

# ACTIN Report (research use only)

PATIENT  
EXAMPLE-LUNG-01  
REPORT DATE  
17-Sep-2025

Gender: **Female** | Birth year: **1975** | WHO: **1**

Tumor: **Lung adenocarcinoma** | Lesions: **Liver, Lung** | Stage: **IV**

## Clinical summary

Relevant systemic treatment history	6/2023-1/2025	Osimertinib
Relevant other oncological history	None	
Previous primary tumor	None	
Relevant non-oncological history	2023	Rheumatoid arthritis

## Recent molecular results

### Hartwig WGS (22-Feb-2025)

Biopsy location	<b>Lung (purity 50%)</b>
Molecular tissue of origin prediction	<b>Lung: Non-small cell: LUAD (98%)</b>
Tumor mutational load / burden	<b>TML 160 / TMB 14 mut/Mb</b>
Microsatellite (in)stability	<b>Stable</b>
HR status	<b>Proficient (0)</b>
Driver mutations	<b>EGFR C797S, EGFR L858R, KRAS G12C, KRAS G12D</b>
Amplified genes	<b>None</b>
Deleted genes	<b>TP53</b>
Homozygously disrupted genes	<b>None</b>
Gene fusions	<b>MET(exon13)::MET(exon15) fusion</b>
Virus	<b>None</b>

### Trial-relevant IHC results

PD-L1	<b>Score &gt; 50%</b>
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## Standard-of-care options considered potentially eligible

There are no standard of care treatment options for this patient

## Trials in Other that are open and potentially eligible (3 cohorts from 3 trials)

Trial	Cohort	Molecular	Sites	Warnings
<a href="#">METC 04</a> <a href="#">TEDR1</a>	Lung cancer C797S cohort	EGFR C797S	NKI-AvL	None
<a href="#">METC 02</a> <a href="#">KAYRAS</a>	Dose expansion - monotherapy - NSCLC	KRAS G12D, PD-L1 >= 50.0	Erasmus MC	Variant(s) G12D in KRAS but subclonal likelihood of > 50%
<a href="#">METC 01</a> <a href="#">IEMOEN</a>	Dose escalation - monotherapy (no slots)	None		Has not exhausted SOC (at least platinum doublet remaining)

## International trials that are open and potentially eligible (4 cohorts from 4 trials)

Trial	Cohort	Molecular	Sites
<a href="#">EGFR-C797S-TRIAL</a>	EGFR C797S	EGFR C797S	NL: Tilburg, Germany: Stuttgart
<a href="#">EGFR-L858R-TRIAL</a>	EGFR L858R	EGFR L858R	NL: Tilburg, Germany: Stuttgart
<a href="#">EGFR-BE</a>	EGFR L858R	EGFR L858R	Belgium: Brussels

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Trial	Cohort	Molecular	Sites
<a href="#"><u>KRAS-G12C-TRIAL-DE</u></a>	<i>KRAS G12C</i>	<i>KRAS G12C</i>	<i>Germany: Stuttgart</i>

International trials are matched solely on molecular event and tumor type (clinical data excluded).

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## Molecular Details

### Hartwig WGS (EXAMPLE-LUNG-01-T, 22-Feb-2025)

#### General

Purity	Ploidy	TML Status	TMB Status	MS Stability	HR Status	DPYD	UGT1A1
50%	2.3	High (160)	High (14)	Stable	Proficient (0)	*1_HOM (Normal function)	*1_HOM (Normal function)

#### Predicted tumor origin

##### 1. Lung: Non-small cell: LUAD

Combined prediction score	98%
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This score is calculated by combining information on:

(1) SNV types	60%
(2) SNV genomic localisation distribution	70%
(3) Driver genes and passenger characteristics	80%

Other cohorts have a combined prediction of 2% or lower

#### Key drivers

Type	Driver	Trials (Locations)	Trials in Hartwig	Best evidence in External	Resistance in External
Mutation (gain of function)	EGFR L858R (2/4 copies)		NCT00000006, NCT00000007	Approved	
Mutation (gain of function)	EGFR C797S (1/4 copies)	TEDR1 (NKI-AvL)	NCT00000008	Pre-clinical	
Mutation (gain of function)	KRAS G12D (0.3/2 copies)*	KAYRAS (Erasmus MC)			
Mutation (gain of function)	KRAS G12C (0.3/2 copies)*		NCT00000009		
Deletion	TP53 del, 0 copies				

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Type	Driver	Trials (Locations)	Trials in Hartwig	Best evidence in External	Resistance in External
Known fusion	MET(exon13)::MET(exon15) fusion				

\* Variant has > 50% likelihood of being sub-clonal

## Other drivers or relevant events

Type	Driver	Trials (Locations)	Trials in Hartwig	Best evidence in External	Resistance in External
None					

## IHC results

PD-L1	Score > 50%
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## Molecular history

