

Later lines of treatment in metastatic NSCLC: opportunities to move the needle



Tejas Patil, MD
Assistant Professor
Thoracic Malignancies Program
University of Colorado Cancer Center



≥ 2nd line options - mNSCLC*

Oncogenic driver mutation

➔ **KRAS G12C⁺**: Sotorasib, adagrasib
EGFR Exon 20⁺: Amivantamab
HER2⁺: Trastuzumab deruxtecan (T-Dxd)

➔ **Treatment adaptation to on-target resistance mechanism identified. Examples below**

- EGFR C797S → 4th generation EGFR TKI trial
- ALK G1202R → lorlatinib (or ALK TKI trial)
- *MET* amp → clinical trial with MET inhibitors (ideally in combination with parent TKI)

➔ **Enroll into clinical trials with novel agents**

- ADCs
- Phase 1/2 immuno-oncology agents
- Novel small molecule combinations

➔ **Carboplatin + pemetrexed (+/- parent TKI)**
Docetaxel +/- ramucirumab (2nd line)

Gemcitabine
Paclitaxel (or nab-paclitaxel)
Vinorelbine

No actionable driver mutation

➔ **Enroll into clinical trials with novel agents**

- ADCs
- Phase 1/2 immuno-oncology agents
- Novel small molecule combinations

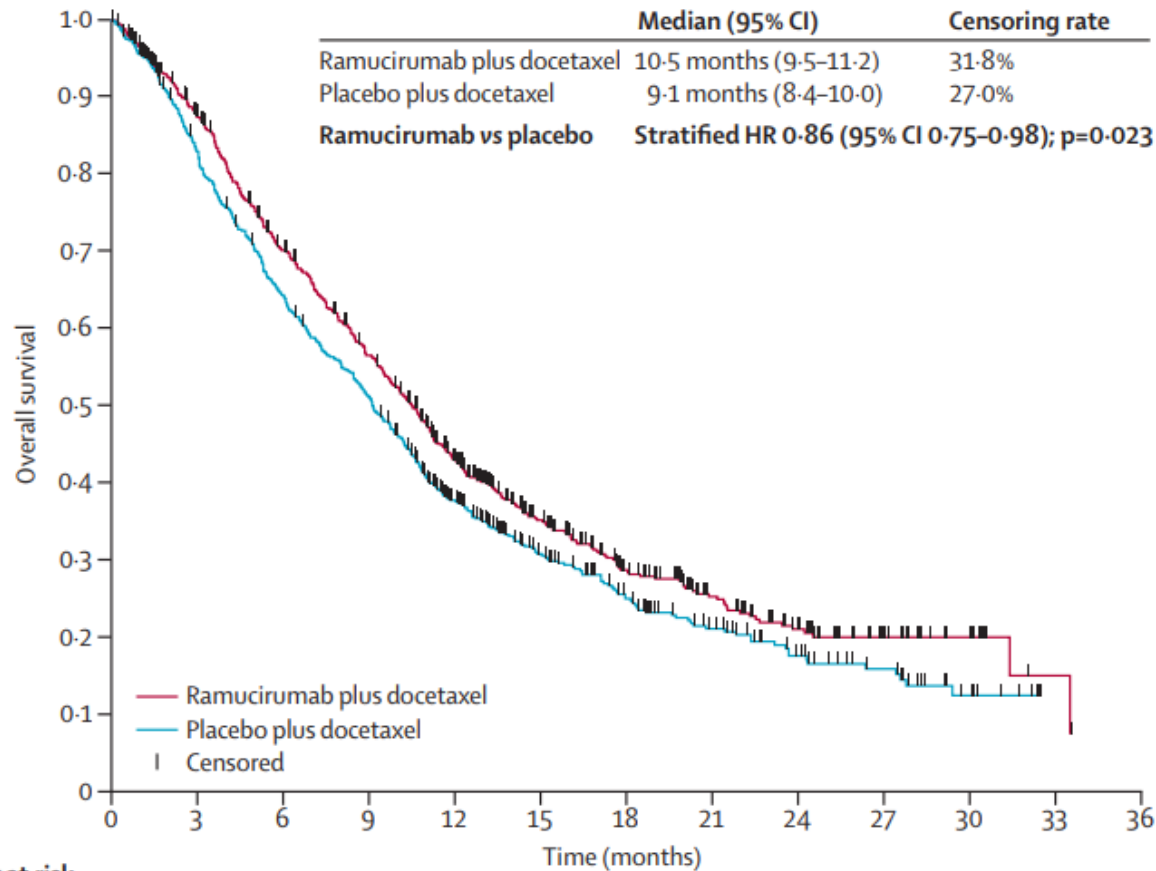
➔ **Docetaxel +/- ramucirumab (2nd line)**

Gemcitabine
Paclitaxel (or nab-paclitaxel)
Vinorelbine
Immune checkpoint inhibitor (if not given first line)

After progression on first line therapy for NSCLC, please strongly consider referral for a clinical trial



Current standard of care for 2nd line in mNSCLC



Number at risk	0	3	6	9	12	15	18	21	24	27	30	33	36
Ramucirumab plus docetaxel	628	527	415	329	231	156	103	70	45	23	11	2	0
Placebo plus docetaxel	625	501	386	306	197	129	86	56	36	23	9	0	0

- Multi-center, double-blind, phase 3 RCT (n = 1253) with (1:1) randomization
 - Docetaxel 75mg/m² +/- ramucirumab 10mg/kg (DR)
 - Docetaxel 75mg/m² + placebo (DP)
- Efficacy endpoints
 - OS (primary): HR 0.86, 95% CI 0.75 – 0.98
 - DR – 10.5 months
 - DP – 9.1 months
 - PFS (secondary): HR 0.76, 95% CI 0.68 – 0.86
 - DR – 4.5 months
 - DP – 3.0 months
 - Investigator ORR (secondary): OR 1.89, 1.41-2.54
 - DR – 23%
 - DP – 14%
- Safety endpoints
 - Dose modifications: 33% (DR) vs 23% (DP)
 - Serious AEs: 43% vs 42%



What is the benchmark for a 2nd line agent?

- **OS:** 9-10 months
- **PFS:** 3-4 months
- **ORR:** 14-20%
- **Safety:** < 33% dose modifications
- **SAEs:** < 42%

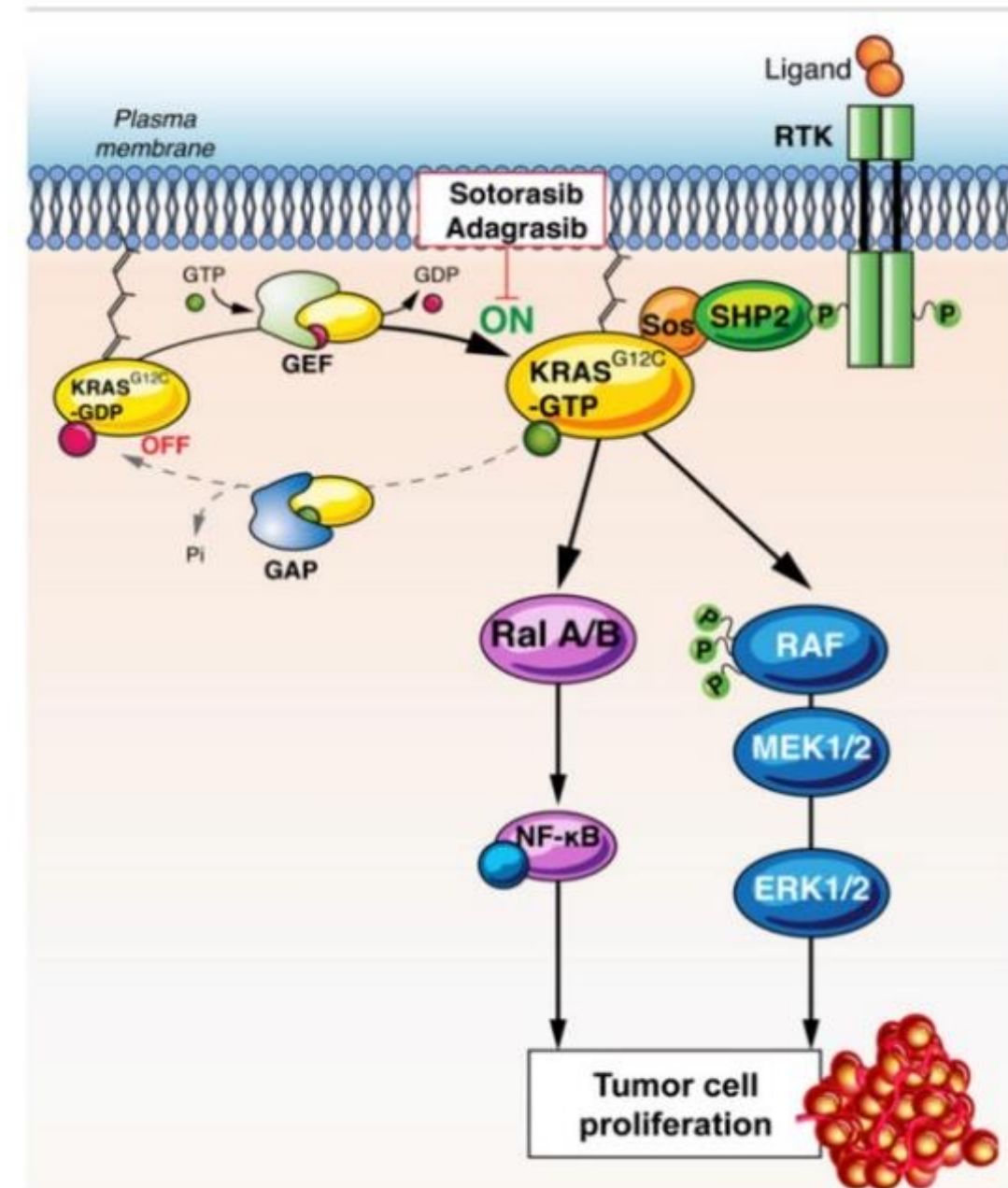


Later line treatments for KRAS G12C

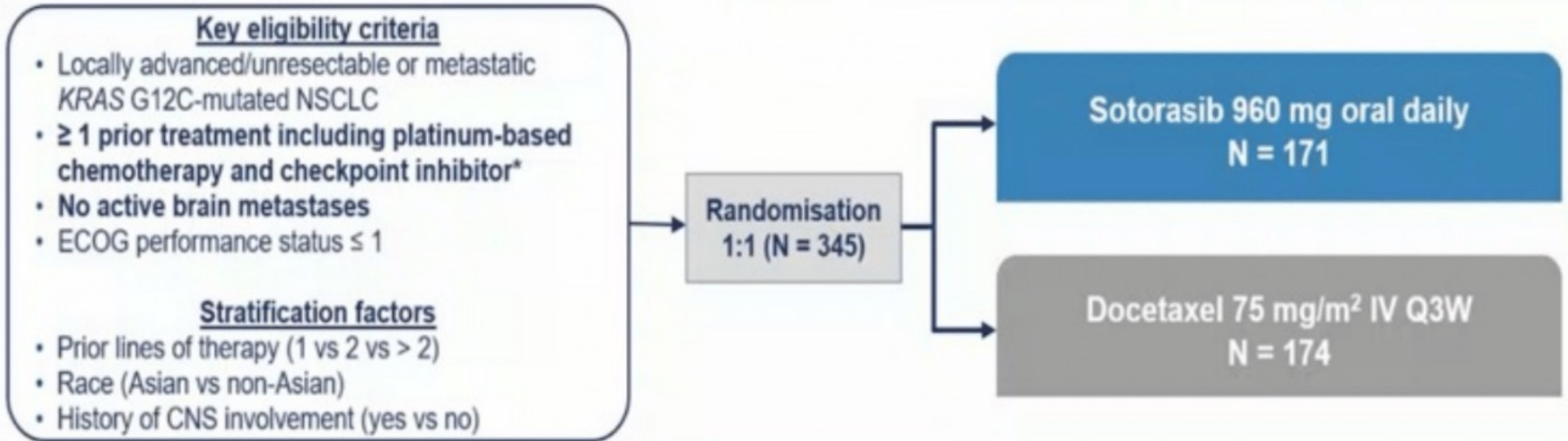


Ras signaling pathway

- KRAS proto-oncogenes → Ras-Raf-Mek-Erk pathway
 - GTP-bound = active
 - GDP-bound = inactive
- Missense mutations in codon 12, 13 and 61 hinder GTP hydrolysis → activation
- Sotorasib (and adagrasib)
 - Irreversibly bind mutant cysteine via a covalent bond
 - Binding the switch pocket II → locks KRAS G12C in the GDP “off” state
 - Inhibits Raf signaling → Reduce MEK/ERK signaling



