

25th Multidisciplinary Management of Cancers: A Case-based Approach

MMC Thoracic Tumor Board 2025 3/7/2025

Jonathan Riess, MD, UC Davis - Chair
Aneeqa Zafar - Fellow, UC Davis - Case Presenter

PANELISTS:

Leah Backhus, MD, Stanford University
Deepti Behl, MD, Sutter Health
Collin Blakely, MD, University of California, San Francisco
David Cooke, MD, University of California, Davis
David Gandara, MD, University of California, Davis
Johannes Kratz, MD, University of California, San Francisco
Ana Velazquez Manana, MD, University of California, San Francisco
Meera Ragavan, MD, The Permanente Medical Group
Lucas Vitzthum, MD Stanford University
Heather Wakelee, MD, Stanford University



Helen Diller Family
Comprehensive
Cancer Center



1

25th Multidisciplinary Management of Cancers: A Case-based Approach

ACCREDITATION

This activity has been planned and implemented in accordance with the accreditation requirements and policies of the Accreditation Council for Continuing Medical Education through the joint providership of i3 Health and ANCO. In support of improving patient care, this activity has been planned and implemented by i3 Health and ANCO. i3 Health is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC), to provide continuing education for the healthcare team.

Physicians: i3 Health designates this live activity 15 AMA PRA Category 1 Credit™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

Physician Assistants: Physician Assistants, American Academy of Physician Assistants (AAPA) accepts certificates of participation for educational activities approved for AMA PRA Category 1 Credit™ from organizations accredited by ACCME. Physician assistants may receive a maximum of 15 hours of Category 1 credit for completing this program.

Successful completion of this CME activity, which includes participation in the evaluation component, enables the participant to earn up to 15 Medical Knowledge MOC points in the American Board of Internal Medicine's (ABIM) Maintenance of Certification (MOC) program.

Participants will earn MOC points equivalent to the amount of CME credits claimed for the activity. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABIM MOC credit. By providing this information, participants are agreeing to allow i3 Health to share this information with the ACCME.

INSTRUCTIONS TO RECEIVE CREDIT

An activity evaluation form will be distributed. To claim credit, you must fill out and submit the form at the conclusion of the program. Your certificate of attendance will either be mailed or emailed to you after your evaluations have been reviewed.

UNAPPROVED USE DISCLOSURE

This educational activity may contain discussion of published and/or investigational uses of agents that are not indicated by the FDA. The planners of this activity do not recommend the use of any agent outside of the labeled indications.

The opinions expressed in the educational activity are those of the faculty and do not necessarily represent the views of the planners. Please refer to the official prescribing information for each product for discussion of approved indications, contraindications, and warnings.

DISCLAIMER

The information provided at this CME activity is for continuing education purposes only and is not meant to substitute for the independent medical/clinical judgment of a healthcare provider relative to diagnostic and treatment options of a specific patient's medical condition.



Helen Diller Family
Comprehensive
Cancer Center



3

25th Multidisciplinary Management of Cancers: A Case-based Approach

Disclosures

Faculty Name	Role	Type of Financial Relationship	Company
Jonathan Riess	Chair		
Aneeqa Zafar	Fellow	Advisory Board or Panel	Advisory Board with honoraria paid to individual - BMS, Janssen, Genentech, Regeneron, Merus NV, Catalyst, Amgen, Oncohost, Merck, Pfizer, GSK, Daichi Sankyo, and Replimune
		Consultant	Consulting with honoraria paid to individual - BMS, Janssen, Genentech, Regeneron, Merus NV, Catalyst, Amgen, Oncohost, Merck, Pfizer, GSK, Daichi Sankyo, and Replimune
		Grants/Research Support	Research funding paid to institution - Pfizer, Boehringer Ingelheim, Revolution Medicines, ArriVent, Nuvalent, Kinnate, IO Biotech, AstraZeneca, Merck, Novartis, and Summit
Leah Backhus	Panelist	Advisory Board or Panel	Johnson & Johnson, AstraZeneca, and Genentech
		Grants/Research Support	Department of Veterans Affairs and NIH
Deepti Behl	Panelist	Advisory Board or Panel	BMS, Boehringer, Janssen and Janssen, and Caris
Colin Blakely	Panelist	Advisory Board or Panel	Gilead, Bayer, BMS, Takeda, Pfizer, Janssen, and Taiho
		Grants/Research Support	AstraZeneca, Genentech, Mirati, Puma, and Novartis
David Cooke	Panelist	Speaker's Bureau	Bristol Myers Squibb - Speaker Honoraria
		Grants/Research Support	Intuitive Surgical - In kind education support
		Other Financial or Material Support (royalties, patents, etc.)	Oxford University Press - Royalties

ANCO and i3 Health have mitigated all relevant financial relationships.

UCSF Helen Diller Family
Comprehensive
Cancer Center

Stanford
Cancer Institute
cancer.stanford.edu
Stanford MEDICINE

UCDAVIS
HEALTH

COMPREHENSIVE
CANCER CENTER

ANCO
Educating and Empowering the
Northern California Cancer Community

4

25th Multidisciplinary Management of Cancers: A Case-based Approach

Disclosures

David Gandara	Panelist	Advisory Board or Panel	Mirati Therapeutics and Regeneron
		Consultant	AstraZeneca, Exact Sciences, Genentech, Guardant Health, Henlius USA, and Foundation Medicine
		Grants/Research Support	Astex Pharma, Amgen Inc., and Genentech
Johannes Kratz	Panelist	Advisory Board or Panel	Intuitive Surgical ION Medical Advisory Board
		Speaker's Bureau	Razor Genomics; Consultant: Razor Genomics and Intuitive Surgical
Ana Velazquez Manana	Panelist	Advisory Board or Panel	AbbVie, AstraZeneca Pharmaceuticals, Janssen, Merus NV, Novocure, and Regeneron
		Other Financial or Material Support (royalties, patents, etc.)	Merck and Pfizer
Meera Ragavan	Panelist	Consultant	Trial Library, Inc.
		Grants/Research Support	Community Benefit Program and The Permanente Medical Group
Lucas Vitzthum	Panelist	Disclosed no relevant financial relationships.	

ANCO and i3 Health have mitigated all relevant financial relationships.

UCSF Helen Diller Family
Comprehensive
Cancer Center

Stanford
Cancer Institute
cancer.stanford.edu
Stanford MEDICINE

UCDAVIS
HEALTH

COMPREHENSIVE
CANCER CENTER

ANCO
Educating and Empowering the
Northern California Cancer Community

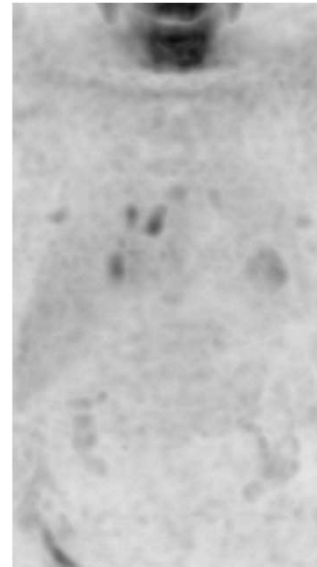
5

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Case 1

71 year-old man, never smoker, presented with cough

- **CXR:** RLL mass
- **PET-CT:** FDG avid RLL lung mass (2 cm SUV=6), with FDG avid hilar (1.5 cm mSUV 5.1) & subcarinal LN(4 cm, SUV6)
- **MR brain:** negative.
- **CT guided biopsy of RLL:** NSCLC, adenocarcinoma
- (TTF1+)



Stanford
Cancer Institute
cancer.stanford.edu
Stanford MEDICINE

UC DAVIS
HEALTH

COMPREHENSIVE
CANCER CENTER

UCSF

Helen Diller Family
Comprehensive
Cancer Center

ANCO
Educating and Empowering the
Northern California Cancer Community

6

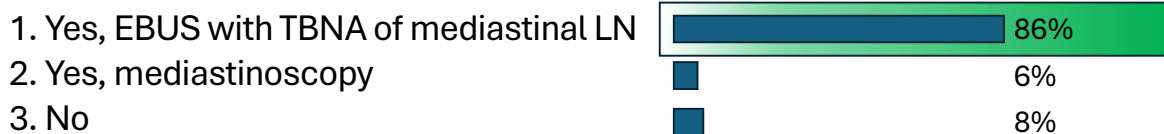
6

25th Multidisciplinary Management of Cancers: A Case-Based Approach

The patient has suspected N1 and N2 disease on PET CT with FDG avid subcarinal and hilar LN.

Question 1A:

Do you stage the mediastinum prior to determining treatment options?



010

65 ●

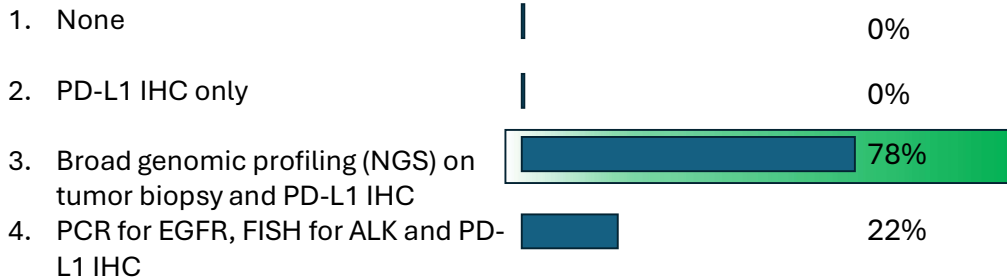
8

25th Multidisciplinary Management of Cancers: A Case-Based Approach

The patient has EBUS with TBNA of station 4R, 7 and 11R. All are positive for NSCLC-adenocarcinoma

Question 1B:

In this 71 year old never smoker with Stage IIIA NSCLC-adenocarcinoma (pT1bpN2Mx) (bulky multi station N2 disease), what molecular testing on tumor tissue would you order?



010

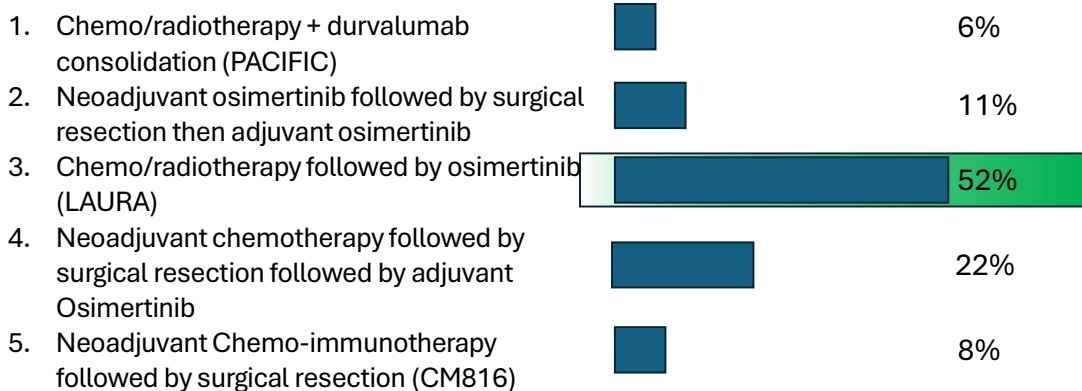
76 ●

10

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Tissue NGS: **EGFR Exon19del+**, PD-L1 TPS 70%, ALK/ROS negative

Question 1C: What general treatment approach would you take with this never smoker 71-year-old patient with stage IIIA (pT1bpN2Mx) (multistation N2 disease-bulky), NSCLC-adenocarcinoma **EGFR E19del+** on molecular testing and high PD-L1 IHC?