Event	Description	Date
EGFR L858R (Tier I)	Mutation (gain of function)	VAF 0.5%
EGFR C797S (Tier II)	Mutation (gain of function)	VAF 0.25%
KRAS G12C (Tier III)	Mutation (gain of function)	VAF 0.15%
KRAS G12D (Tier III)	Mutation (gain of function)	VAF 0.15%
MET(exon13)::MET(exon15) fusion (Tier III)	Known fusion Gain of function	Detected
TP53 del	Deletion	Detected

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Event	Description	Date	Method
(Tier III)	Unknown protein effect	2025-02-22	Hartwig WGS
TMB		14.0	
MSI		Stable	

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## Efficacy evidence

### Standard of care options considered potentially eligible

The following standard of care treatment(s) could be an option for this patient. For further details per study see 'SOC literature details' section in extended report.

There are no standard of care treatment options for this patient

There are no standard of care treatment options for this patient

### Resistance evidence

There are no standard of care treatment options for this patient

### On label clinical evidence

Event	CKB Event	Level A	Level B	Level C	Level D
EGFR C797S	EGFR C797S				AFATINIB <small>Lung non-small cell carcinoma (2015)</small>
EGFR L858R	EGFR L858R	OSIMERTINIB <small>Lung non-small cell carcinoma (2016)</small>	AFATINIB <small>Lung non-small cell carcinoma (2013)</small>		

### Off label clinical evidence

Event	CKB Event	Level A	Level B	Level C	Level D
None					

### Efficacy evidence description

#### EGFR L858R

<b>OSIMERTINIB:</b>	Level A (2016)	<b>Lung non-small cell carcinoma</b>	Osimertinib is effective in patients with EGFR L858R mutations
<b>AFATINIB:</b>	Level A (2013)	<b>Lung non-small cell carcinoma</b>	Afatinib is effective in patients with EGFR L858R mutations

#### EGFR C797S

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<b>AFATINIB:</b>	Level D (2015)	Lung non-small cell carcinoma	In a case-report, afatinib was effective against EGFR L858R/C797S positive lung cancer.
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## Treatment ranking

Treatment	Events	Score
AFATINIB	EGFR L858R	2,150
	EGFR C797S	
OSIMERTINIB	EGFR L858R	1,900

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## Clinical Details

### Clinical summary

Relevant systemic treatment history	6/2023-1/2025	Osimertinib
Relevant other oncological history		<b>None</b>
Previous primary tumor		<b>None</b>
Relevant non-oncological history	2023	Rheumatoid arthritis

### Patient current details (20-Feb-2025)

Unresolved toxicities grade => 2	<b>None</b>
LVEF	50%
Known allergies	<b>None</b>
Recent surgeries	01-Aug-2024 Cholecystectomy

### Tumor details (20-Feb-2025)

Measurable disease	<b>Yes</b>
Known lesions	<b>Liver, Lung</b>
Unknown lesions	<b>None</b>
No lesions present	<b>CNS, Brain, Bone, Lymph node</b>

### Active medication details

Medication	Administration route	Start date	Stop date	Dosage	Frequency
St. John's Wort	Oral	01-Feb-2023		300 MILLIGRAMS	1 / 2 DAYS

### Blood transfusions

Product	Date
ERTHROCYTES_FILTERED	20-Sep-2024

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## Trial Matching Details

### Trials in Other that are open and potentially eligible (0)

Trial	Cohort	Molecular	Sites	Warnings
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### International trials that are open and potentially eligible (4 cohorts from 4 trials)

Trial	Cohort	Molecular	Sites
<a href="#">EGFR-C797S-TRIAL</a>	EGFR C797S	EGFR C797S	NL: Tilburg, Germany: Stuttgart
<a href="#">EGFR-L858R-TRIAL</a>	EGFR L858R	EGFR L858R	NL: Tilburg, Germany: Stuttgart
<a href="#">EGFR-BE</a>	EGFR L858R	EGFR L858R	Belgium: Brussels
<a href="#">KRAS-G12C-TRIAL-DE</a>	KRAS G12C	KRAS G12C	Germany: Stuttgart

International trials are matched solely on molecular event and tumor type (clinical data excluded).