CodeBreak 200 - sotorasib



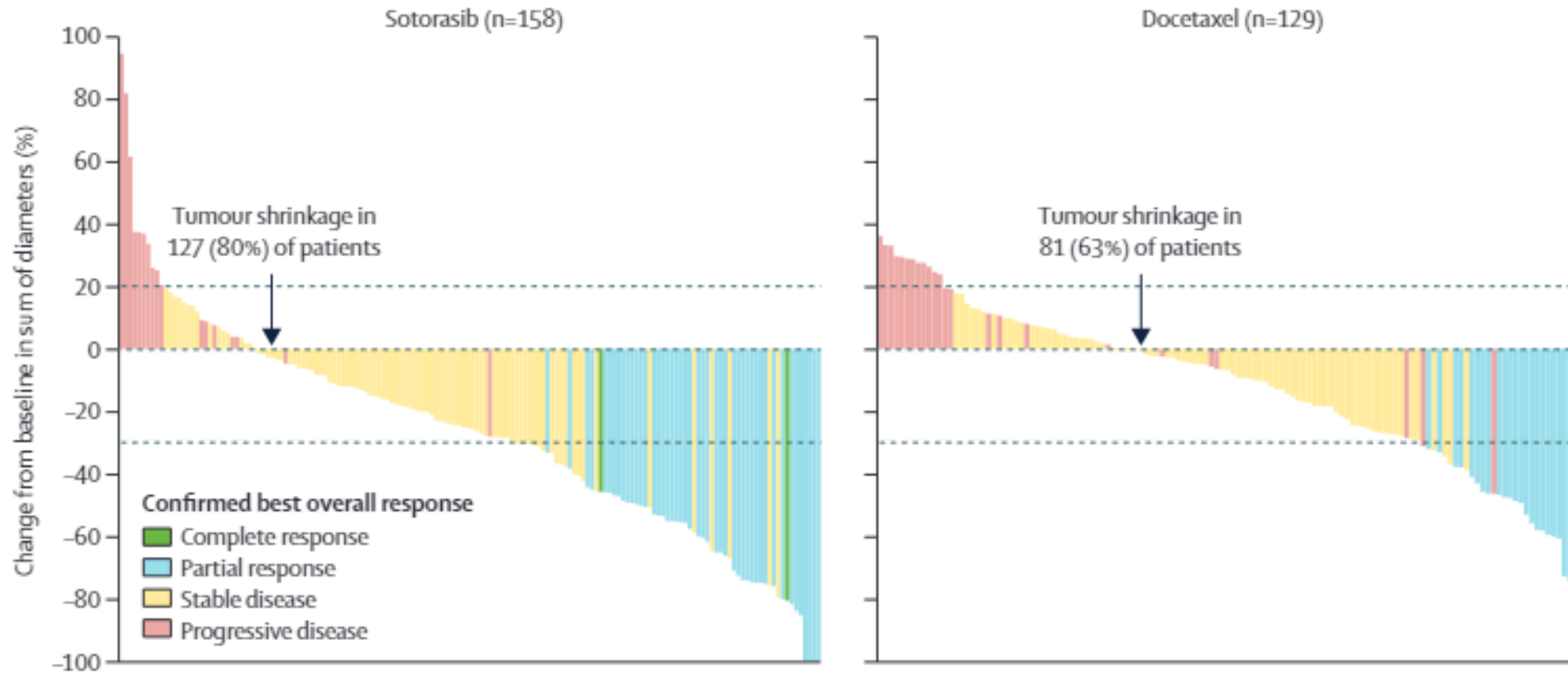
Primary Endpoint: PFS by BICR

Secondary Endpoints: Efficacy (OS[†], ORR, DOR, TTR, DCR), safety/tolerability, PRO

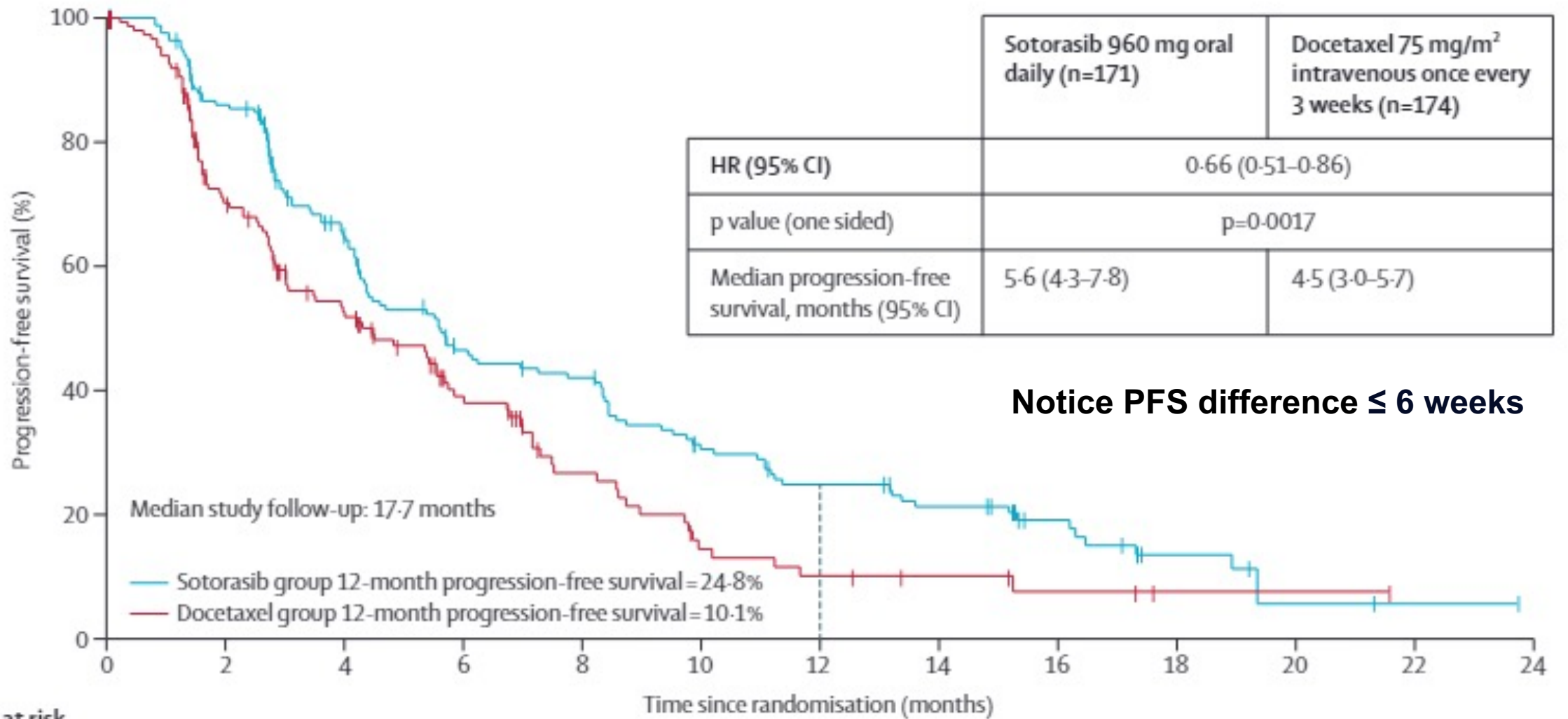
ITT population analysis included all randomised patients

A

	Sotorasib	Docetaxel
Overall response rate (95% CI)	28.1 (21.5–35.4)	13.2 (8.6–19.2)
Disease control rate (95% CI)	82.5 (75.9–87.8)	60.3 (52.7–67.7)
Median duration of response, months (95% CI)	8.6 (7.1–18.0)	6.8 (4.3–8.3)