010

63 ●

12

LAURA – Improved PFS with adjuvant Osimertinib after Chemoradiotherapy in Stage III EGFR-Mutated NSCLC

Patients with locally advanced, unresectable stage III* EGFRm NSCLC with no progression during / following definitive CRT† treatment

Key inclusion criteria:

- ≥18 years (Japan: ≥20)
- WHO PS 0 / 1
- Confirmed locally advanced, unresectable stage III* NSCLC
- Ex19del / L858R‡
- Maximum interval between last dose of CRT and randomization: 6 weeks

Osimertinib 80 mg, once daily

Randomization

2:1

(N=216)

Stratification by:
Concurrent vs sequential CRT
Stage IIIA vs stage IIIB/IIIC
China vs non-China

Placebo, once daily

Treatment duration until BICR-assessed progression (per RECIST v1.1), toxicity, or other discontinuation criteria

Open-label osimertinib after BICR-confirmed progression offered to both treatment arms[§]

Tumor assessments:

- Chest CT / MRI and brain MRI
- At baseline, every 8 weeks to Week 48, then every 12 weeks until BICR-assessed progression

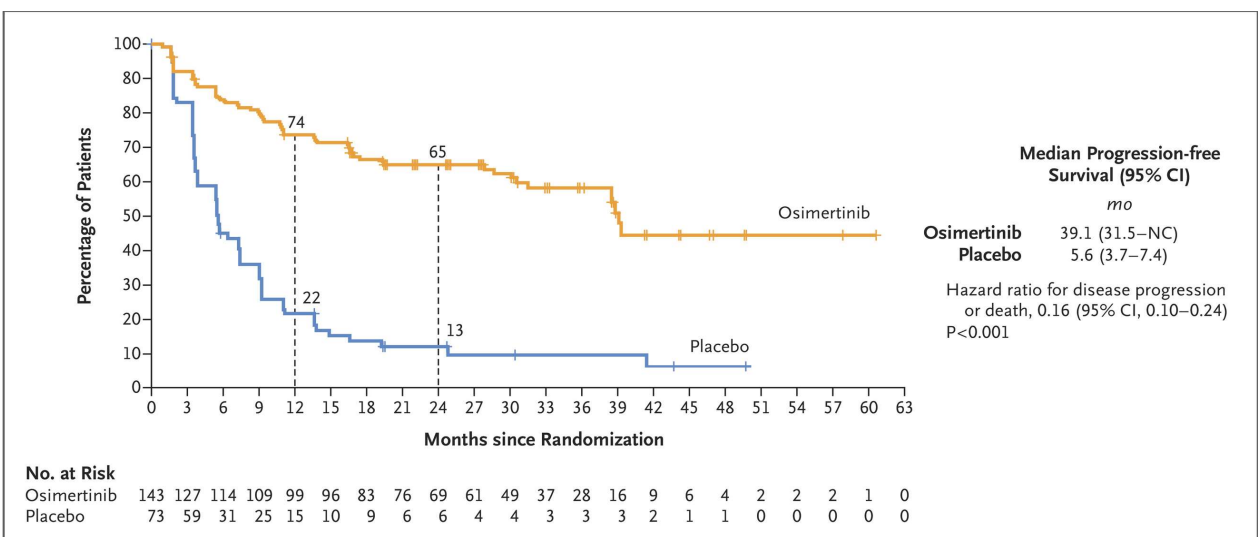
Endpoints

- **Primary endpoint:** PFS assessed by BICR per RECIST v1.1 (sensitivity analysis: PFS by investigator assessment)
- **Secondary endpoints included:** OS, CNS PFS, safety

Shun Lu et al. N Engl J Med 2024;391:585-597

13

LAURA – Improved PFS with adjuvant Osimertinib after Chemoradiotherapy in Stage III EGFR-Mutated NSCLC

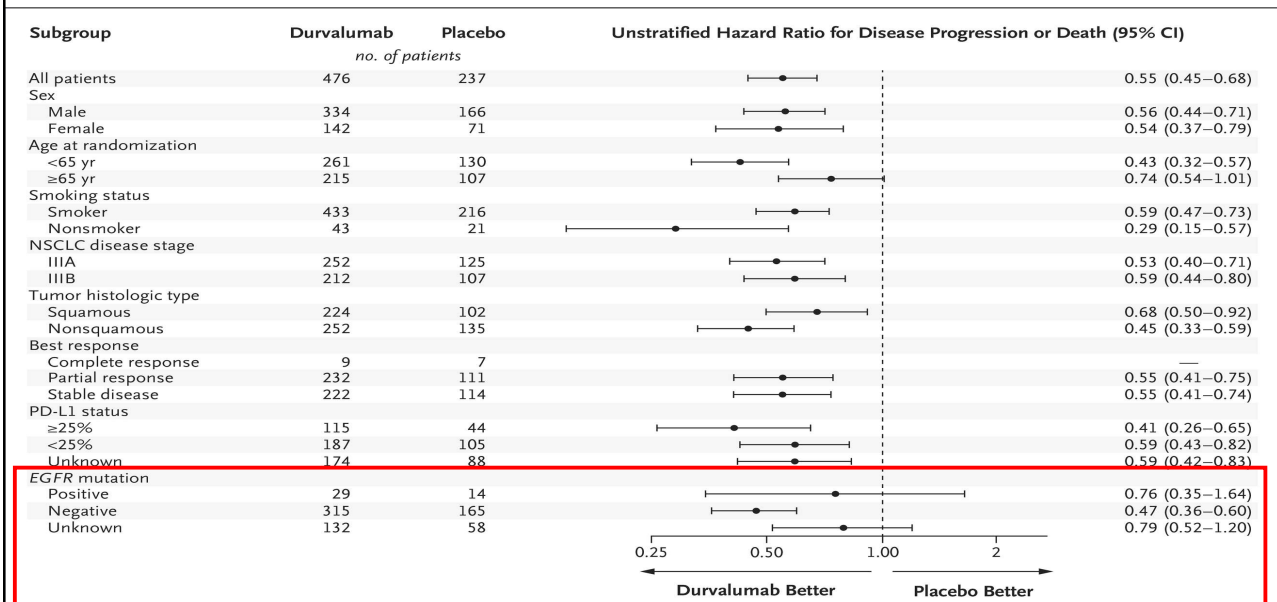


Shun Lu et al. N Engl J Med 2024;391:585-597

14

14

PACIFIC: Progression-Free Survival after Chemoradiotherapy with or without Durvalumab in EGFR-mut NSCLC



15

25th Multidisciplinary Management of Cancers: A Case-Based Approach

EGFR Exon19del⁺, PD-L1 TPS 70%, ALK/ROS negative

The patient is treated with concurrent weekly carboplatin+paclitaxel and radiation, followed by consolidation osimertinib. About 8 months after initiating osimertinib he develops shortness of breath. CT Chest reveals large R pleural effusion and bilateral pulmonary nodules. Thoracentesis improves symptoms and cytology on cell block shows lung adenocarcinoma (TTF1+). NGS off the cell block shows the EGFR E19del and no clear mechanism of resistance.

Question 1D: What would you treat the patient with as next line of treatment?

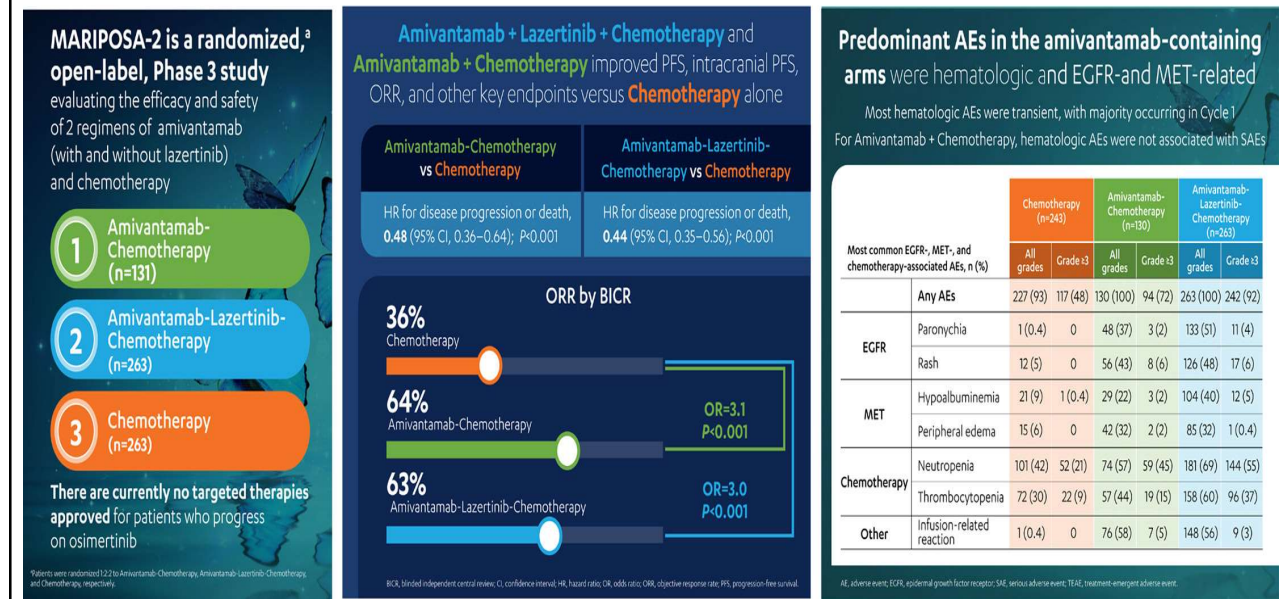
1. Add carboplatin/pemetrexed to Osimertinib 11%
2. Stop osimertinib, start carboplatin/pemetrexed +/- bevacizumab 17%
3. Stop osimertinib, start carboplatin/pemetrexed and amivantamab. 45%
4. Stop osimertinib, start amivantamab and Lazertinib 28%

010

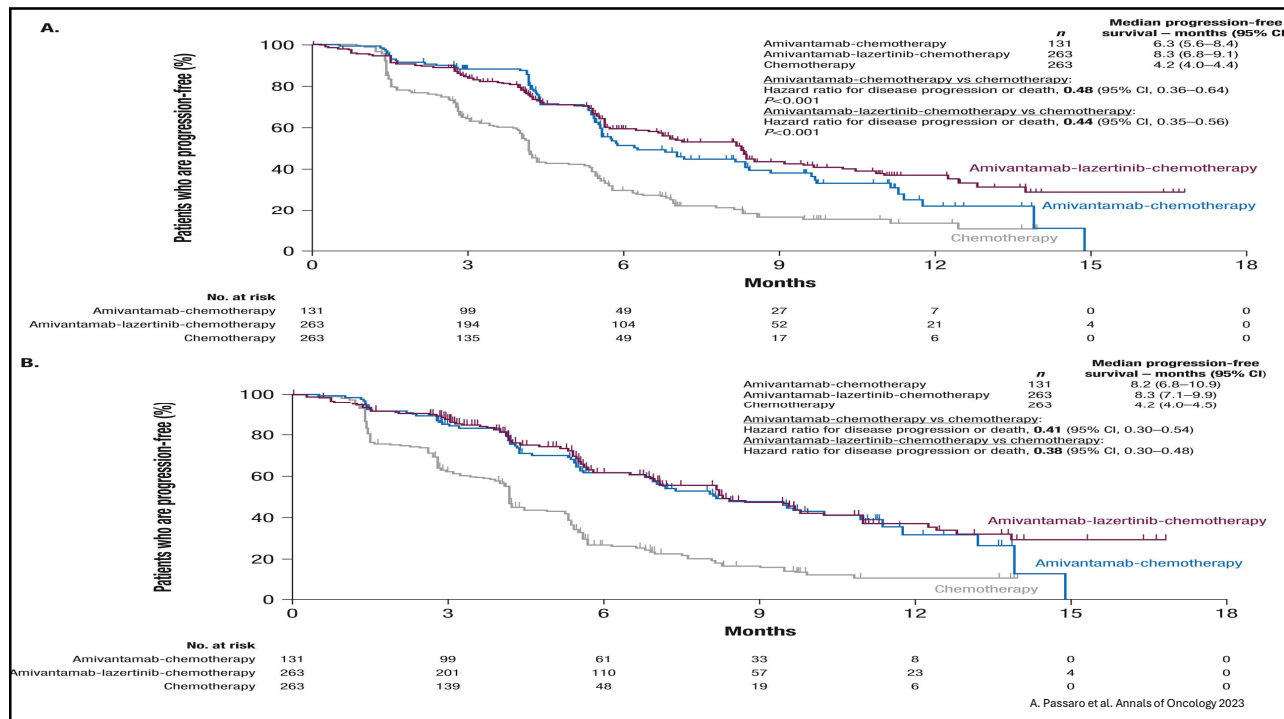
65

17

MARIPOSA-2 (NCT04988295) demonstrated improved PFS versus chemotherapy after disease progression on osimertinib in patients with EGFR-mutated advanced NSCLC



18



19

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Case 1 – Take Home Messages

- **LAURA:** Adding Osimertinib after concurrent chemoradiation resulted in significantly longer progression-free survival than placebo in patients with unresectable stage III *EGFR*-mutated NSCLC
- **PACIFIC:** No benefit from adding consolidation durvalumab after definitive CRT in *EGFR* mutated, stage III NSCLC patients and higher frequency of irAEs
- **MARIPOSA-2:** amivantamab + carbo + pemetrexed for *EGFR*-mutated NSCLC after progression on osimertinib improves PFS vs carbo + pemetrexed alone. Overall survival data immature, but trend towards OS.



20

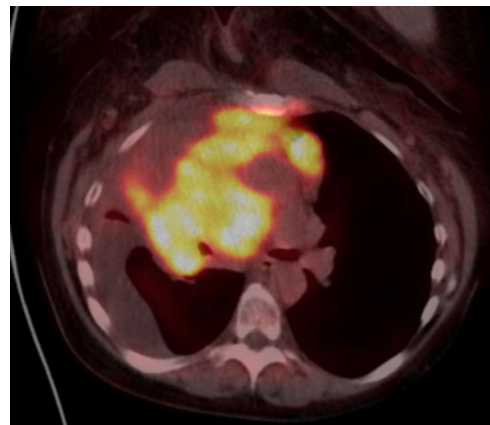
25th Multidisciplinary Management of Cancers: A Case-Based Approach

Case 2

53 yo F, 25 ppd smoker, presented with SOB,
Cough & chest pain

- **CXR:** RUL lung mass.
- **PET CT:** FDG avid RUL lung mass, mediastinal LAD, R hilar LN and R SCL LN
- **MR brain:** negative
- **EBUS bx:** small cell lung cancer.



