKI-587, PLX-5622, PLX8394, PLX-9486, POZIOTINIB, PQR309, PRT062070, PU-H71, PWT143, PWT33597, PX-478, PX-866, PYROTINIB, QUIZARTINIB, R547, RAF265, RDEA119, REBASTINIB, RG1530, RGB-286638, RIDAFOROLIMUS, RILOTUMUMAB, RINDOPEPIMUT, Ro3280, RO4929097, RO4987655, RO5045337, RO5083945, RO5126766, RO5212054, RO5503781, RO6839921, ROCILETINIB, RP6530, RUBOXISTAURIN, RXDX-101, S-222611, S49076, SAIT301, SAPITINIB, SAR125844, SAR260301, SB939, SCH-900776, SEMAGACESTAT, SEMAXANIB, SF1126, SGX523, SHP-141, SIMOTINIB, SNDX-275, SNS-032, SNX-2112, SNX-5422 mesylate, SOLCITINIB, SOTRASTAURIN, STA-9090, SU-014813, SU-11274, SU9516, SULFATINIB, Sym004, TAK-165, TAK-285, TAK-733, TANDUTINIB, TAREXTUMAB, TAS-120, TASELISIB, TELATINIB, TEPOTINIB, TESEVATINIB, TEW-7197, TG02, TG100-115, TG100-801, TG101348, TGR-1202, TIVANTINIB, TIVOZANIB, TSA, TSR-011, TSU-68, U0126, UCN-01, VARLITINIB, VATALANIB, VELIPARIB, VER155008, VER-49009, VER-50589, VS-5584, VX-970, WP1066, WX-037, WX-554, X-396, X-82, XL019, XL147, XL-281, XL647, XL765, XL-820, XL888, XL-999, ZALUTUMUMAB, ZD4547, ZM336372, ZSTK474

Description of the genes is provided by UniProt (Universal Protein Resource).

.....

Report Validated By

Istvan Petak, MD, PhD

Molecular pharmacologist, Director