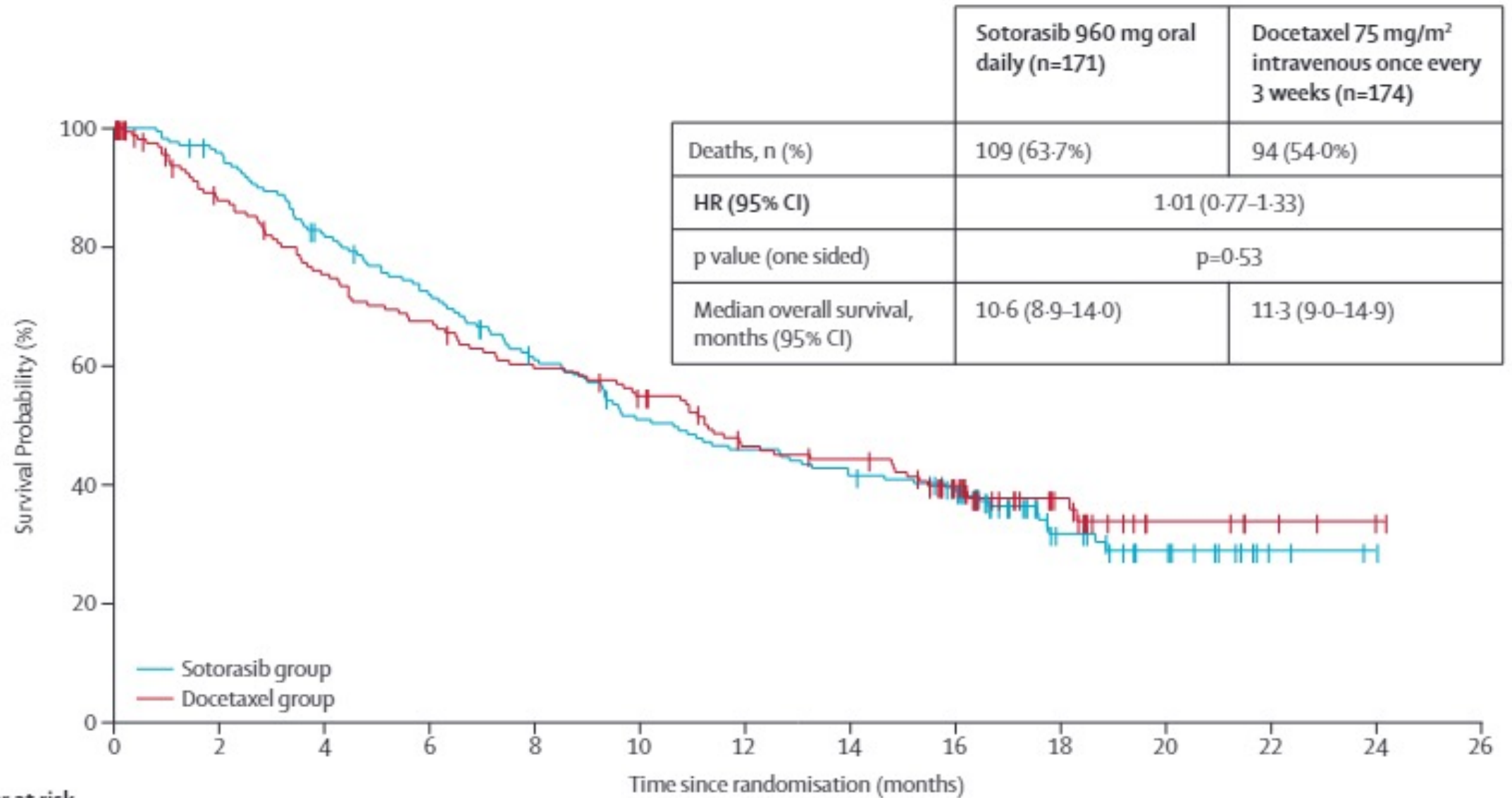


A



Number at risk
(number censored)

	0	2	4	6	8	10	12	14	16	18	20	22	24
Sotorasib group	171 (0)	139 (9)	93 (14)	63 (4)	56 (1)	38 (3)	30 (1)	24 (2)	14 (8)	6 (4)	2 (1)	1 (1)	0 (1)
Docetaxel group	174 (0)	93 (39)	62 (9)	36 (12)	20 (6)	10 (1)	7 (0)	5 (2)	3 (1)	1 (2)	1 (0)	0 (1)	-



Number at risk
(number censored)

Sotorasib group	171 (0)	162 (2)	137 (2)	119 (1)	98 (3)	81 (1)	73 (0)	66 (0)	56 (6)	25 (24)	15 (8)	3 (12)	0 (3)	..
Docetaxel group	174 (0)	135 (20)	115 (1)	103 (0)	90 (1)	81 (2)	65 (4)	61 (1)	44 (11)	20 (22)	7 (11)	4 (3)	1 (3)	0 (1)



Other safety signals

Sotorasib (n=169) Docetaxel (n=151)

Any grade Grade ≥3 Any grade Grade ≥3

Diarrhoea	57 (34%)	20 (12%)	28 (19%)	3 (2%)
Fatigue	11 (7%)	1 (1%)	38 (25%)	9 (6%)
Alopecia	2 (1%)	0	31 (21%)	0
Nausea	24 (14%)	2 (1%)	30 (20%)	1 (1%)
Anaemia	5 (3%)	1 (1%)	27 (18%)	5 (3%)
Decreased appetite	18 (11%)	3 (2%)	21 (14%)	0
Stomatitis	1 (1%)	0	17 (11%)	2 (1%)
Constipation	5 (3%)	0	16 (11%)	0
Asthenia	7 (4%)	1 (1%)	16 (11%)	4 (3%)
Alanine aminotransferase increased	17 (10%)	13 (8%)	0	0
Aspartate aminotransferase increased	17 (10%)	9 (5%)	0	0
Neutropenia	2 (1%)	0	20 (13%)	18 (12%)
Neuropathy peripheral	0	0	15 (10%)	1 (1%)
Oedema peripheral	0	0	14 (9%)	1 (1%)
Dysgeusia	4 (2%)	0	13 (9%)	0
Myalgia	3 (2%)	0	13 (9%)	2 (1%)
Vomiting	8 (5%)	0	10 (7%)	0
Arthralgia	2 (1%)	0	10 (7%)	1 (1%)
Mucositis	1 (1%)	0	10 (7%)	2 (1%)
Alkaline phosphatase increased	11 (7%)	5 (3%)	1 (1%)	0
Malaise	2 (1%)	1 (1%)	9 (6%)	1 (1%)
Febrile neutropenia	0	0	8 (5%)	8 (5%)
Abdominal pain	9 (5%)	2 (1%)	6 (4%)	0
Pyrexia	1 (1%)	0	8 (5%)	0
Pneumonia	0	0	7 (5%)	5 (3%)

Data are n (%). Adverse events were graded with the use of the Common Terminology Criteria for Adverse Events (version 5.0), which incorporates certain elements of *Medical Dictionary for Regulatory Activities* terminology.

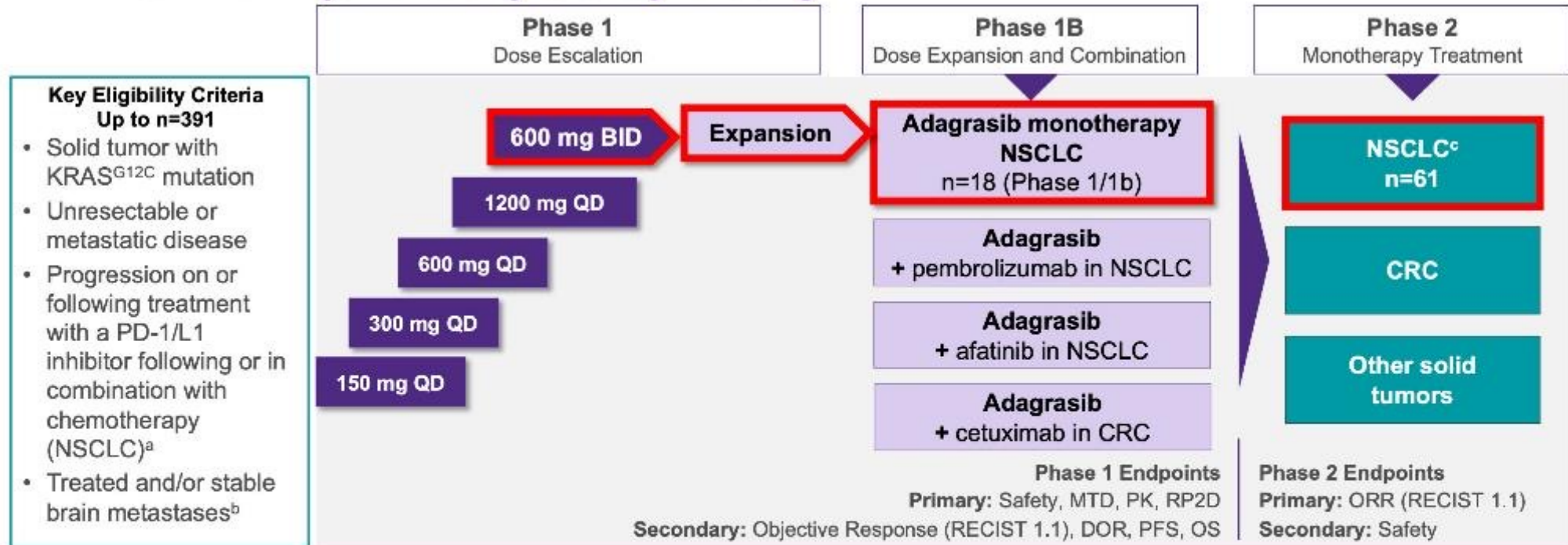
Table 3: Treatment-related adverse events of any grade (occurring in ≥5% of patients) or of grade ≥3 (occurring in ≥3% of patients)

	Sotorasib N = 169	Docetaxel N = 151
Grade ≥ 3 AEs	94 (56)	84 (56)
Fatal TEAEs	11 (7)	11 (7)
Serious TEAEs	64 (38)	60 (40)
Discontinuation	22 (13)	22 (15)
Dose reduction	26 (15)	42 (28)
Dose interruption	83 (49)	40 (26)



KRYSTAL-1 – adagrasib monotherapy

KRYSTAL-1 (849-001) Study Design



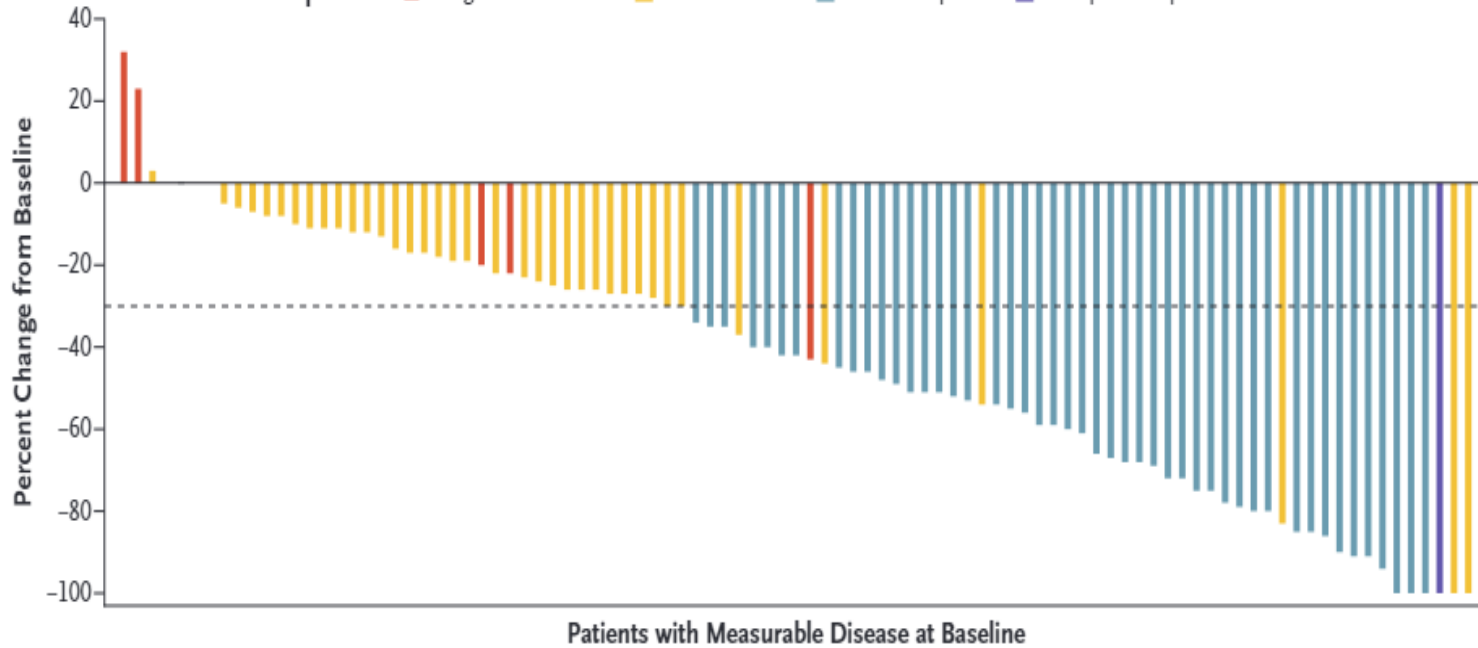
- Previously reported data from Phase 1 demonstrated clinical activity with adagrasib (MRTX849) in patients with pretreated KRAS^{G12C} NSCLC and CRC
- 600 mg BID was chosen as the RP2D
- Here we report data for 79 patients evaluating adagrasib 600 mg BID in patients with previously treated NSCLC in Phase 1/1b (n=18, median follow-up, 9.6 mo) and Phase 2 (n=61); pooled (n=79) median follow-up, 3.6 mo
- Data cut-off date: 30 August 2020

^aApplies to the majority of NSCLC cohorts. ^bMost cohorts allow patients with brain metastases if adequately treated and stable; additional phase 1/1b cohort allows limited brain metastases.