Drainage of R pleural effusion with neg cytology for malignancy.



21

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Question 2A: Would you order broad genomic profiling for this 53 year old woman with 25 pack-year smoking history and newly diagnosed limited stage SCLC?

- | | | |
|--|--|-----|
| 1. Yes, I want to see if p53 and RB1 mutations are present |  | 61% |
| 2. No, broad genomic profiling is not indicated. |  | 39% |

010





69

23

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Molecular testing confirms p53 and RB1 co-mutations. You diagnose the patient with limited stage small cell lung cancer.

Question 2B: What treatment and radiation schedule would you offer?

- | | | |
|---|--|-----|
| 1. Carboplatin/Etoposide/Atezolizumab without RT |  | 4% |
| 2. Cisplatin/Etoposide + RT bid (45 Gy in 1.5 Gy BID fractions) |  | 42% |
| 3. Cisplatin/Etoposide + RT daily (66 Gy in 2 Gy QD fractions) |  | 47% |
| 4. Carboplatin/Etoposide/Durvalumab without RT |  | 7% |

010

57

25

25th Multidisciplinary Management of Cancers: A Case-Based Approach

The patient completes Cisplatin/Etoposide/XRT given in once daily 2 Gy fractions with a response to treatment.

Question 2C: What would you offer next?

- | | | |
|---|---------------------------------|-----|
| 1. Consolidation Durvalumab for 2 Years with MRI brain surveillance | <div style="width: 58%;"></div> | 58% |
| 2. Observation only with MRI brain + CT Chest/Abdomen/Pelvis | <div style="width: 7%;"></div> | 7% |
| 3. Prophylactic Cranial Irradiation (PCI) followed by surveillance | <div style="width: 8%;"></div> | 8% |
| 4. Consolidation durvalumab for 2 years and PCI | <div style="width: 26%;"></div> | 26% |

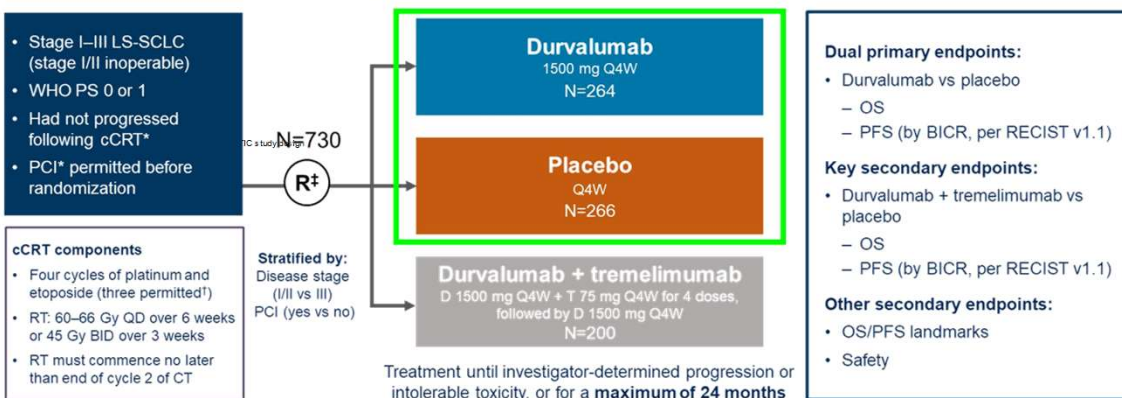
010

72

27

ADRIATIC study design

Phase 3, randomized, double-blind, placebo-controlled, multicenter, international study (NCT03703297)

2024 ASCO
ANNUAL MEETING

#ASCO24

PRESENTED BY: Dr David R. Spigel

Presentation is property of the author and ASCO. Permission required for reuse: contact permissions@asco.org

BICR, blinded independent central review; BID, twice daily; CT, chemotherapy; D, durvalumab; PCI, prophylactic cranial irradiation; PS, performance status; Q4W, every 4 weeks; QD, once daily; RECIST, Response Evaluation Criteria in Solid Tumors; RT, radiotherapy; T, tremelimumab; WHO, World Health Organization

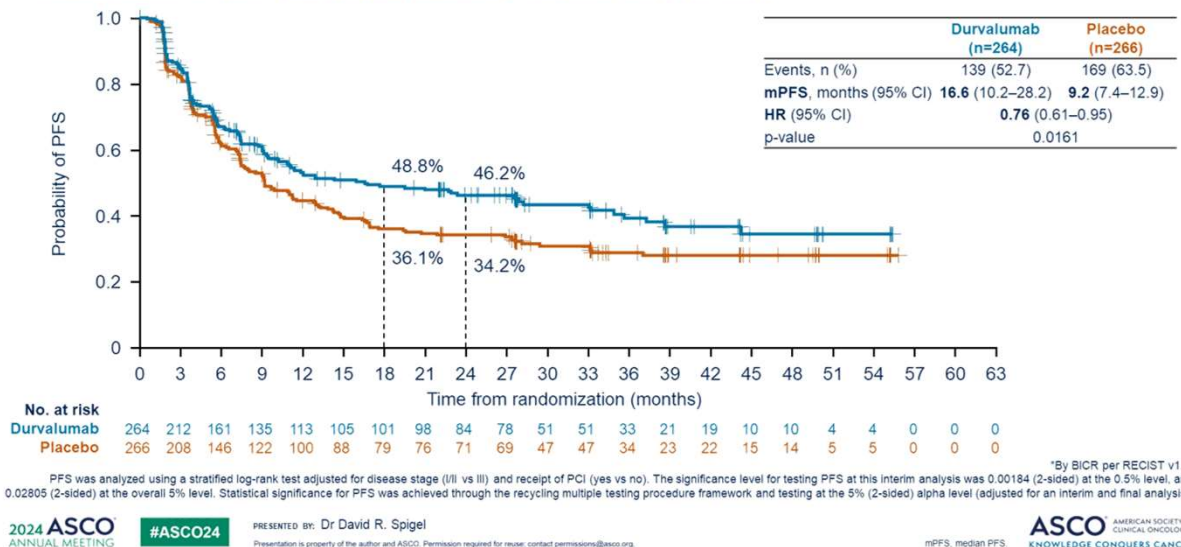
ASCO
AMERICAN SOCIETY OF
CLINICAL ONCOLOGY
KNOWLEDGE CONQUERS CANCER

Spigel et al, JCO, ASCO 2024 meeting abstract

28

Progression-free survival* (dual primary endpoint)

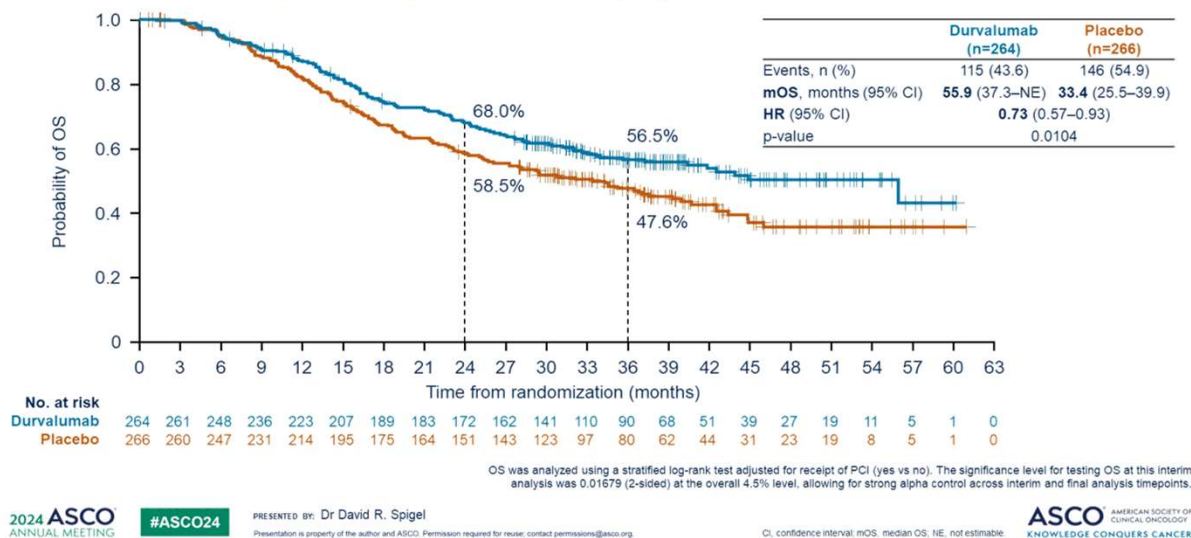
- Median duration of follow up in censored patients: 27.6 months (range 0.0–55.8)



29

Overall survival (dual primary endpoint)

- Median duration of follow up in censored patients: 37.2 months (range 0.1–60.9)

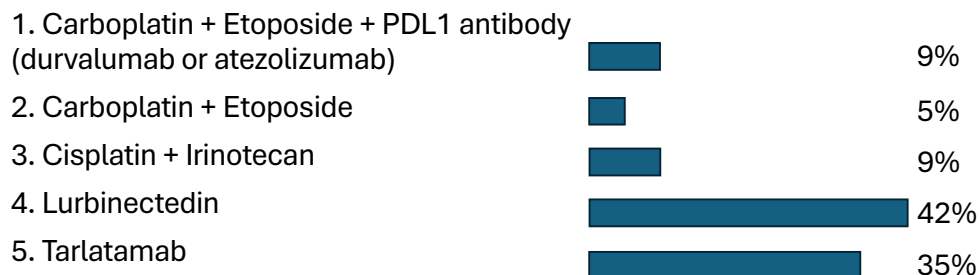


30

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Three months after starting consolidation durvalumab, she develops metastasis to the adrenal gland, liver, lung and lymph nodes. Brain MRI is negative. She still has good performance status, ECOG 1

Question 2D: What second line therapy would you offer?



010

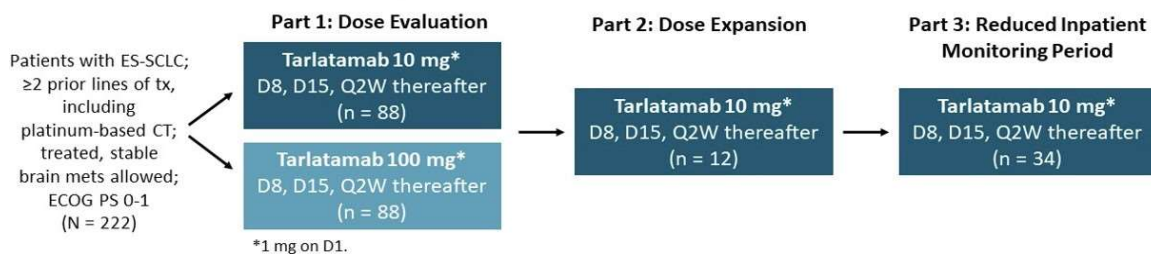
65

32

DeLLphi-301: Tarlatamab improves ORR and DOS in previously treated SCLC

Open-label phase II study

- Patients required to have received 1 platinum-based regimen and ≥ 1 other line of tx; median lines of tx: 2 (range: 1-8)



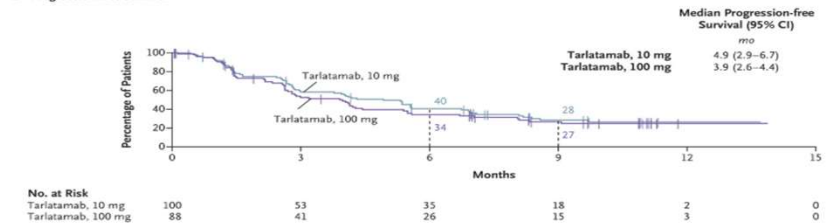
- Primary endpoints:** ORR per RECIST v1.1 by BICR
- Secondary endpoints:** DoR. DCR. PFS. OS. safety. drug serum concentration

Myung-Ju Ahn N Engl J Med 2023;389:2063-2075

33

DeLLphi-301: Tarlatamab improves ORR and DOS in previously treated SCLC

B Progression-free Survival

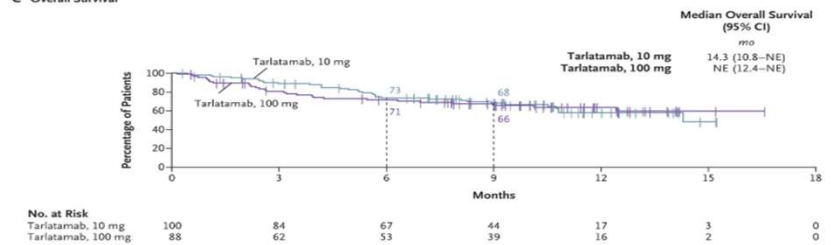


Objective response in 10mg group: 40%

Objective response in 100mg group: 32%

Median duration of response was at least 6 months in 59% patients.