### Trials and cohorts that are potentially eligible, but are closed (1)

Trial	Cohort	Molecular	Sites	Warnings
<b>METC 01</b> IMEOEN	Dose expansion - monotherapy	None		Has not exhausted SOC (at least platinum doublet remaining)

### Trials and cohorts that are considered ineligible (4)

Trial	Cohort	Molecular	Ineligibility reasons
<b>METC 03</b> NO-SEE797ES	Dose escalation - monotherapy	EGFR C797S	C797S in EGFR in canonical transcript
<b>METC 02</b> KAYRAS	Dose expansion - monotherapy - Colorectum	KRAS G12D, PD-L1 >= 50.0	No colorectal cancer
<b>METC 05</b> PIK3CA	Applies to all cohorts below	None	No PIK3CA activating mutation(s)
	Dose expansion - monotherapy - NSCLC (closed)		
	Dose expansion - monotherapy - Other cancer types (closed)		Tumor belongs to DOID term(s) lung non-small cell carcinoma

### Trials and cohorts that are not evaluable or ignored (0)

Trial	Cohort	Molecular	Sites	Configuration
None				

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## Potentially eligible open trials & cohorts

### METC 01

Potentially eligible	Yes
Acronym	IEMOEN
Title	Phase I first-in-human study to evaluate safety of IEMOEN, a new PD-L1 inhibitor in advanced solid tumors
Reference	Evaluation
I-03	<b>WARN</b> Has not exhausted SOC (at least platinum doublet remaining)
E-02	UNDETERMINED No measurement found for hemoglobin
E-03	UNDETERMINED No measurement found for absolute neutrophil count
E-01	<b>PASS</b> Has no other condition belonging to category autoimmune disease
I-01	<b>PASS</b> Patient is at least 18 years old
I-02	<b>PASS</b> Has solid primary tumor Stage IV is considered metastatic

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## METC 01 - Dose escalation - monotherapy

Cohort ID      **A**  
Potentially eligible?      **Yes**  
Open for inclusion?      **Yes**  
Has slots available?      **No**

## METC 01 - Dose expansion - monotherapy

Cohort ID      **B**  
Potentially eligible?      **Yes**  
Open for inclusion?      **No**  
Has slots available?      **No**

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## METC 02

Potentially eligible	Yes
Acronym	KAYRAS
Title	A phase 1/2 trial for first in-human usage of KAYRAS, a new specific KRAS G12D inhibitor in NSCLC and colorectal cancer

Reference	Evaluation
I-04	WARN
	Variant(s) G12D in KRAS but subclonal likelihood of > 50%
I-03	UNDETERMINED
	ASAT and ALAT are not present or cannot be evaluated
I-01	PASS
	Patient is at least 18 years old
I-02	PASS
	Stage IV is considered metastatic
I-05	PASS
	PD-L1 expression above minimum of 50.0

## METC 02 - Dose expansion - monotherapy - NSCLC

Cohort ID	A
Potentially eligible?	Yes
Open for inclusion?	Yes
Has slots available?	Yes

Reference	Evaluation
I-02	PASS
	Tumor belongs to DOID term(s) lung non-small cell carcinoma

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12/16 Gene and variant annotations and related content are powered by Genomenon Cancer Knowledgebase (CKB).

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## METC 02 - Dose expansion - monotherapy - Colorectum

Cohort ID **B**

Potentially eligible? **No**

Open for inclusion? **Yes**

Has slots available? **Yes**

Reference	Evaluation
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I-02	FAIL
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No colorectal cancer

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## METC 04

Potentially eligible	Yes
Acronym	TEDR1
Title	<b>TEDR1 Trial: A phase II trial to evaluate efficacy of specific EGFR inhibitors in lung cancer</b>

Reference	Evaluation
I-1	PASS  Patient is at least 18 years old
I-2	PASS  Stage IV is considered metastatic  Tumor belongs to DOID term(s) lung cancer
I-3	PASS  C797S in EGFR in canonical transcript

## METC 04 - Lung cancer C797S cohort

Cohort ID	A
Potentially eligible?	Yes
Open for inclusion?	Yes
Has slots available?	Yes

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## Other trials & cohorts

### METC 03

Potentially eligible	No
Acronym	NO-SEE797ES
Title	Phase I trial for development of NO-SEE797ES, a specific inhibitor for EGFR with C797 mutations but not C797S in solid tumors
Reference	Evaluation
I-03	FAIL  C797S in EGFR in canonical transcript

### METC 03 - Dose escalation - monotherapy

Cohort ID	A
Potentially eligible?	No
Open for inclusion?	Yes
Has slots available?	Yes

### METC 05

Potentially eligible	No
Acronym	PICKME3CA
Title	A phase 1/2 trial of ABC123 +/- platinum doublet in PIK3CA-mutated solid cancer
Reference	Evaluation
I-04	FAIL  No PIK3CA activating mutation(s)

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## METC 05 - Dose expansion - monotherapy - NSCLC

Cohort ID	<b>A</b>
Potentially eligible?	<b>No</b>
Open for inclusion?	<b>No</b>
Has slots available?	<b>Yes</b>

## METC 05 - Dose expansion - monotherapy - Other cancer types

Cohort ID	<b>B</b>
Potentially eligible?	<b>No</b>
Open for inclusion?	<b>No</b>
Has slots available?	<b>Yes</b>

Reference	Evaluation
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I-03	<b>FAIL</b>
Tumor belongs to DOID term(s) lung non-small cell carcinoma	