^cPrimary NSCLC cohort eligibility based on a tissue test; KRAS^{G12C} testing for entry was performed locally or centrally using a sponsor pre-approved test. ClinicalTrials.gov. NCT03785249.

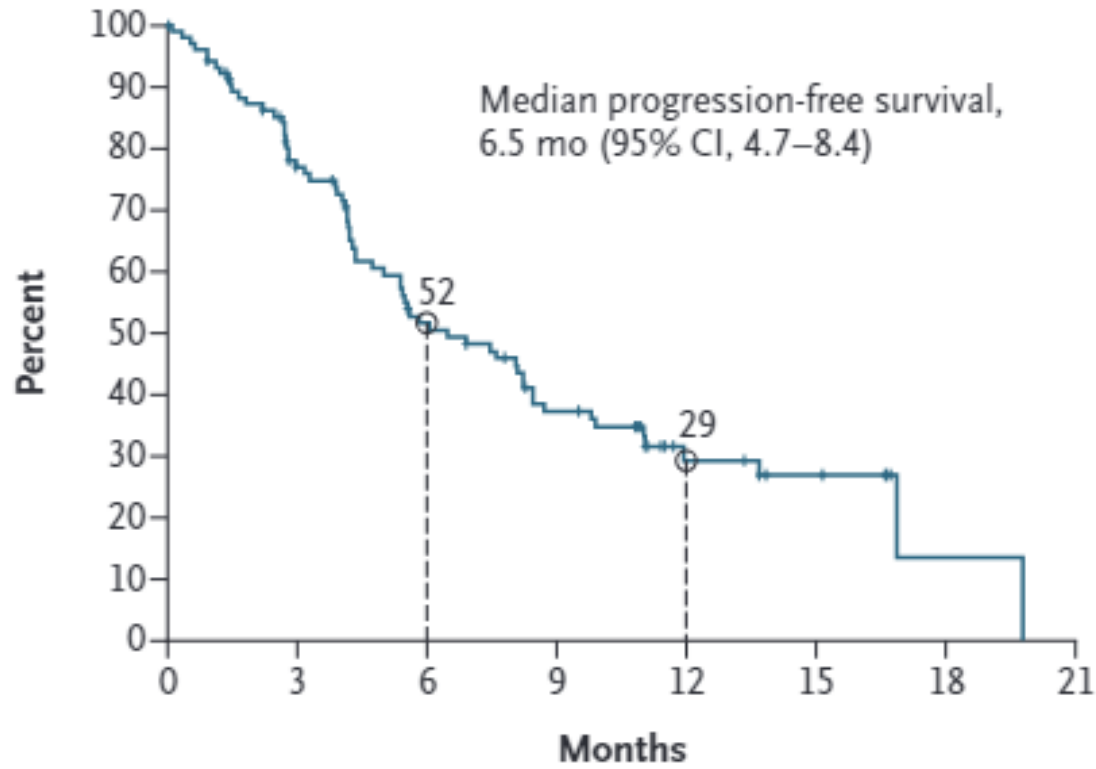
A Maximum Tumor Change from Baseline

Responses: ■ Progressive disease ■ Stable disease ■ Partial response ■ Complete response



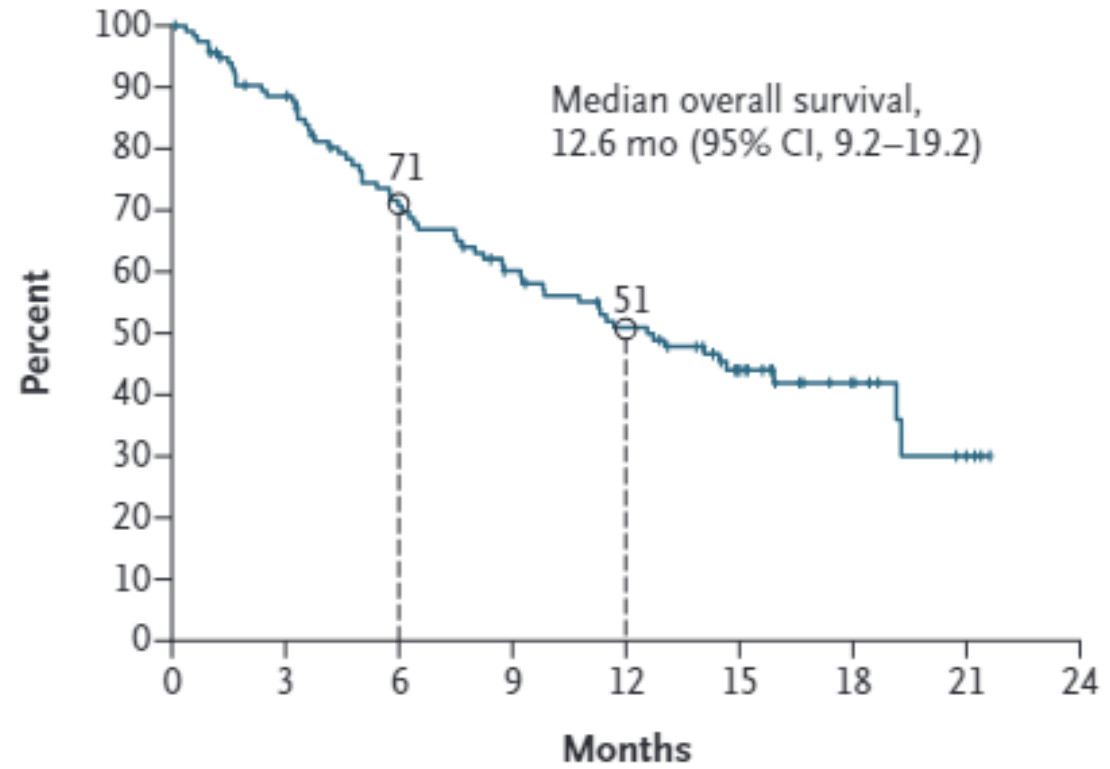
Variable	Cohort A (N=112) [†]
Objective response [‡]	
No. of patients	48
Percent (95% CI)	42.9 (33.5–52.6)
Best overall response — no. (%)	
Complete response	1 (0.9)
Partial response	47 (42.0)
Stable disease	41 (36.6)
Progressive disease	6 (5.4)
Not evaluable	17 (15.2)
Disease control	
No. of patients	89
Percent (95% CI)	79.5 (70.8–86.5)
Median duration of response (95% CI) — mo	8.5 (6.2–13.8)
Median progression-free survival (95% CI) — mo	6.5 (4.7–8.4)
Median overall survival (95% CI) — mo [§]	12.6 (9.2–19.2)

C Progression-free Survival



No. at Risk 112 72 45 30 13 6 1 0

D Overall Survival



No. at Risk 116 98 74 60 49 29 10 3 0

Event	Any Grade	Grade ≥ 3
	<i>no. of patients (%)</i>	
Any adverse event	116 (100)	95 (81.9)
Adverse event leading to dose reduction or interruption	96 (82.8)	—
Adverse event leading to discontinuation of therapy	18 (15.5)	—
Adverse event of any grade that occurred in >10% of patients or that was grade ≥ 3 in >1 patient†		
Diarrhea	82 (70.7)	1 (0.9)
Nausea	81 (69.8)	5 (4.3)
Fatigue	69 (59.5)	8 (6.9)
Vomiting	66 (56.9)	1 (0.9)
Anemia	42 (36.2)	17 (14.7)
Dyspnea	41 (35.3)	12 (10.3)
Blood creatinine increased	40 (34.5)	1 (0.9)
Decreased appetite	37 (31.9)	5 (4.3)
ALT increased	33 (28.4)	6 (5.2)
Edema peripheral	33 (28.4)	0
AST increased	31 (26.7)	6 (5.2)
Constipation	27 (23.3)	0
Hyponatremia	27 (23.3)	10 (8.6)



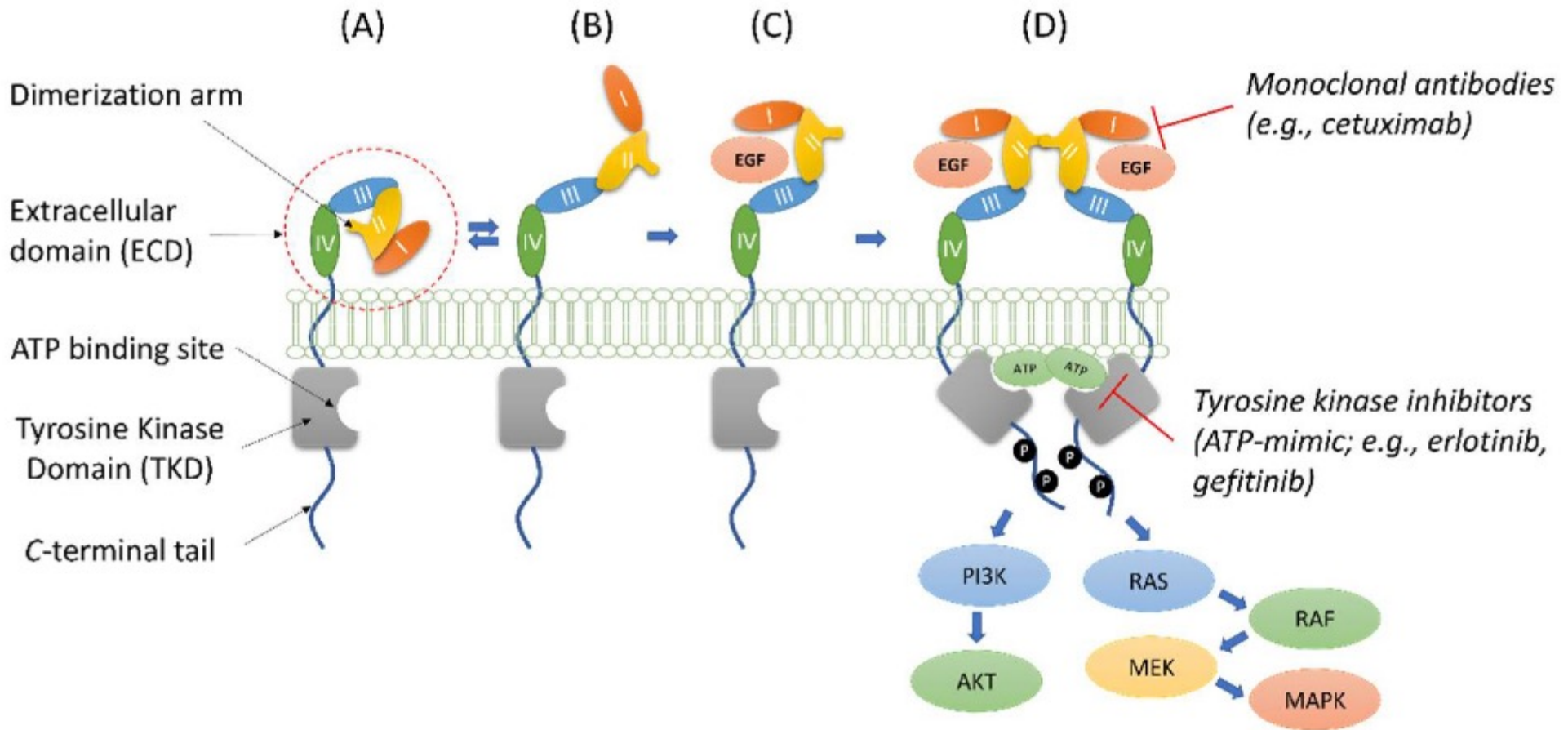
KRAS TKIs – where do we go from here?