C Overall Survival



Myung-Ju Ahn N Engl J Med 2023;389:2063-2075

34

34

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Question 2F: Patient is started on Tarlatamab. 16 hours after the first dose is administered, and while monitored in an inpatient-like setting, the patient develops a new fever of 39.2°C. She is hypotensive and oxygenation saturation is 88%. Infectious work up is sent but there is low suspicion for infection. Imaging is unrevealing.

What treatment would you offer next?

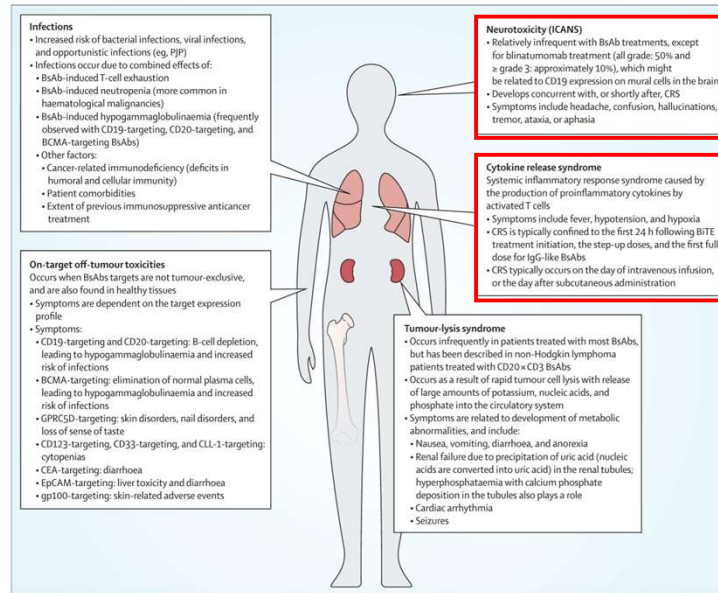
- | | | |
|--|----------------------|-----|
| 1. Start supplemental oxygen, draw blood cultures and treat empirically for pneumonia with antibiotics | | 2% |
| 2. Give supplemental oxygen, start IV steroids and tocilizumab | ████████████████████ | 97% |
| 3. Continue symptomatic treatment | | 2% |

010

64

36

Key Toxicities with Bispecific Antibody Treatment



Cytokine Release Syndrome
CRS with tarlatamab
– G3 1% 10 mg, 6% 100 mg

IL-6 driven
– Glucocorticoids
– Tocilizumab (anti-IL-6R ab)

N. van de Donk, S. Zweegman Lancet 2023.

37

DeLLphi-301: Tarlatamab improves ORR and DOS in previously treated SCLC



Incidence of CRS in 10-mg group: 51%
Incidence of CRS in 100-mg group: 61%

Grade 1 CRS: 30% vs 32%
Grade 2 CRS: 20% vs 23%
Grade 3 CRS: 1% vs 6%

Median onset of CRS: 13h
Median duration of CRS: 4 days

Grade 1-2 ICANS: 8% vs 28%
Grade 3 ICANS: None vs 5%

Median onset of ICANS: 5 days

Myung-Ju Ahn N Engl J Med 2023;389:2063-2075

38

CRS Grade	Defining Symptoms	IMDELLTRA Dosage Modification	Management
Grade 1	Symptoms require symptomatic treatment only (e.g., fever $\geq 100.4^{\circ}\text{F}$ without hypotension or hypoxia).	Withhold IMDELLTRA until event resolves, then resume IMDELLTRA at the next scheduled dose ⁶ .	<ul style="list-style-type: none"> Administer symptomatic treatment (e.g., acetaminophen) for fever.
Grade 2	Symptoms require and respond to moderate intervention. <ul style="list-style-type: none"> Fever $\geq 100.4^{\circ}\text{F}$. Hypotension responsive to fluids not requiring 	Withhold IMDELLTRA until event resolves, then resume IMDELLTRA at the next scheduled dose ⁶ .	<ul style="list-style-type: none"> Recommend hospitalization for a minimum of 24 hours with cardiac telemetry and pulse oximetry. Administer symptomatic treatment (e.g., acetaminophen) for fever. Administer supplemental oxygen and intravenous fluids when indicated. Consider dexamethasone⁶ (or equivalent) 8 mg IV. Consider tocilizumab (or equivalent).
Grade 3	Severe symptoms defined as temperature $\geq 38^{\circ}\text{C}$ with: <ul style="list-style-type: none"> Hemodynamic instability requiring a vasopressor (with or without vasopressin) or Worsening hypoxia or respiratory distress requiring high flow nasal canula ($> 6 \text{ L/min}$ oxygen) or face mask. 	Withhold IMDELLTRA until the event resolves, then resume IMDELLTRA at the next scheduled dose ⁶ . For recurrent Grade 3 events, permanently discontinue IMDELLTRA.	In addition to Grade 2 treatment: <ul style="list-style-type: none"> Recommend intensive monitoring, e.g., ICU care. Administer dexamethasone⁶ (or equivalent) 8 mg IV every 8 hours up to 3 doses. Vasopressor support as needed. High flow oxygen support as needed. Recommend tocilizumab (or equivalent) Prior to the next dose, administer concomitant medications as recommended for Cycle 1 (see Table 3). When resuming treatment at the next planned dose, monitor patients from the start of the IMDELLTRA infusion for 22 to 24 hours in an appropriate healthcare setting.

CRS Grade	Defining Symptoms	IMDELLTRA Dosage Modification	Management
Grade 4	Life-threatening symptoms defined as temperature $\geq 100.4^{\circ}\text{F}$ with: <ul style="list-style-type: none"> Hemodynamic instability requiring multiple vasopressors (excluding vasopressin). Worsening hypoxia or respiratory distress despite oxygen administration requiring positive pressure. 	Permanently discontinue IMDELLTRA.	<ul style="list-style-type: none"> ICU care. Per Grade 3 treatment. Recommend tocilizumab (or equivalent).

39

ICANS management

ICANS Grade ^a	Defining Symptoms	IMDELLTRA Dosage Modifications	Management
Grade 1 ^a	ICE score 7-9 ^b with no depressed level of consciousness.	<ul style="list-style-type: none"> Withhold IMDELLTRA until ICANS resolves, then resume IMDELLTRA at the next scheduled dose⁶. 	<ul style="list-style-type: none"> Supportive care.
Grade 2 ^a	ICE score 3-6 ^b and/or mild somnolence awaking to voice.	<ul style="list-style-type: none"> Withhold IMDELLTRA until ICANS resolves, then resume IMDELLTRA at the next scheduled dose⁶. 	<ul style="list-style-type: none"> Supportive care. Dexamethasone⁶ (or equivalent) 10 mg IV. Can repeat every 6 hours or methylprednisolone 1 mg/kg IV every 12 hours if symptoms worsen. Monitor neurologic symptoms and consider consultation with neurologist and other specialists for further evaluation and management. Monitor patients for 22 to 24 hours following the next dose of IMDELLTRA.
Grade 3 ^a	ICE score 0-2 ^b and/or depressed level of consciousness awakening only to tactile stimulus and/or any clinical seizure focal or generalized that resolves rapidly or nonconvulsive seizures on EEG that resolve with intervention and/or Focal or local edema on neuroimaging.	<ul style="list-style-type: none"> Withhold IMDELLTRA until the ICANS resolves, then resume IMDELLTRA at the next scheduled dose⁶. If there is no improvement to grade ≤ 1 within 7 days or grade 3 toxicity reoccurs within 7 days of reinitiation, permanently discontinue IMDELLTRA. 	<ul style="list-style-type: none"> Recommend intensive monitoring, e.g., ICU care. Consider mechanical ventilation for airway protection. Dexamethasone⁶ (or equivalent) 10 mg IV every 6 hours or methylprednisolone 1 mg/kg IV every 12 hours. Consider repeat neuroimaging (CT or MRI) every 2-3 days if patient has persistent Grade ≥ 3 neurotoxicity. Monitor patients for 22 to 24 hours following the next dose of IMDELLTRA.

Grade 4 ^a	ICE score 0 ^b (patient is unarousable and unable to perform ICE) and/or Stupor or coma and/or Life-threatening prolonged seizure (> 5 minutes) or repetitive clinical or electrical seizures without return to baseline in between and/or diffuse cerebral edema on neuroimaging, decerebrate or decorticate posturing or papilledema, cranial nerve VI palsy, or Cushing's triad.	<ul style="list-style-type: none"> Permanently discontinue IMDELLTRA. 	<ul style="list-style-type: none"> ICU care. Consider mechanical ventilation for airway protection. High dose corticosteroids⁶. Consider repeat neuroimaging (CT or MRI) every 2-3 days if patient has persistent Grade ≥ 3 neurotoxicity. Treat convulsive status epilepticus per institutional guidelines.
----------------------	--	--	--

40

Case 2 – Take Home Messages

- **ADRIATIC:** Consolidation durvalumab improved both PFS and OS in patients with limited stage SCLC who did not progress after concurrent chemoradiation
- **DELPHI 301:** Tarlatamab, administered as a 10-mg dose every 2 weeks, showed antitumor activity with durable objective responses and promising survival outcomes in patients with previously treated SCLC.
- Most common adverse effects from Tarlatamab were grade 1 CRS, managed with supportive care. Consider IV steroids and/or tocilizumab for higher grade CRS.

41

41

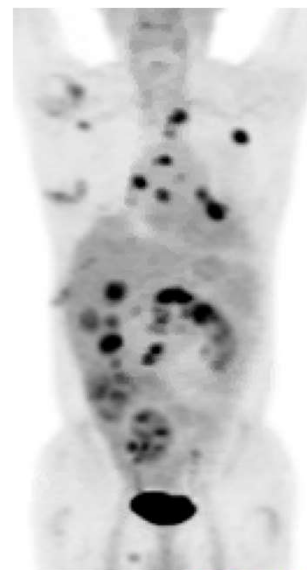
25th Multidisciplinary Management of Cancers: A Case-Based Approach

Case 3

58 yo M, 30 pack-year former smoker, presented with cough and dyspnea

- **PET-CT:** LLL primary with lymphadenopathy in the hilum and mediastinum. Diffuse bone and liver mets noted
- **MRI brain:** negative.
- **Biopsy:** NSCLC, squamous histology
- PD-L1 TPS = <1%
- **ECOG:** 1

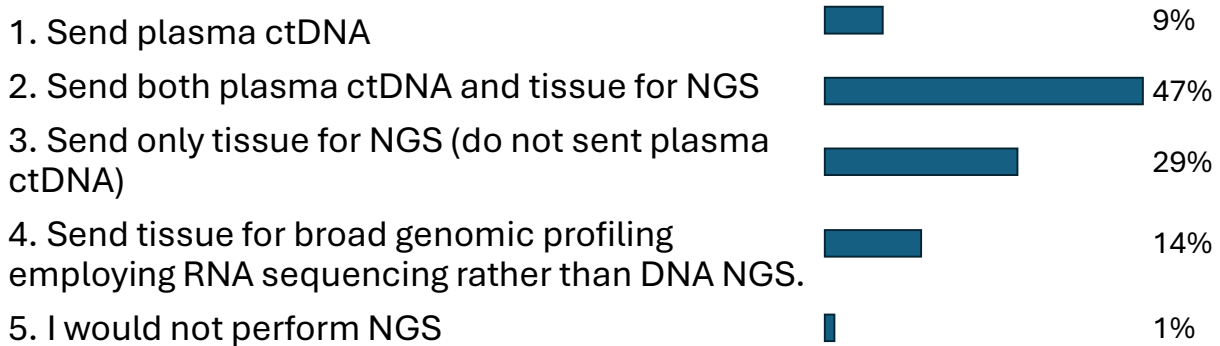
Stage IVB (pT3N3M1C) squamous NSCLC



42

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Question 3A: Do you perform NGS on a patient with a smoking history and Stage IV squamous cell lung cancer?