- ORR for sotorasib and adagrasib (across Phase 1, 2 and 3 trials) is relatively consistent ranging from 28.1 – 42.9%
- PFS benefit is lower than scan interval frequency (6 weeks) for sotorasib
 - Early warning sign that might not be an OS benefit!
- Patient preferences may play role here, but KRAS TKIs do have important side effects and dose reductions common
- CNS predominant disease – may favor KRAS G12C TKI
- **Key message – highlights importance of selecting optimal and *tolerable* dose when determining RP2D**

Later line treatments for EGFR Exon 20 insertion mutations

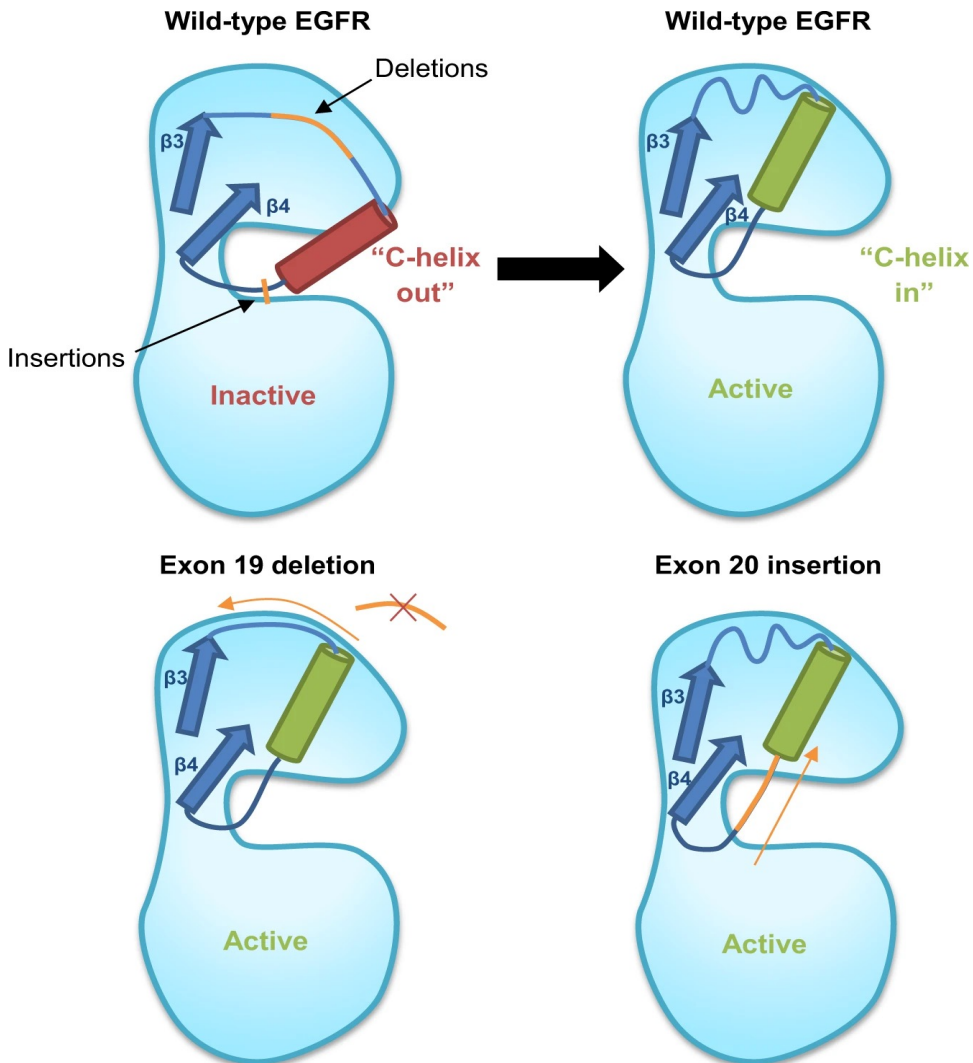


EGFR (ERBB1) dimerization



***Note:** EGF-like ligand more accurate given variety of signaling substrates

EGFR mutations



Classical-like	Description	Representative mutations	Drug selectivity
<ul style="list-style-type: none"> P-loop αC-helix Hydrophobic core Hinge 	Distal to drug-binding pocket Modest to no impact on drug binding	L858R Ex19dels S720P L861Q/R S811F K754E T725M L833F/V A763insFQEA A763insLQEA	Selective Intermediate Resistant 3rd gen 2nd gen 1st gen Ex20ins-active
T790M-like	At least one mutation in hydrophobic core Increased affinity for ATP compared to classical-like mutations Two subgroups: T790M-like-3S T790M-like-3R	T790M-3S Classical/T790M G719X/T790M L747_K745del insATSPE S768I/T790M T790M-3R Ex19del/T790M/L792H L858R/T790M/L718X Classical/T790M/ C797S	T790M-3S 3rd gen PKC ALG 2nd gen 1st gen T790M-3R PKC ALG 3rd gen 2nd gen 1st gen
Exon 20 loop insertion	C-terminal loop of α C-helix Indirect and substantial impact on drug binding (P-loop and α C-helix)	Ex20ins-NL S768dupSVD A767dupASV D770insNPG D770del insGY Ex20ins-FL H773insNPH H773dupH V774insAV V774insPR	Ex20ins-NL Ex20ins-active 2nd gen 1st gen 3rd gen Ex20ins-FL Ex20ins-active 2nd gen 1st gen 3rd gen
P-loop α C-helix compressing	Proximal to drug-binding pocket Direct or indirect impact on drug binding via moderate displacement of P-loop and/or α C-helix	Primary G719X S768I L747P/S V769L E709_T710 delinsD Acquired C797S L792H G724S L718X T854I	2nd gen 1st gen Ex20ins-active 3rd gen

Knowing that your patient is EGFR positive is **not** enough!

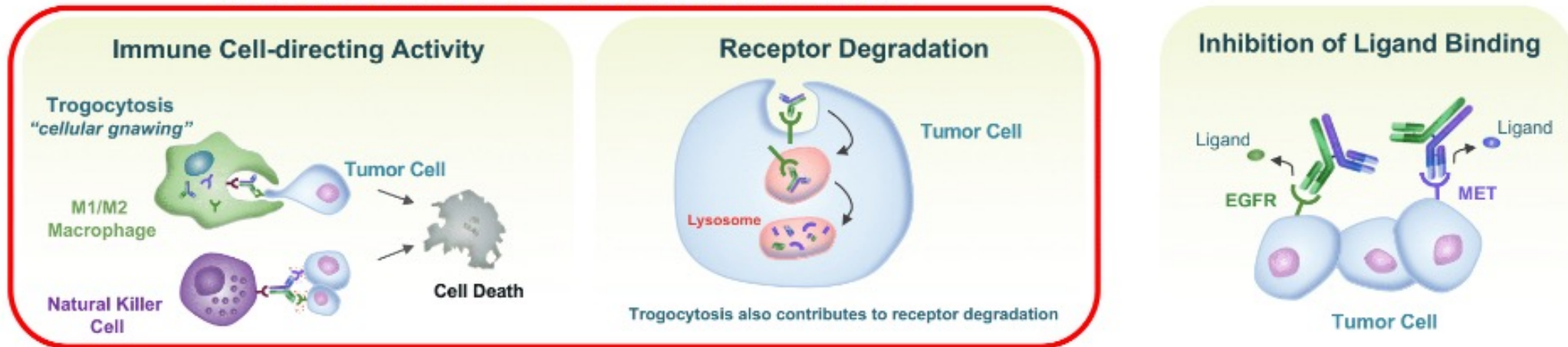
You need to know which mutations are sensitizing to EGFR TKIs

- *Drug-sensitive:*
 - Exon 19 del, L858R
- *Partially drug-sensitive:*
 - G719, L861Q
- *Insensitive:*
 - Exon 20 insertions (except FQEA)

Amivantamab: EGFR-MET Bispecific Antibody

- Fully human EGFR-MET bispecific antibody with immune cell-directing activity¹⁻²
 - Targets activating and resistance EGFR mutations and MET mutations and amplifications³⁻⁴
- Demonstrated monotherapy activity in patients with diverse EGFRm disease including EGFR Exon19del, L858R, T790M, C797S, Exon20ins, and MET amplification³⁻⁴

MOA Relevant to EGFR Exon20ins-mutated NSCLC



¹Vijayaraghavan *Mol Cancer Ther* 19(10):2044. ²Yun *Cancer Discov* 10(8):1194. ³Haura *JCO* 37(15_suppl):9009. ⁴Park *JCO* 38(15_suppl):9512
EGFR, epidermal growth factor receptor; EGFRm, EGFR-mutant; MET, mesenchymal-epithelial transition; NSCLC, non-small cell lung cancer



CHRYSALIS Study Design: Post-platinum Exon20ins Population

NCT02609776

Key Objectives

- Dose escalation: Establish RP2D
- Dose expansion: Assess safety and efficacy at RP2D

Key Eligibility Criteria for Post-platinum Population

- Metastatic/unresectable NSCLC
- EGFR Exon20ins mutation
- Progressed on platinum-based chemotherapy

Dose Escalation
Cohorts
140–1750 mg
Advanced NSCLC

RP2D
1050 mg (<80 kg)
1400 mg (≥80 kg)
C1 QW, C2+ Q2W

Dose Expansion
Cohort D
EGFR Exon20ins

Post-platinum Exon20ins
Treated at RP2D
(N=114; *Safety Population*)

Post-platinum Exon20ins with ≥3
Disease Assessments at Clinical Cut-off^a
(n=81; *Efficacy Population*)

Efficacy End Points

Primary

- Overall response rate per RECIST v1.1

Key Secondary

- Clinical benefit rate
- Duration of response
- Progression-free survival
- Overall survival

^aPost-platinum patients treated at the RP2D and had ≥3 scheduled disease assessments or discontinued, progressed, or died prior to the 3rd postbaseline assessment at the time of clinical cut-off (June 8, 2020). By October 8, 2020, all responders in the efficacy population had ≥6 months of follow-up from their first disease assessment.