010

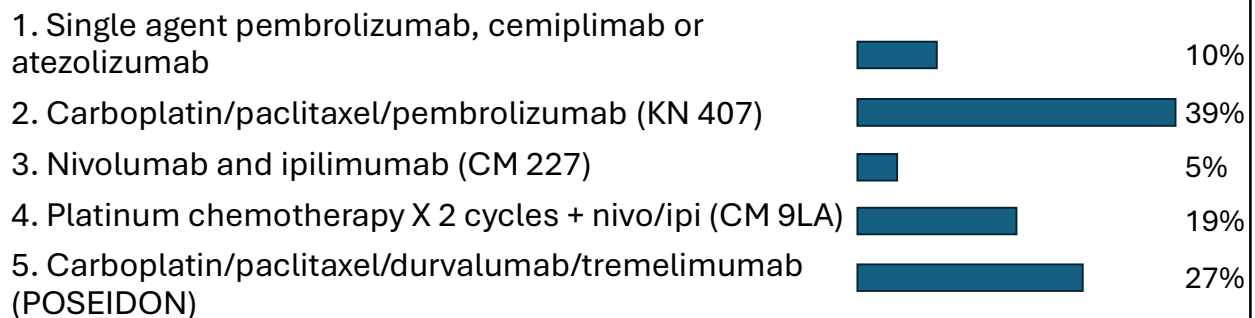
70

44

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Tissue NGS is sent and shows a KEAP-1 mutation and TMB=15 mut/mb

Question 3B: What treatment would you offer for Stage IVB NSCLC-squamous histology PD-L1 <1% and KEAP-1 mutation



010

62

46

	KEYNOTE 407 5 year survival outcomes (Novello et al, JCO 2023)	CHECKMATE 227-PART 1 5 year survival outcomes (Brahmer et al JCO 2022)	CHECKMATE 9LA 5 year survival outcomes (Paz-Ares et al, JTO 2023)	POSEIDON (Johnson et al JCO 2022)
COMPARISON	Carbo-Taxol + Pembro vs Carbo-Taxol-placebo x 4 cycles -> pembro vs placebo for 35 cycles	PD-L1 ≥ 1%: Nivo/Ipi, Nivo or chemo PD-L1 < 1%: Nivo/Ipi, Nivo/chemo, chemo alone	Nivo/Ipi + 2 cycles chemotherapy vs 4 cycles of chemotherapy.	Tremelimumab plus durvalumab and chemotherapy (T + D + CT) and D + CT vs CT alone 1L mNSCLC
PFS	10.8% vs 3.5 [5 year]	PD-L1 ≥ 1%: 5.1 vs 4.2 vs 5.6 PD-L1 < 1%: 5.1 vs 5.6 vs 4.7	5 year PFS 55% vs 38%	D+ CT: 5.5 v 4.8 mo D+ CT + T: 6.2 v 4.8mo
OS based on PD-L1 status	PD-L1 > 50% 19.9 v 11.5% [5-yr] PD-L1 < 1% 15% v 11% [5 -yr]	5-year OS rate of 39% (combined PD-L1 populations). PD-L1 ≥ 1%: 17mo vs 14.9 vs 15.7mo PD-L1 < 1%: 17.4mo vs 15.2 vs 12.2mo	PD-L1 ≥ 1%, 15.8 vs 10.9 mo PD-L1 < 1%, 17.7mo vs 9.8mo	D+CT: PD-L1 > 50% HR 0.63 [0.5-0.88] PD-L1 < 1% HR 0.99 [0.7-1.30] D+CT+T PD-L1 > 50% HR 0.65 [0.47-0.89] PD-L1 < 1% HR 0.77 [0.48-1]
OS based on histology:	Squamous: PD-L1 > 50% 19.9 v 11.5% [5-yr] PD-L1 < 1% 15% v 11% [5 -yr]	Non-squamous PD-L1 ≥ 1%: 0.82 [0.67 to 0.99]; PD-L1 < 1%: 0.70 [0.54 to 0.90] squamous PD-L1 ≥ 1%: 0.69 [0.52 to 0.91] PD-L1 < 1%: 0.52 [0.34 to 0.82]	squamous: 14.5 vs 9.1mo non squamous: 17.8 vs. 12mo	D+CT Squamous HR 0.84 [0.6-1.10] Non squamous HR 0.82[0.6-1.03] D+CT+T Squamous HR 0.88 [0.68-1.16] - NS Non squamous HR 0.70 [0.5-0.87]

47

POSEIDON: Exploratory analysis showed improved OS with D+CT+T regardless of KEAP-1 mutation

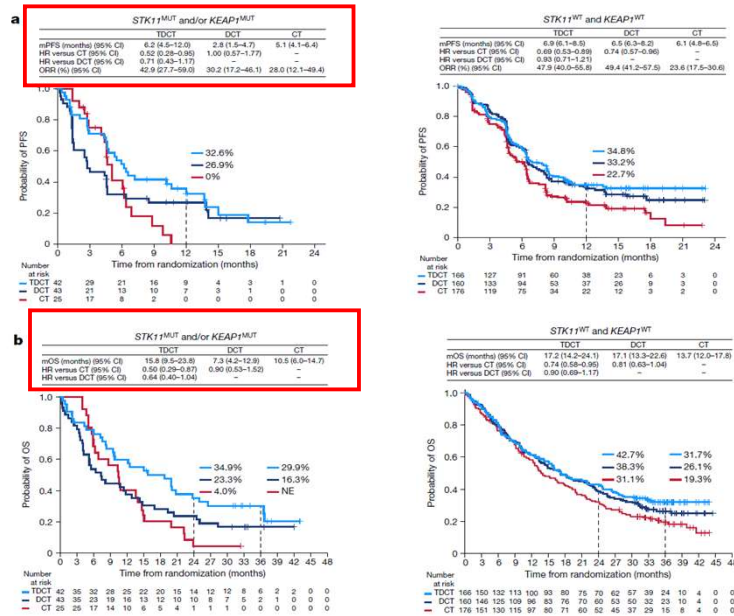
Mutation-evaluable population	T+D+CT	D+CT	CT
KRASm, n	72	83	64
Median OS (95% CI), months	16.0 (9.7–27.8)	11.4 (8.1–14.8)	10.5 (7.6–12.6)
OS HR vs CT (95% CI)	0.63 (0.42–0.92)	0.83 (0.58–1.20)	–
24-month OS rate (95% CI), %	44.4 (32.8–55.4)	26.5 (17.6–36.3)	23.0 (13.4–34.2)
KRASwt, n	253	247	254
Median OS (95% CI), months	13.4 (11.5–15.8)	13.7 (11.5–15.8)	12.8 (10.6–15.2)
OS HR vs CT (95% CI)	0.84 (0.69–1.01)	0.86 (0.71–1.05)	–
24-month OS rate (95% CI), %	29.2 (23.7–34.9)	30.6 (24.9–36.4)	22.7 (17.7–28.0)
STK11m, n	47	41	25
Median OS (95% CI), months	11.7 (8.9–18.7)	6.4 (3.9–11.4)	10.7 (6.0–14.9)
OS HR vs CT (95% CI)	0.80 (0.48–1.38)	1.19 (0.70–2.05)	–
24-month OS rate (95% CI), %	23.4 (12.6–36.2)	17.1 (7.5–29.9)	8.3 (1.4–23.3)
STK11wt, n	278	289	293
Median OS (95% CI), months	14.6 (12.5–16.6)	14.0 (12.2–15.8)	12.2 (10.6–14.1)
OS HR vs CT (95% CI)	0.77 (0.64–0.92)	0.82 (0.68–0.98)	–
24-month OS rate (95% CI), %	34.2 (28.7–39.9)	31.3 (26.0–36.8)	24.0 (19.2–29.0)
KEAP1m, n	22	23	6
Median OS (95% CI), months	13.7 (7.2–26.5)	8.1 (4.0–12.9)	8.7 (5.1–NE)
OS HR vs CT (95% CI)	0.43 (0.16–1.25)	0.77 (0.31–2.15)	–
24-month OS rate (95% CI), %	35.0 (16.1–54.7)	19.3 (6.2–37.9)	0.0 (0.0–0.0)
KEAP1wt, n	303	307	312
Median OS (95% CI), months	14.0 (11.8–16.1)	13.5 (11.7–14.9)	12.2 (10.6–13.9)
OS HR vs CT (95% CI)	0.79 (0.66–0.94)	0.85 (0.71–1.01)	–
24-month OS rate (95% CI), %	32.5 (27.2–37.8)	30.3 (25.2–35.5)	23.2 (18.6–28.1)

Mutation-evaluable population	T+D+CT	D+CT	CT
Non-squamous histology*			
KRASm, n	60	69	53
Median OS (95% CI), months	25.7 (9.9–36.5)	12.6 (7.5–16.9)	10.4 (7.5–13.6)
OS HR vs CT (95% CI)	0.56 (0.36–0.88)	0.80 (0.53–1.21)	–
24-month OS rate (95% CI), %	51.7 (38.4–63.4)	30.4 (20.1–41.4)	25.6 (14.6–38.1)
STK11m, n	31	34	22
Median OS (95% CI), months	15.0 (8.2–23.8)	6.9 (3.6–12.9)	10.7 (6.0–14.9)
OS HR vs CT (95% CI)	0.56 (0.30–1.03)	1.03 (0.59–1.84)	–
24-month OS rate (95% CI), %	32.3 (16.9–48.6)	20.6 (9.1–35.3)	4.5 (0.3–18.9)

Data cutoff: 12 March 2021. HRs calculated by unstratified analysis. Mutation categories are not mutually exclusive, with some patients having co-mutations. The mutation-evaluable population included patients with both squamous and non-squamous histology. CI, confidence interval; NE, not estimable. *The subgroup with KEAP1m non-squamous mNSCLC was not analysed due to insufficient patient numbers.

48

CTLA4 blockade abrogates *KEAP1*/*STK11*-related resistance to PD-(L)1 inhibitors



49

25th Multidisciplinary Management of Cancers: A Case-Based Approach

The patient is initiated on nivolumab+ ipilimumab + carboplatin/paclitaxel (9LA). The patient develops multiple new lung nodules and several bone sites after 8 months of stable disease. He still has excellent performance status (PS=1) and is interested in further treatment.

Question 3C: What would you treat with next?

1. Docetaxel +/- ramucirumab 70%
2. Docetaxel monotherapy 2%
3. Carboplatin/paclitaxel/Pembrolizumab 11%
4. Rechallenge with carboplatin (combined with gemcitabine or paclitaxel) 14%
5. Afatinib 4%

010

57

51

24th Multidisciplinary Management of Cancers: A Case-Based Approach

The patient was treated with docetaxel/ramucirumab

Case 3 – Take home messages

- **KEYNOTE 407:** Pembro combined with chemotherapy improves PFS and OS in previously untreated mNSCLC, squamous histology. Patients who completed 35 cycles of IO had ORR > 90%
- **CHECKMATE 9LA:** Dual ICI with Nivo/Ipi + chemo provided long-term, durable clinical benefit in metastatic NSCLC. Magnitude of benefit was higher in PD-L1 < 1% or squamous histology subgroups. Treatment discontinuation due to TRAEs had no negative impact on efficacy
- **POSEIDON:** 1L tremelimumab + durvalumab + chemotherapy (T+D+CT) demonstrated improved PFS & OS compared to chemotherapy alone.
- STK11/KEAP1 mutations, portend poor prognosis and worse response to ICIs. Exploratory analysis suggests that adding a CTLA4 inhibitor to PD-(L)1 inhibitor might improve outcomes. Prospective clinical trials are needed to validate these findings.



Helen Diller Family
Comprehensive
Cancer Center



52

52

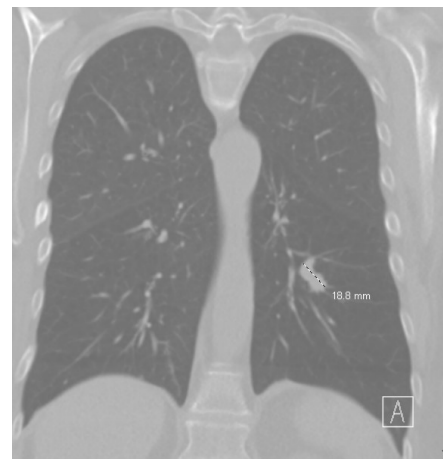
25th Multidisciplinary Management of Cancers: A Case-Based Approach

Case 4

67 yo F, heavy smoker, found to have 2cm LLL nodule on low dose CT chest screening.

- **PET CT:** 2 cm LLL nodule max SUV 9. No other sites of metastatic disease are noted
- **MR brain:** negative
- **Biopsy:** NSCLC, adenocarcinoma
- **EBUS:** negative. Mediastinal LN negative
- **NGS/IHC:** Positive for KRAS G12C mutation, TMB=15, PD-L1 40%

Staged as Stage IB NSCLC-adenocarcinoma (pT1bN0)



Helen Diller Family
Comprehensive
Cancer Center







53

53

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Questions 4A: What would be the optimal management for this patient with presumptive Stage IB NSCLC-adenocarcinoma (pT1bN0), PD-L1=40% and KRAS G12C mutation?