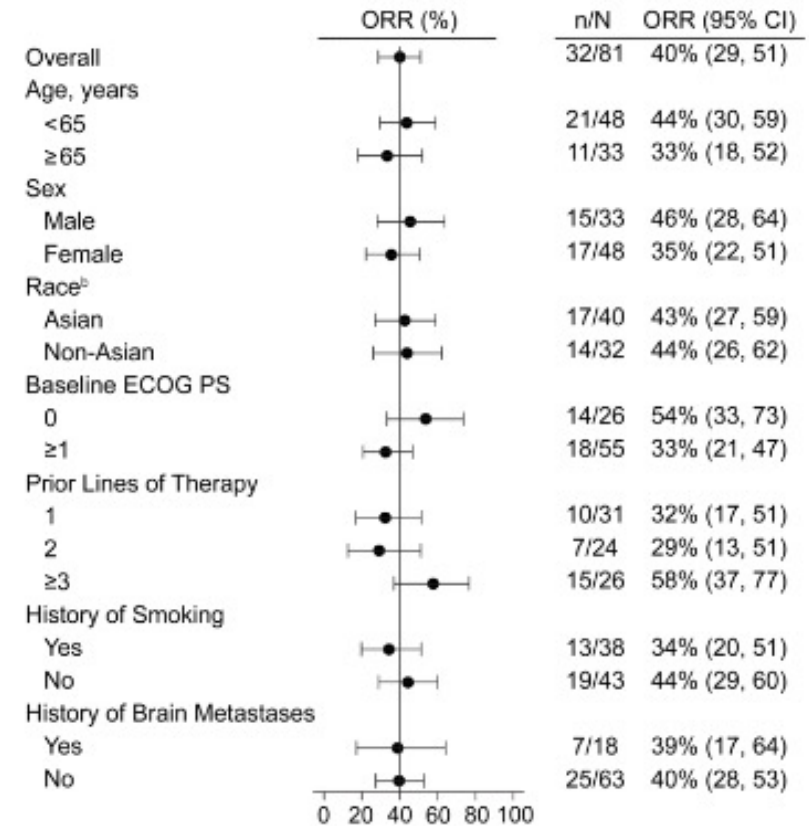
C, cycle; Q2W, every other week; QW, weekly; RECIST, Response Evaluation Criteria in Solid Tumors; RP2D, recommended phase 2 dose



Amivantamab: Efficacy by BICR

BICR-assessed Response	Efficacy Population (n=81)
Overall response rate	40% (95% CI, 29–51)
Median duration of response	11.1 months (95% CI, 6.9–NR)
Best response, n (%)	
Complete response	3 (4)
Partial response	29 (36)
Stable disease	39 (48)
Progressive disease	8 (10)
Not evaluable	1 (1)
Clinical benefit rate ^a	74% (95% CI, 63–83)

Median follow-up: 9.7 months (range, 1.1–29.3)



8 October 2020 efficacy data cut. ^aClinical benefit rate (CBR) defined as complete response or partial response or stable disease for at least 2 disease assessments. ^bDoes not include 9 patients with race not reported and multiple race. BICR, blinded independent central review; CI, confidence interval; ECOG PS, Eastern Cooperative Oncology Group performance status; NR, not reached; ORR, overall response rate

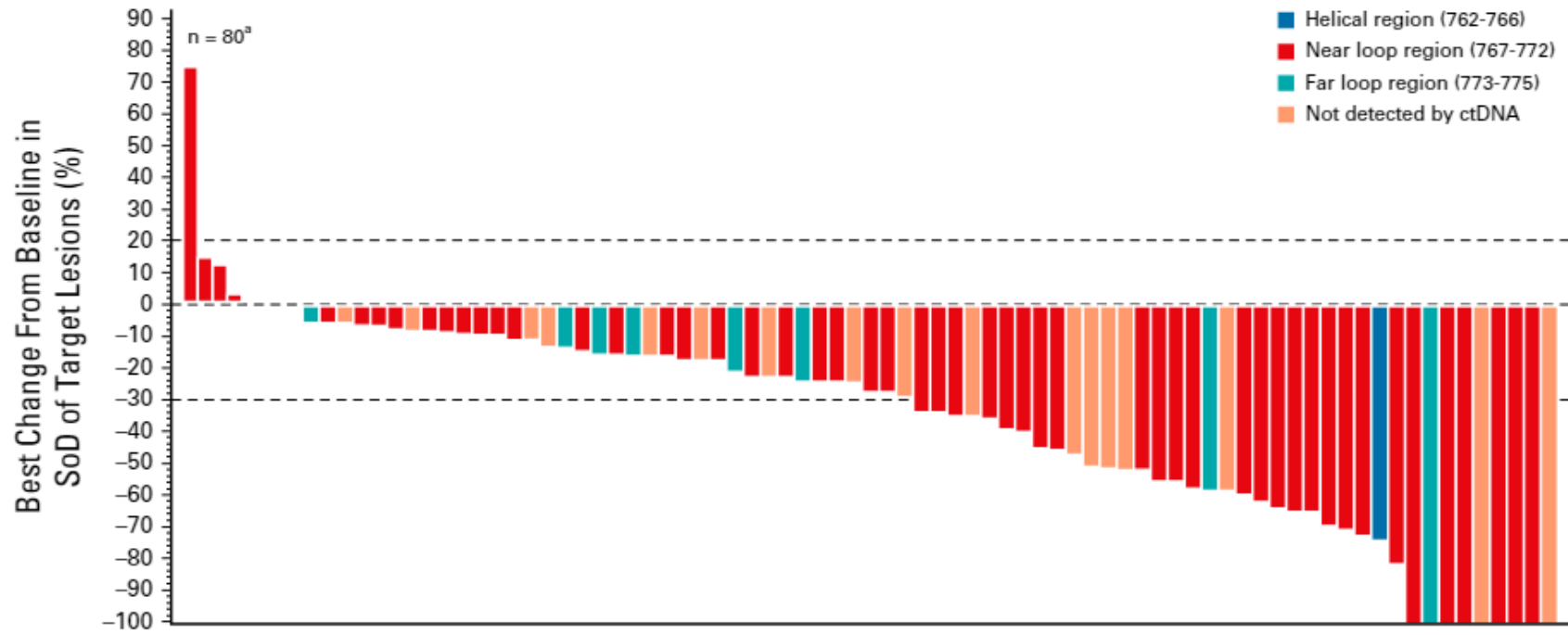
TABLE 2. Summary of AEs

Event	Safety Population (n = 114), No. (%)	Patients Treated at the RP2D (n = 258), No. (%)
Any AE	113 (99)	257 (100)
Grade \geq 3 AE	40 (35)	101 (39)
Serious AE	34 (30)	79 (31)
AE leading to death	8 (7)	13 (5)
AE leading to discontinuation	11 (10)	17 (7)
AE leading to dose reduction	15 (13)	26 (10)
AE leading to dose interruption ^a	40 (35)	88 (34)

Most Common AE (\geq 10%)	Safety Population (n = 114), No. (%)				Patients Treated at the RP2D (n = 258), No. (%)			
	Total	Grade 1	Grade 2	Grade \geq 3	Total	Grade 1	Grade 2	Grade \geq 3
Rash ^b	98 (86)	43 (38)	51 (45)	4 (4)	202 (78)	101 (39)	94 (36)	7 (3)
Infusion-related reaction	75 (66)	9 (8)	63 (55)	3 (3)	167 (65)	21 (8)	140 (54)	6 (2)
Paronychia	51 (45)	28 (25)	22 (19)	1 (1)	104 (40)	50 (19)	51 (20)	3 (1)
Hypoalbuminemia	31 (27)	6 (5)	22 (19)	3 (3)	63 (24)	21 (8)	38 (15)	4 (2)
Constipation	27 (24)	18 (16)	9 (8)	0	58 (23)	36 (14)	22 (9)	0
Nausea	22 (19)	17 (15)	5 (4)	0	55 (21)	40 (16)	14 (5)	1 (0.4)
Dyspnea	22 (19)	12 (11)	8 (7)	2 (2)	52 (20)	28 (11)	13 (5)	11 (4)
Stomatitis	24 (21)	11 (10)	13 (11)	0	50 (19)	33 (13)	17 (7)	0
Peripheral edema	21 (18)	20 (18)	1 (1)	0	50 (19)	43 (17)	5 (2)	2 (1)
Pruritus	19 (17)	11 (10)	8 (7)	0	49 (19)	40 (16)	9 (4)	0
Fatigue	21 (18)	15 (13)	4 (4)	2 (2)	47 (18)	29 (11)	16 (6)	2 (1)
Cough	16 (14)	11 (10)	5 (4)	0	40 (16)	25 (10)	15 (6)	0
Decreased appetite	16 (14)	7 (6)	9 (8)	0	39 (15)	23 (9)	16 (6)	0
Dry skin	18 (16)	18 (16)	0	0	33 (13)	32 (12)	1 (0.4)	0



A



B

762 E (n = 0)	763 A (n = 1)	764 Y (n = 0)	765 V (n = 0)	766 M (n = 0)	767 A (n = 19)	768 S (n = 13)	769 V (n = 1)	770 D (n = 9)	771 N (n = 9)	772 P (n = 3)	773 H (n = 8)	774 V (n = 0)	775 C (n = 0)
Helical region (n = 1) ORR = 100% CBR = 100%					Near loop (n = 54) ORR = 41% CBR = 70%						Far loop (n = 8) ORR = 25% CBR = 75%		
Not detected by ctDNA (n = 18) ORR = 39% CBR = 83%													

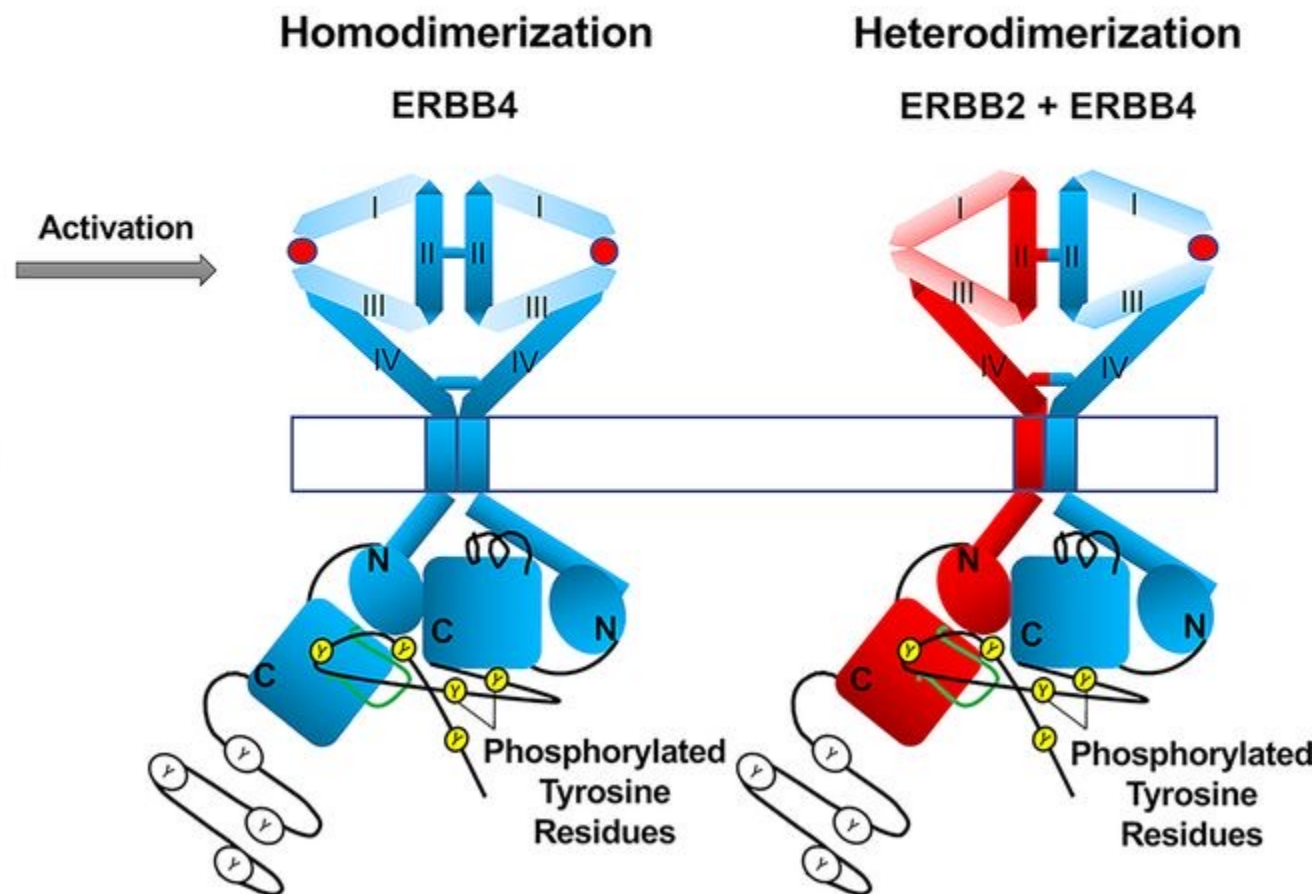
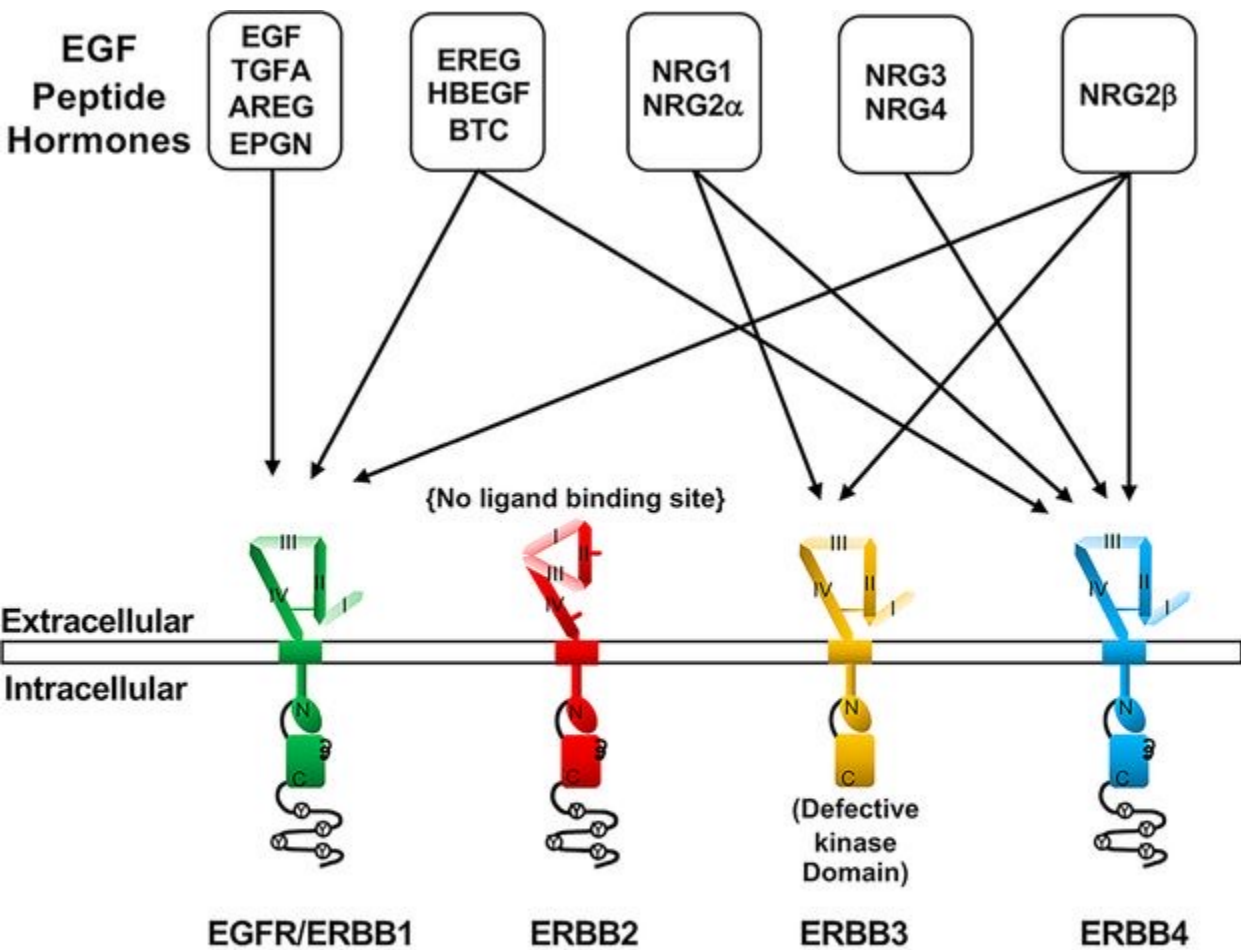
EGFR Exon 20 therapies – what's next

- Amivantamab is available for patients with EGFR Exon 20 insertion mutations who progress on 1st line platinum chemotherapy
 - *Open question whether to include ICI or bevacizumab with doublet*
 - *Takeda has voluntarily removed mobocertinib from market*
- Amivantamab has very real side effects including IRR, rash, diarrhea, and peripheral edema
 - *Grade ≥ 3 AEs (30%), dose reduction (10%), dose discontinuation (34%) when treated at RP2D*
- Future directions
 - Amivantamab + lazertinib + chemotherapy combination studies
 - Structural variants of EGFR Exon 20 may matter (far loop vs near loop)



Later line treatments – antibody drug conjugates (ADCs)

Receptor tyrosine kinases and dimerization



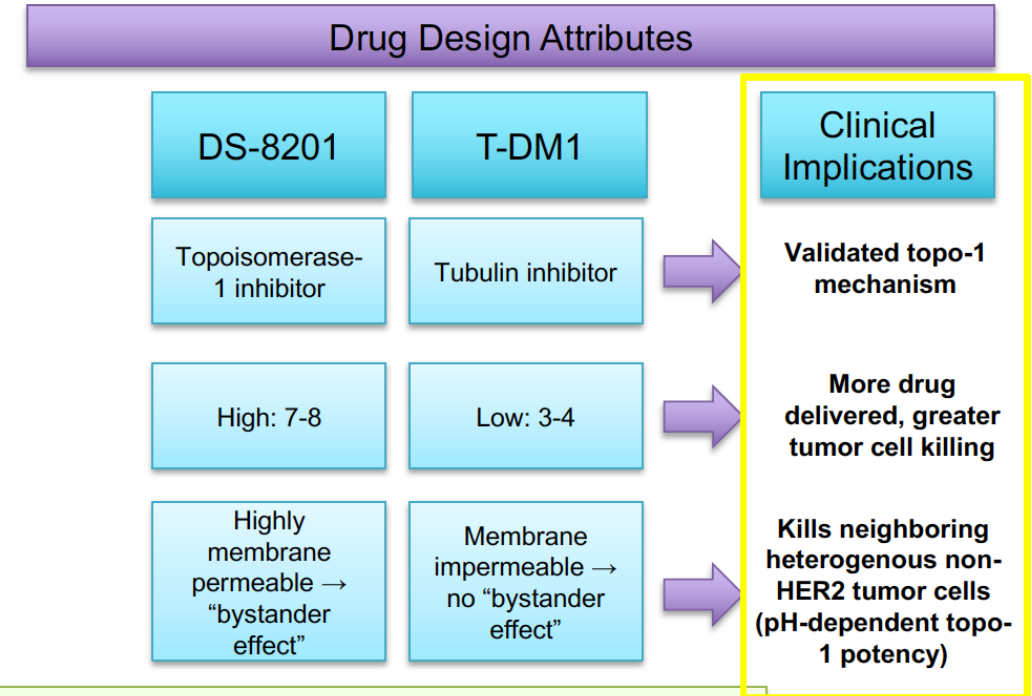
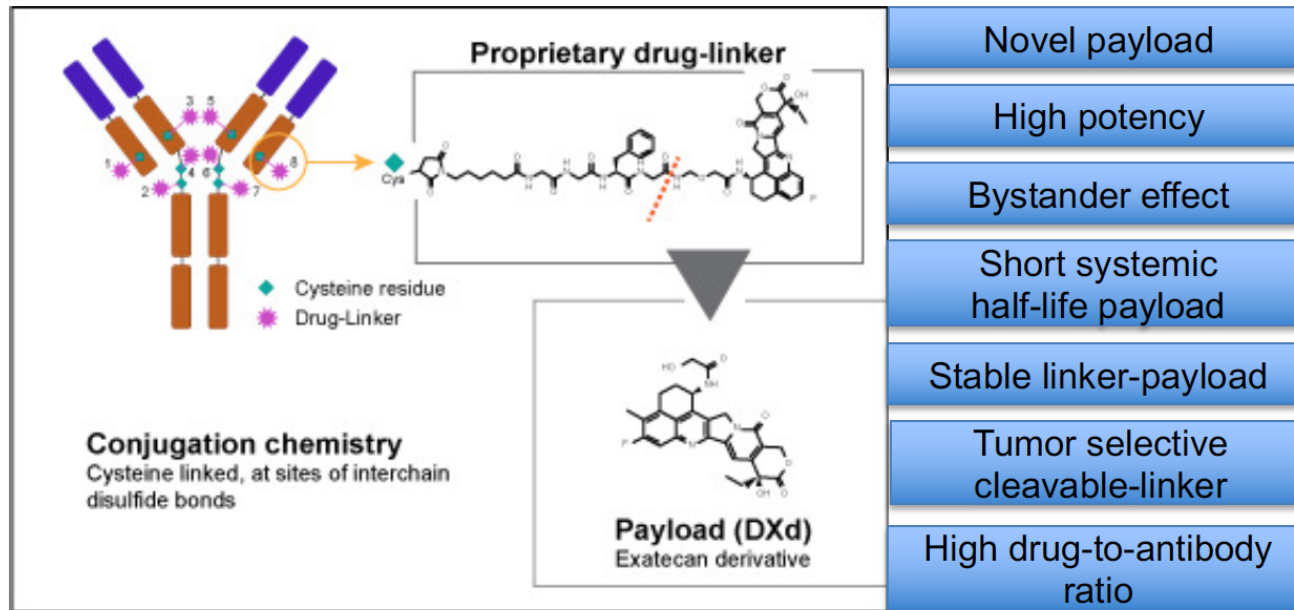
HER2 mutations, amplifications, overexpression