- | | | |
|---|---|-----|
| 1. Lobectomy followed by adjuvant cisplatin-based chemotherapy then atezolizumab or pembrolizumab |  | 26% |
| 2. Neoadjuvant chemo-immunotherapy followed by lobectomy |  | 3% |
| 3. Neoadjuvant chemo-immunotherapy then surgical resection and adjuvant immunotherapy (Peri-operative treatment). |  | 13% |
| 4. Lobectomy and wait for final staging pathology for future decision making |  | 57% |

010






61

55

25th Multidisciplinary Management of Cancers: A Case-Based Approach

The patient has a LLL lobectomy. Margins are negative but there are multiple ipsilateral mediastinal and hilar LN positive (11/18). Final pathologic Stage IIIA (T1bN2M1x)

Question 4B: What would you do for adjuvant treatment for this patient with Stage IIIA NSCLC-adenocarcinoma. 50 pack-years smoking. PD-L1 IHC positive (40%), KRAS on NGS, TMB=15.

- | | | |
|--|--|-----|
| 1. 4 cycles adjuvant cisplatin/pemetrexed. |  | 2% |
| 2. 4 cycles adjuvant cisplatin/pemetrexed -> adjuvant pembrolizumab or atezolizumab |  | 52% |
| 3. 4 cycles adjuvant cisplatin/pemetrexed-> PORT |  | 8% |
| 4. 4 cycles adjuvant cisplatin/pemetrexed-> PORT -> adjuvant pembrolizumab or atezolizumab |  | 38% |
| 5. PORT followed by adjuvant pembrolizumab or atezolizumab |  | 0% |

010





65

57

25th Multidisciplinary Management of Cancers: A Case-Based Approach

The patient receives adjuvant cisplatin/pemetrexed followed by pembrolizumab (PEARLS/KN-091). 6 months after completing adjuvant treatment with chemotherapy and immunotherapy she develops widespread metastatic disease

Question 4C: What would you do for treatment for this patient with recurrent metastatic NSCLC-adenocarcinoma. 50 pack-years smoking. PD-L1 IHC positive (40%), KRAS G12C on NGS, TMB=15.

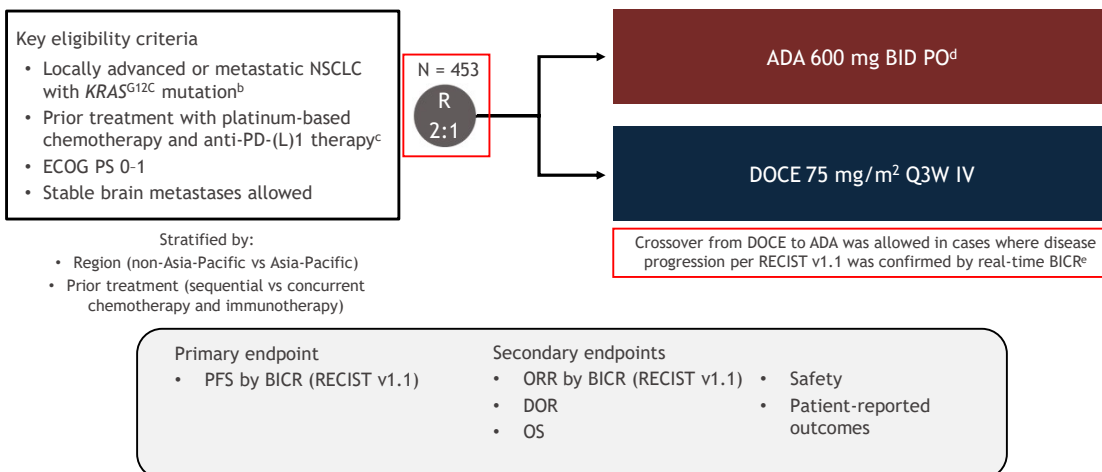
- | | | |
|--|--|-----|
| 1. Carboplatin/pemetrexed + sotorasib |  | 7% |
| 2. Docetaxel/Ramucirumab |  | 2% |
| 3. Rechallenge with chemotherapy and immunotherapy |  | 0% |
| 4. KRAS G12Ci (sotorasib or adagrasib) |  | 92% |

010

61

59

KRYSTAL-12 – Improved PFS and ORR with Adagrasib vs Docetaxel in previously treated KRAS^{G12C}-mutated NSCLC

KRYSTAL-12: ADA in previously treated KRAS^{G12C} NSCLC

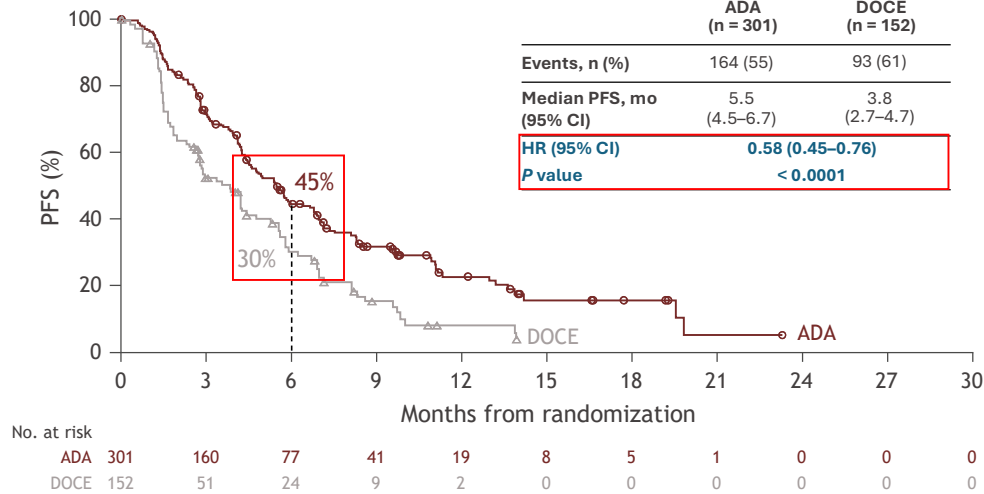
Database lock: March 19, 2024. Data cut-off: December 31, 2023.

^aNCT04685135. ^bDetected in tumor tissue using sponsor-approved local or central testing. ^cNo washout period was required between prior therapy and study treatment. ^dTablet formulation, except for four patients who initially received the capsule formulation. ^eOther crossover criteria: ECOG PS 0-2, recovery from DOCE-related AEs to grade 1 or baseline (except peripheral neuropathy and alopecia for which grade 2 is acceptable).

60

KRYSTAL-12 – Improved PFS and ORR with Adagrasib vs Docetaxel in previously treated *KRAS*^{G12C}-mutated NSCLC

Primary endpoint: PFS^a per BICR



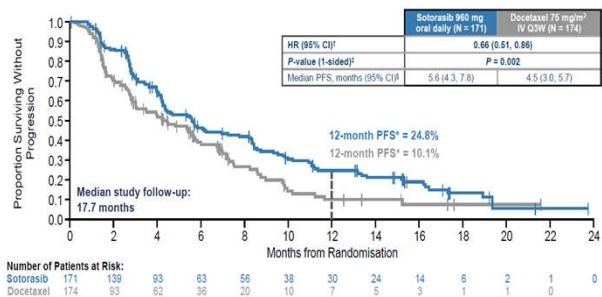
Median follow-up: 7.2 months.

^aTime from randomization to the date of disease progression per BICR or death due to any cause, whichever occurs first. For patients who started a subsequent anticancer therapy prior to disease progression or death, PFS was censored at the date of the last tumor assessment prior to the start of the new therapy.

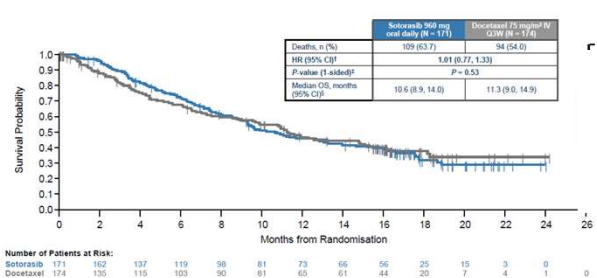
61

CodeBreakK 200: Improved PFS with Sotorasib versus docetaxel for previously treated non-small-cell lung cancer with *KRAS*^{G12C} mutation

Primary Endpoint: PFS by BICR



OS: Sotorasib vs Docetaxel[†]

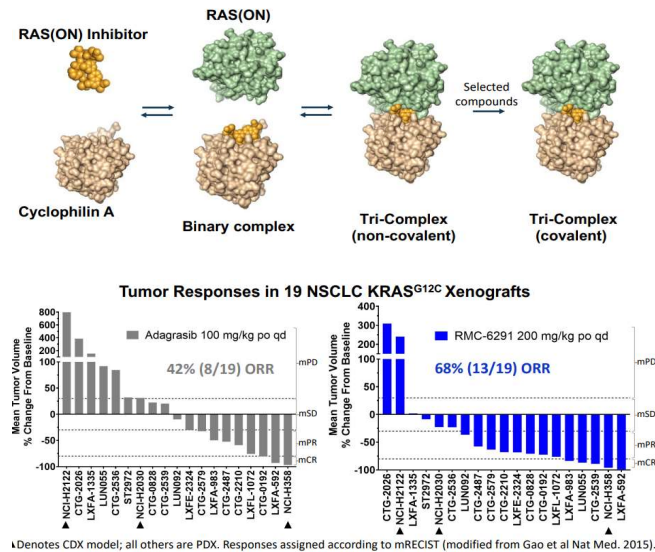


Johnson ML, et al. ESMO 2022. Abstract LBA10

62

Next Generation RAS Inhibitors

- Less susceptible to adaptive resistance compared to GDP bound RAS
- RMC-6291 KRAS G12C (ON) inhibitor
- RMC-9805 KRAS G12D (ON) inhibitor
- RMC-6236-Pan RAS (ON)
- Divarasib – Single arm study
ORR = 53.4% (95% CI, 39.9 to 66.7),
and mPFS was 13.1 months (95% CI,
8.8 to, could not be estimated)



Sacher et al N Engl J Med 2023;389:710-721.

63

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Case 4 - Take home messages

- 1st line therapy for advanced KRAS G12C-mutated NSCLC remains ICI +/- chemotherapy. KRAS G12C inhibitors reserved for 2nd line
- **KRYSTAL-12:** In patients with previously treated KRAS^{G12C}-mutated NSCLC, Adagrasib demonstrated a statistically significant improvement in PFS and ORR over docetaxel.
- **CodeBreak 200:** Sotorasib significantly increased progression-free survival compared with docetaxel, in patients with previously treated advanced NSCLC with KRAS^{G12C} mutation
- Several new next generation KRAS inhibitors are being tested in clinical trials

64

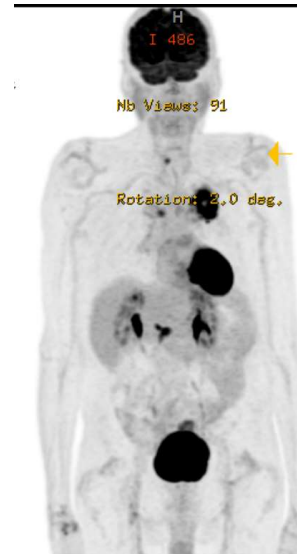
25th Multidisciplinary Management of Cancers: A Case-Based Approach

Case 5

- 60 yo M, never smoker presented with cough and low back pain
- **PET-CT:** LUL primary with hypermetabolic lymphadenopathy in the hilum & mediastinum. Diffuse bone mets also noted
- **MRI brain:** negative.
- **Biopsy:** NSCLC, adenocarcinoma
- **NGS/IHC:** PD-L1 TPS = 80%, **not enough tissue for NGS sampling**

Stage IVB (pT3N2M1C) NSCLC-adenocarcinoma

He completes palliative RT to sacral metastases for low back pain.



Stanford
Cancer Institute
cancer.stanford.edu
Stanford MEDICINE

UC DAVIS
HEALTH

COMPREHENSIVE
CANCER CENTER

UCSF

Helen Diller Family
Comprehensive
Cancer Center

ANCO
Educating and Empowering the
Northern California Cancer Community
65

65

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Question 5A: What would you do during the time the patient is receiving palliative radiation in this patient with Stage IV adenocarcinoma, high PD-L1 80%?

- | | | |
|--|---------------------------------|-----|
| 1. Send plasma ctDNA for broad molecular profiling | <div style="width: 9%;"></div> | 9% |
| 2. Repeat tissue biopsy for broad molecular profiling | <div style="width: 5%;"></div> | 5% |
| 3. Send plasma ctDNA followed by tissue biopsy if ctDNA negative for actionable molecular alterations. | <div style="width: 65%;"></div> | 65% |
| 4. Initiate carboplatin/Pemetrexed/Pembrolizumab (KN 189) | <div style="width: 9%;"></div> | 9% |
| 5. Initiate pemetrexed/carboplatin while awaiting the results of molecular testing | <div style="width: 12%;"></div> | 12% |

010

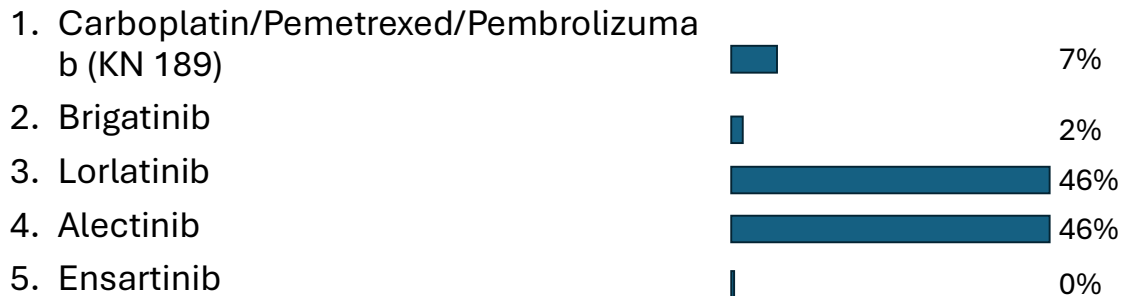
65

67

25th Multidisciplinary Management of Cancers: A Case-Based Approach

- Plasma ctDNA is positive for *EML4-ALK fusion*

Question 5B: What would you initiate as 1L systemic treatment for Stage IV NSCLC-adenocarcinoma with *EML4-ALK fusion* and PD-L1 TPS of 80%.



010

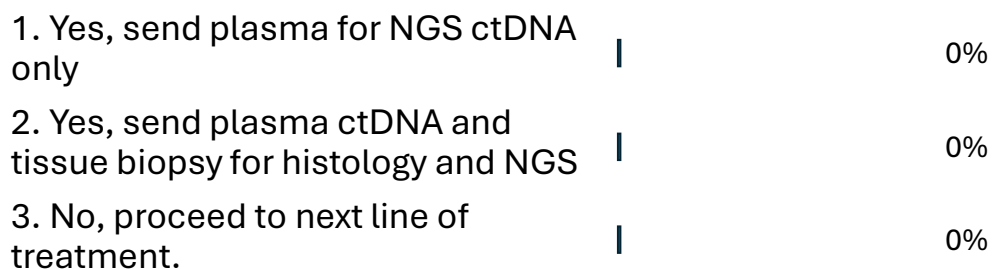
61

69

25th Multidisciplinary Management of Cancers: A Case-Based Approach

The patient is initiated on Lorlatinib. He develops oligo-progressive disease to the adrenal gland after 30 months on treatment

Question 5C: Would you repeat biopsy in this patient prior to instituting next line of treatment?



010

0

71

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Repeat tissue biopsy again shows ALK fusion with no explanation for TKI resistance

Question 5D: What would you initiate as 2L systemic treatment for Stage IV NSCLC-adenocarcinoma with EML4-ALK fusion mutation and PD-L1 TPS of 80% after PD on Lorlatinib?

1. Switch to carboplatin/pemetrexed/pembrolizumab | 0%
2. Continue Lorlatinib and consult Surgical Oncology for resection of adrenal met | 0%
3. Stop lorlatinib and switch to carboplatin/Pemetrexed | 0%
4. Continue Lorlatinib and consult Rad-Onc for XRT to adrenal gland | 0%

010

0

73

How to Choose? FDA Approved Next Generation ALK inhibitors for 1L Therapy: Comparison of Efficacy and Toxicity

	Alectinib	Brigatinib	Lorlatinib	Ensartinib
ORR	79%	71%	76%	74%
Med PFS by ICR	25.7 mo	24 mo	NR (3yr follow-up)	
Med PFS by IR	34.8	30.8	NR (5-yr PFS=60%)	25.8mo
Med OS	>5 yr	NR	NR	NR
Toxicity	Fatigue, constipation, myalgia (CPK), edema, transaminitis (moderate) Weight gain	Nausea, diarrhea, fatigue, HA, HTN, pulmonary tox, transaminitis	Edema, neuropathy, cognitive changes (mood), lipids, weight gain	rash, musculoskeletal pain, constipation, cough, pruritis, nausea, edema, pyrexia, and fatigue

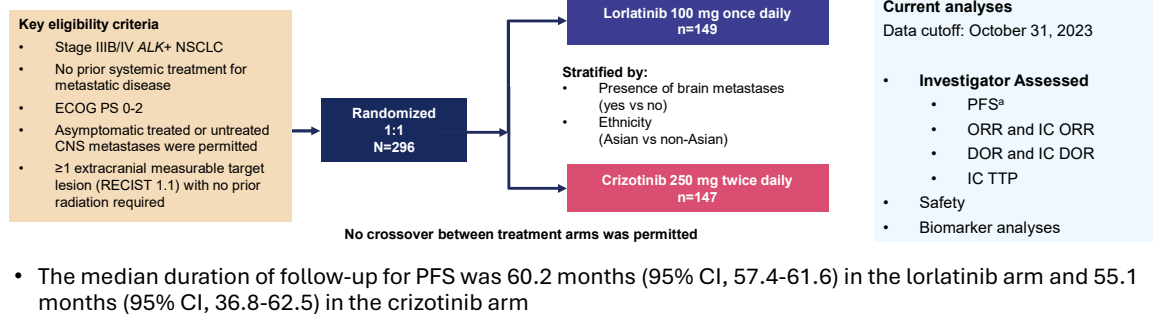
• 1L, first-line

74

CROWN: Significantly improved PFS with lorlatinib vs crizotinib in advanced NSCLC

Current Post Hoc Analyses at 5 Years

Endpoint evaluation by BICR stopped after the 3-year analysis



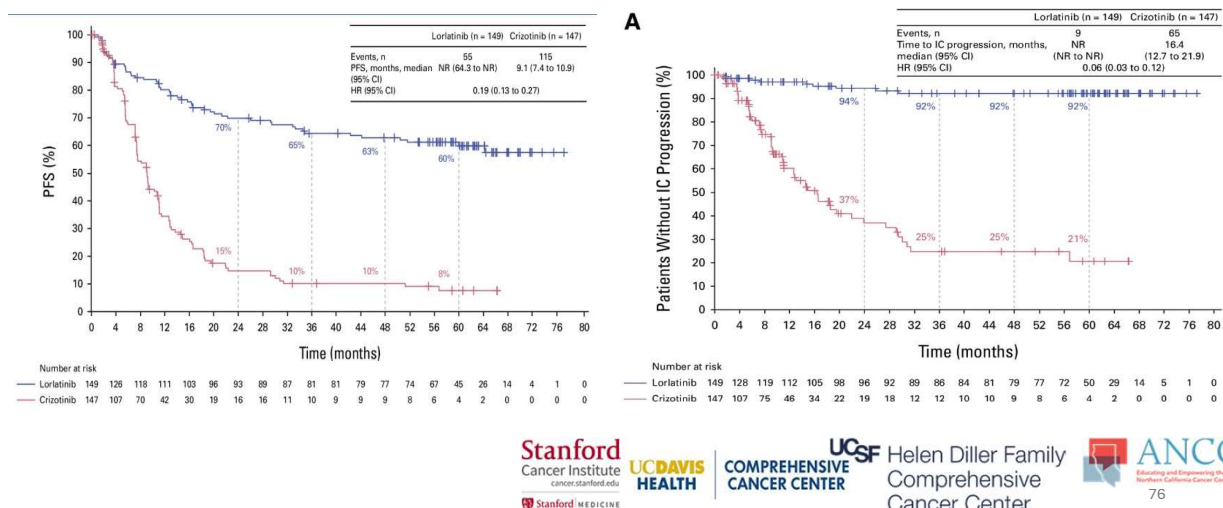
CNS, central nervous system; DOR, duration of response; ECOG, Eastern Cooperative Oncology Group; IC, intracranial; ORR, objective response rate; NSCLC, non-small cell lung cancer; PFS, progression-free survival; PS, performance status; RECIST, Response Evaluation Criteria in Solid Tumors; TTP, time to tumor progression.
^a Defined as the time from randomization to RECIST-defined progression or death due to any cause.

Benjamin J. Solomon (Ben.Solomon@petermac.org)

75

25th Multidisciplinary Management of Cancers: A Case-Based Approach

CROWN: Significantly improved PFS with lorlatinib vs crizotinib in advanced NSCLC



76

CROWN: Emerging New ALK Mutations Were Not Detected in ctDNA Collected at the End of Lorlatinib Treatment

	Lorlatinib (n=31) n (%)	Crizotinib (n=89) n (%)
Resistance mechanisms		
New single ALK mutation	0	8 (9)
ALK compound mutation	0	2 (2)
Bypass mechanism		
MAPK pathway aberration	3 (10)	1 (1)
PI3K/MTOR/PTEN pathway aberration	2 (6)	0
RTK pathway aberration	4 (13)	5 (6)
Cell cycle pathway aberration	2 (6)	5 (6)
Other gene aberration	11 (35)	19 (21)
Unknown	13 (42)	56 (63)

ctDNA from plasma collected at screening was analyzed with a validated, commercially available, 74-gene ctDNA next-generation sequencing assay (Guardant360 panel version 2.11; bioinformatics pipeline version 3.5.3; Guardant Health, Inc., Redwood City, CA).
ctDNA, circulating tumor DNA.

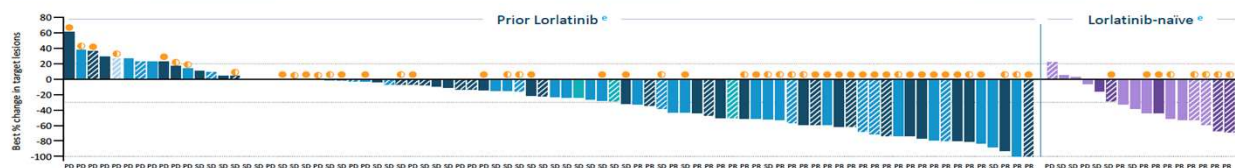
Benjamin J. Solomon
(Ben.Solomon@petermac.org)

77

ALKOVE: NVL-655, New Next Generation ALK-TKI

Preliminary Activity: Radiographic Tumor Responses Across Previously Treated Patients with ALK+ NSCLC

RECIST 1.1 ORR, % (n/N) All patients ± chemotherapy	NSCLC Response-Evaluable (Any Prior ALK TKI, range 1 – 5)			Prior Lorlatinib (≥2 ALK TKIs)			Lorlatinib-naïve (≥1 2G ± 1G)	
	All	Any ALK mutation ^a	G1202R ^b	All	Any ALK mutation	Compound ALK mutation	All	Any ALK mutation
All Doses	38% (39/103)	52% (30/58)	69% (22/32) ^d	35% (30/85)	47% (23/49)	54% (15/28)	53% (9/17)	88% (7/8)
RP2D	38% (15/39)	55% (12/22)	71% (10/14)	35% (11/31)	50% (8/16)	64% (7/11)	57% (4/7)	80% (4/5)



Data cut-off: 15 June 2024. Response-evaluable patients with NSCLC. All responses were confirmed.
NSCLC, non-small cell lung cancer; ORR, objective response rate; PD, progressive disease; PR, partial response; RECIST 1.1, Response Evaluation Criteria in Solid Tumors version 1.1; RP2D, recommended Phase 2 dose (150 mg QD); SD, stable disease; TKI, tyrosine kinase inhibitor.
^aIncludes all patients with ≥1 identified ALK resistance mutation as per local or central testing of blood (ctDNA) or tissue. Responses observed in patients with ALK L1171N/S, V1180L, L1196Q, L1198F, D1203N, or E1210K mutations, including where multiple mutations co-occur, in addition to those with G1202R.
^bIncludes patients with G1202R single and compound (≥2) mutations.
^cCis-allelic configuration has not been confirmed for all patients with compound (≥2) ALK resistance mutations.
^dORR = 67% (20/30) for G1202R patients with prior lorlatinib, and ORR = 100% (1/1) for lorlatinib-naïve G1202R patients.
^eFive response-evaluable patients (4 with no known ALK mutations and 1 with single ALK mutation) not shown due to incomplete or missing post-baseline tumor assessments in the setting of PD or symptomatic deterioration.

KEY: PATIENT DETAILS

Lorlatinib Pre-treated:

- ≥ 3 prior ALK TKIs
- 2 prior, 2G + lorlatinib
- 2 prior, 1G + lorlatinib
- 1 prior (lorlatinib only)

Lorlatinib-naïve:

- ≥ 2 prior ALK TKIs
- 1 prior, alectinib
- ☑ Patient treated at RP2D

- ALK single resistance mutation
- ALK compound (≥2) resistance mutation

BARCELONA 2024 ESMO congress

6

78

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Lorlatinib is continued and radiation oncology is consulted for radiation to adrenal gland.

Case 5 – Take home messages

- **CROWN:** 5 year survival analysis continues to show significantly improved PFS of lorlatinib when compared to crizotinib in previously untreated ALK-EML4 positive NSCLC. Lorlatinib has better CNS activity.
- After 5 years of follow-up, median PFS has yet to be reached in the lorlatinib group, corresponding to the longest PFS ever reported with any single-agent molecular targeted treatment in advanced NSCLC and across all metastatic solid tumors.
- Emerging new ALK mutations were not detected in ctDNA collected at the end of Lorlatinib treatment
- **ALKOVE-1:** NVL-655 shows promising results in heavily pre-treated ALK-EML4 mutated NSCLC, including patients with CNS involvement.



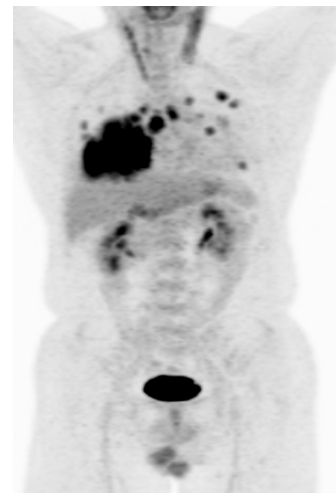
79

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Case 6

58 yo M, never smoker, presented with cough and DOE


- **PET CT:** R sided lung mass, bilateral lung nodules and bilateral mediastinal LAD
- **Biopsy:** NSCLC, adenocarcinoma
- **NGS/IHC:** PD-L1 = 0%, HER2 Exon 20 insertion on NGS



80

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Question 6A: What would you offer as first line therapy?

- | | | |
|---|--|------|
| 1. Carboplatin/Pemetrexed | | 0% |
| 2. Carboplatin/Pemetrexed/Pembrolizumab | | 0% |
| 3. Trastuzumab Deruxtecan |  | 100% |

010


5

82

25th Multidisciplinary Management of Cancers: A Case-Based Approach

The patient receives carboplatin, pemetrexed and pembrolizumab with an initial response followed by progressive disease 5 months later with new liver metastases and growing lung lesions.

Question 6B: What would you offer as next line of treatment?

- | | | |
|--|--|------|
| 1. Trastuzumab Deruxtecan |  | 100% |
| 2. Docetaxel +/- Ramucirumab | | 0% |
| 3. Repeat carboplatin/pemetrexed/pembrolizumab | | 0% |

010

5

84

25th Multidisciplinary Management of Cancers: A Case-Based Approach

The patient receives 2 cycles of 2L trastuzumab deruxtecan with partial response to treatment. He then develops worsening SOB. CT Chest shows bilateral interstitial opacities. You make the diagnosis of grade 2 pneumonitis from trastuzumab deruxtecan

Question 6C: What do you do next for grade 2 pneumonitis from trastuzumab deruxtecan?

1. Initiate corticosteroids. Consider restarting trastuzumab deruxtecan when off steroids and symptoms and radiologic findings resolve. 0%
2. Initiate corticosteroids. Permanently discontinue trastuzumab deruxtecan. 0%
3. Initiate corticosteroids. Consider restarting alternate HER2 directed therapy when off steroids and symptoms/ radiologic findings resolve (i.e. Trastuzumab with chemotherapy, afatinib or TDM-1). 100%

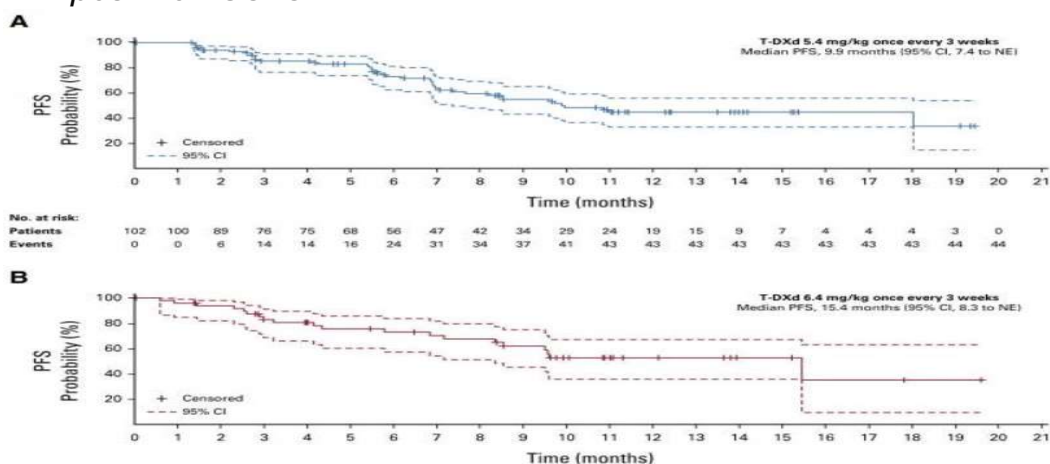
010

5

86

25th Multidisciplinary Management of Cancers: A Case-Based Approach

DESTINY-Lung02: Durable response with T-DXd in previously treated metastatic HER-2 positive NSCLC



Stanford
Cancer Institute
cancer.stanford.edu
Stanford MEDICINE

UC DAVIS
HEALTH

COMPREHENSIVE
CANCER CENTER

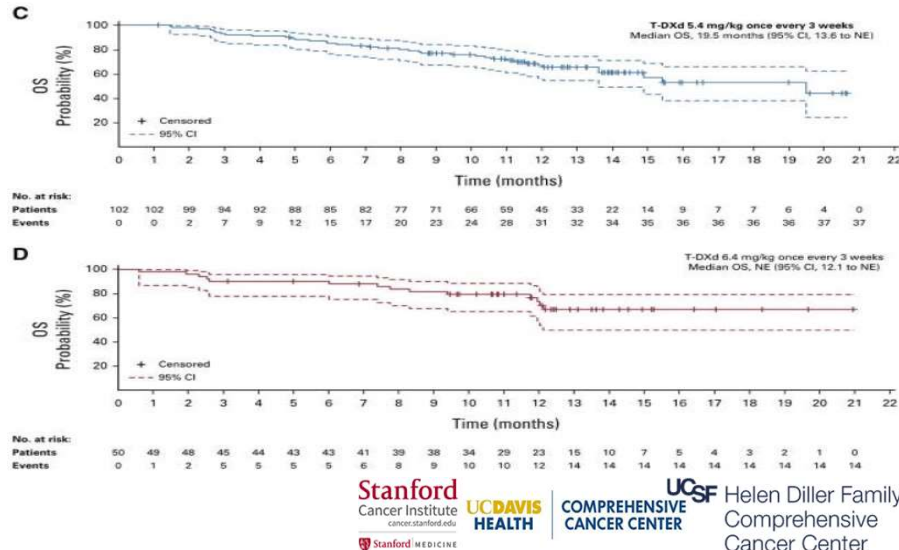
UCSF
Helen Diller Family
Comprehensive
Cancer Center

ANCO
Educating and Empowering the
Northern California Cancer Community
87

87

25th Multidisciplinary Management of Cancers: A Case-Based Approach

DESTINY-Lung02: Durable response with T-DXd in previously treated metastatic HER-2 positive NSCLC



88

DESTINY-PanTumor02

DESTINY-PanTumor02: A Phase 2 Study of T-DXd for HER2-Expressing Solid Tumors

An open-label, multicenter study (NCT04482309)

- Advanced solid tumors not eligible for curative therapy
- 2L+ patient population
- HER2 expression (IHC 3+ or 2+)
 - Local test or central test by HercepTest if local test not feasible (ASCO/CAP gastric cancer guidelines¹)^a
- Prior HER2-targeting therapy allowed
- ECOG/WHO PS 0–1

T-DXd 5.4 mg/kg q3w

n=40 per cohort planned
(Cohorts with no objective responses in the first 15 patients were to be closed)

- Cervical cancer
- Endometrial cancer
- Ovarian cancer
- Biliary tract cancer
- Pancreatic cancer
- Bladder cancer
- Other tumors^b

Primary endpoint

- Confirmed ORR (investigator)^c

Secondary endpoints

- DOR^c
- DCR^c
- PFS^c
- OS
- Safety

Data cut-off for analysis:

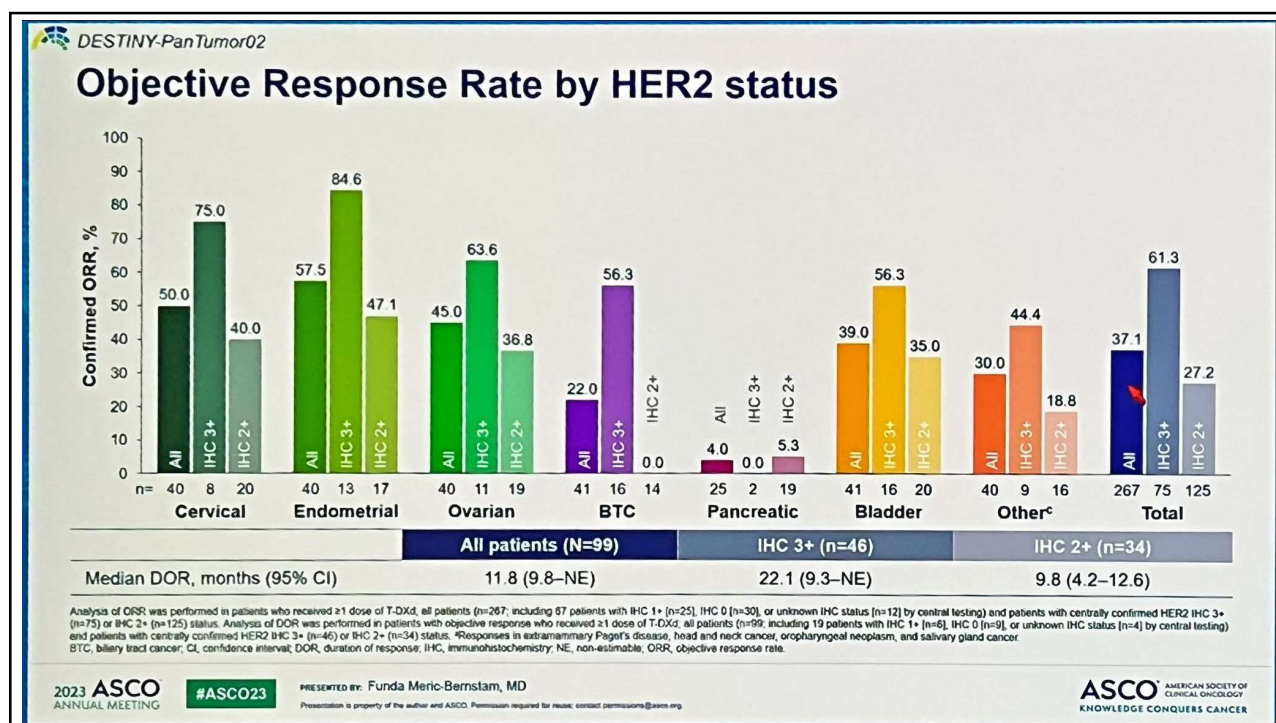
- Nov 16, 2022

^aPatients were eligible for either test. All patients were centrally confirmed. ^bPatients with tumors that express HER2, excluding tumors in the tumor-specific cohorts, and breast cancer, non-small cell lung cancer, gastric cancer, and colorectal cancer. ^cInvestigator-assessed per Response Evaluation Criteria in Solid Tumors version 1.1. 2L, second-line; ASCO, American Society of Clinical Oncology; DCR, disease control rate; CAP, College of American Pathologists; DOR, duration of response; ECOG, Eastern Cooperative Oncology Group; HER2, human epidermal growth factor receptor 2; IHC, immunohistochemistry; ORR, objective response rate; OS, overall survival; PFS, progression-free survival; PS, performance status; q3w, every 3 weeks; T-DXd, trastuzumab deruxtecan; WHO, World Health Organization. ¹ Holmann M, et al. Histopathology 2008;52(7):797–805.

2023 ASCO ANNUAL MEETING #ASCO23 PRESENTED BY: Funda Meric-Bernstam, MD
Presentation is property of the author and ASCO. Permission required for reuse; contact permissions@asco.org.

ASCO AMERICAN SOCIETY OF CLINICAL ONCOLOGY
KNOWLEDGE CONQUERS CANCER

89



90

25th Multidisciplinary Management of Cancers: A Case-Based Approach

Case 6 – Take home messages

- **DESTINY-Lung02:** T-DXd showed durable response rates, PFS and duration of response in previously treated (platinum based chemotherapy), HER2 Exon 20 ins NSCLC
- **DestinyPanTumor02:** T-DXd demonstrated clinically meaningful activity across a broad range of HER-2 expressing solid tumors with best outcomes at the higher HER2 expression level.
- New HER2 TKIs are in development (zongertinib, NVL-330, BAY-2927088)

Stanford Cancer Institute
UC DAVIS HEALTH
COMPREHENSIVE CANCER CENTER
UCSF Helen Diller Family Comprehensive Cancer Center
ANCO
91

91