<i>ERBB2</i> Mutations	<i>ERBB2</i> Gene Amplifications	HER2 Protein Overexpression
~2%-3% of lung adenocarcinomas	~2%-5% of lung adenocarcinomas	~2.4%-38% of NSCLCs
NGS, RT-PCR Most common: exon 20	FISH HER2/CEP17 ratio ≥ 2.0	IHC 2+ or 3+



Trastuzumab deruxtecan (T-DXd)

Designed with the goal of improving clinical attributes of an ADC



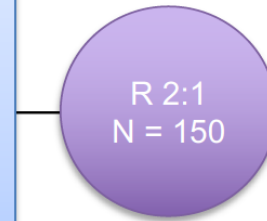
[Fam-] trastuzumab deruxtecan is an antibody-drug conjugate with a HER2 antibody, peptide-based cleavable linker, and a novel topoisomerase I inhibitor payload

DESTINY-Lung 02

HER2+ NSCLC, Second Line

Key Eligibility Criteria

- Confirmed metastatic NSCLC with activating HER2 mutation
- Progression after 1 previous line of platinum-containing therapy
- Absence of *EGFR*, *BRAF* mutations and *ALK*, *ROS1* fusions
- ECOG PS 0 or 1
- LVEF \geq 50% within 28 days before randomization
- No history of non-infections ILD requiring steroids or active ILD



T-DXd 5.4 mg/kg
Every 3 weeks for 14 months

T-DXd 6.4 mg/kg
Every 3 weeks for 14 months

Primary End Point

- ORR (RECIST v1.1 per BICR)

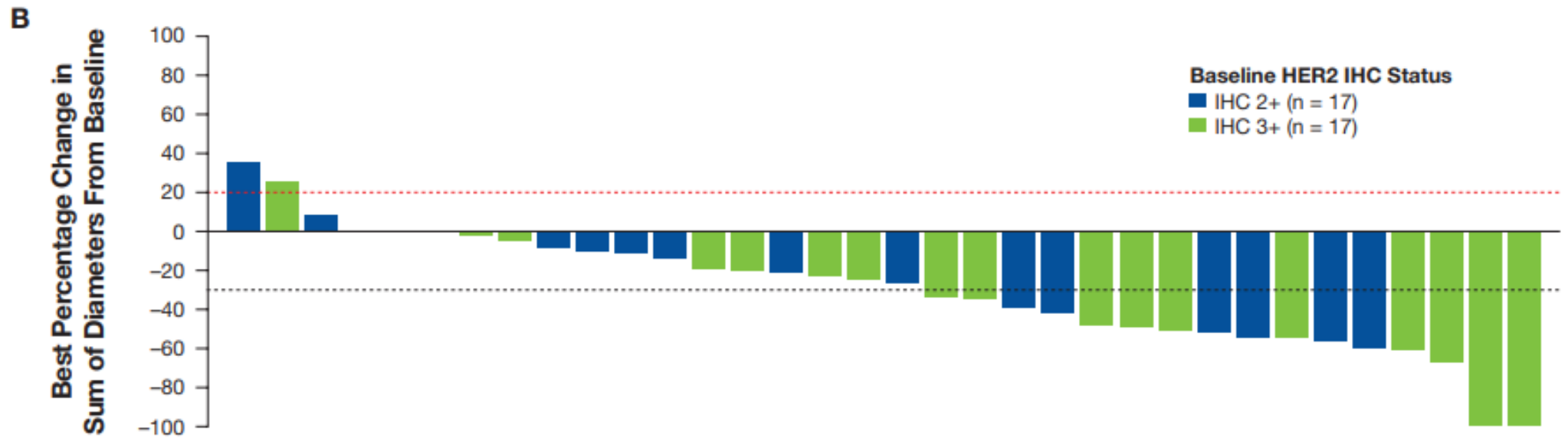
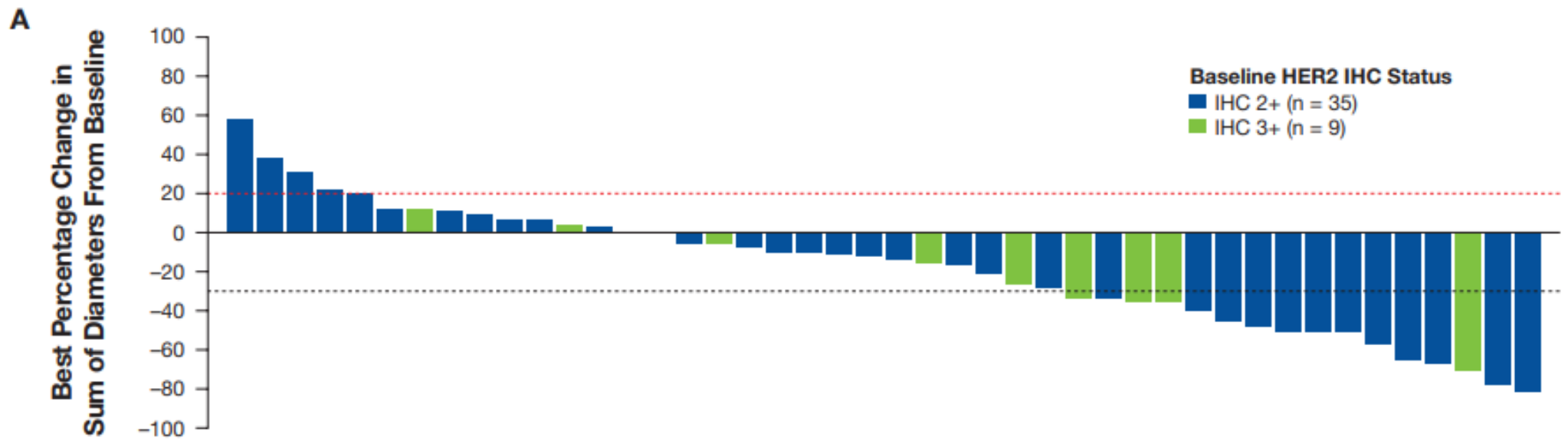
Key Secondary End Points

- ORR (RECIST v1.1 per investigator)
- DCR, DOR, and PFS (RECIST v1.1 per BICR), OS, Safety

DL-02 Efficacy

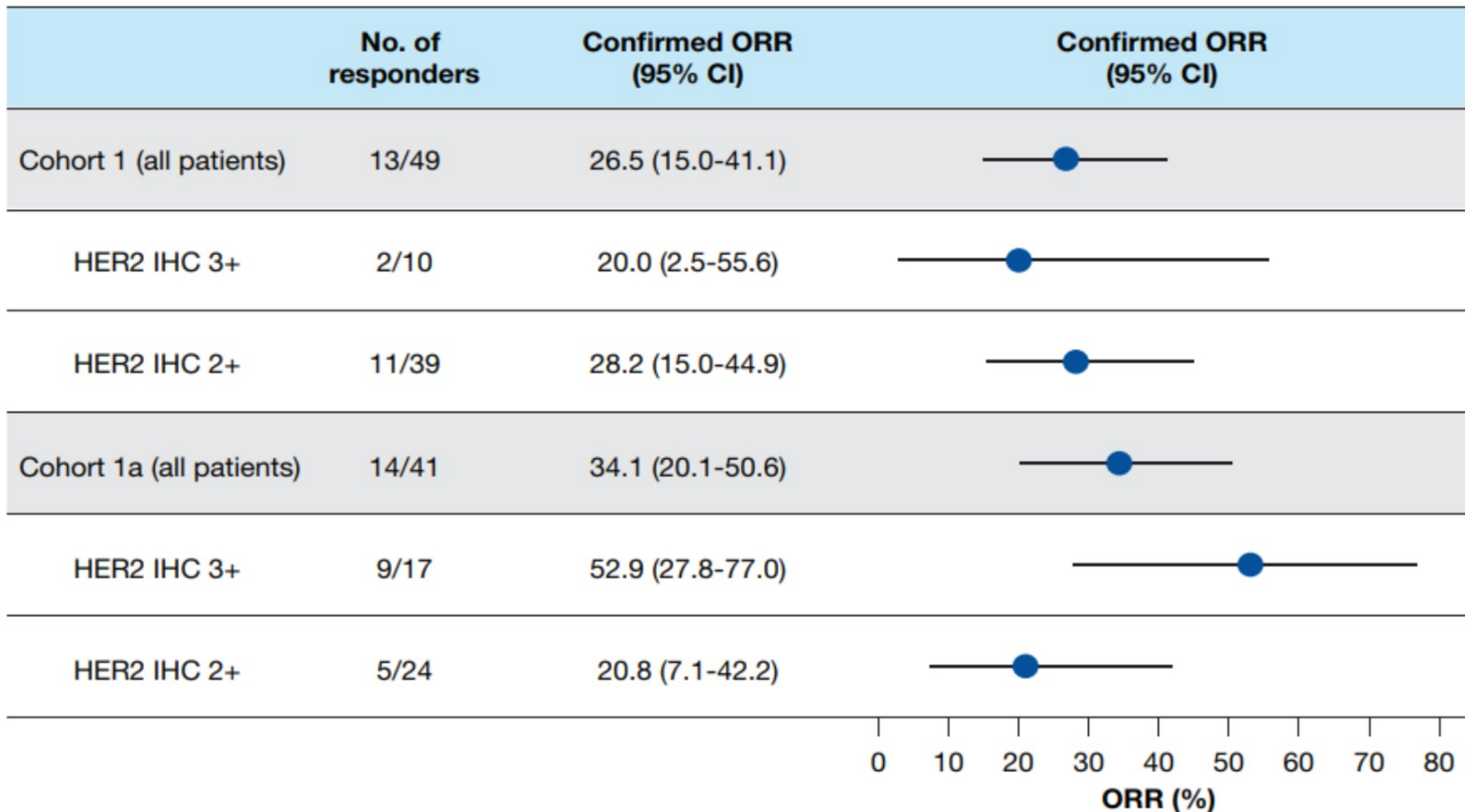
Response Assessment by BICR	Prespecified early cohort	
	T-DXd 5.4 mg/kg n = 52	T-DXd 6.4 mg/kg n = 28
Confirmed ORR,^a n (%) [95% CI]	28 (53.8) [39.5, 67.8]	12 (42.9) [24.5, 62.8]
Best overall response, n (%)		
CR	1 (1.9)	1 (3.6)
PR	27 (51.9)	11 (39.3)
SD	19 (36.5)	14 (50.0)
PD	2 (3.8)	1 (3.6)
NE ^b	3 (5.8)	1 (3.6)
DCR,^c n (%) [95% CI]	47 (90.4) [79.0, 96.8]	26 (92.9) [76.5, 99.1]
Median DoR, months [95% CI]	NE [4.2, NE]	5.9 [2.8, NE]
Median TTIR, months [range]	1.4 [1.2-5.8]	1.4 [1.2-3.0]
Median follow-up, months [range]	5.6 (1.1-11.7)	5.4 (0.6-12.1)





Best (minimum) percentage change from baseline in the sum of diameters for all target lesions, based on ICR. Baseline was last measurement taken before enrollment. Red line at 20% indicates PD, and black line at -30% indicates PR (when considering only target lesions). Full analysis set data are shown.

Figure 2. Response to T-DXd by HER2 IHC Status



ILD lower in 5.4 mg/kg

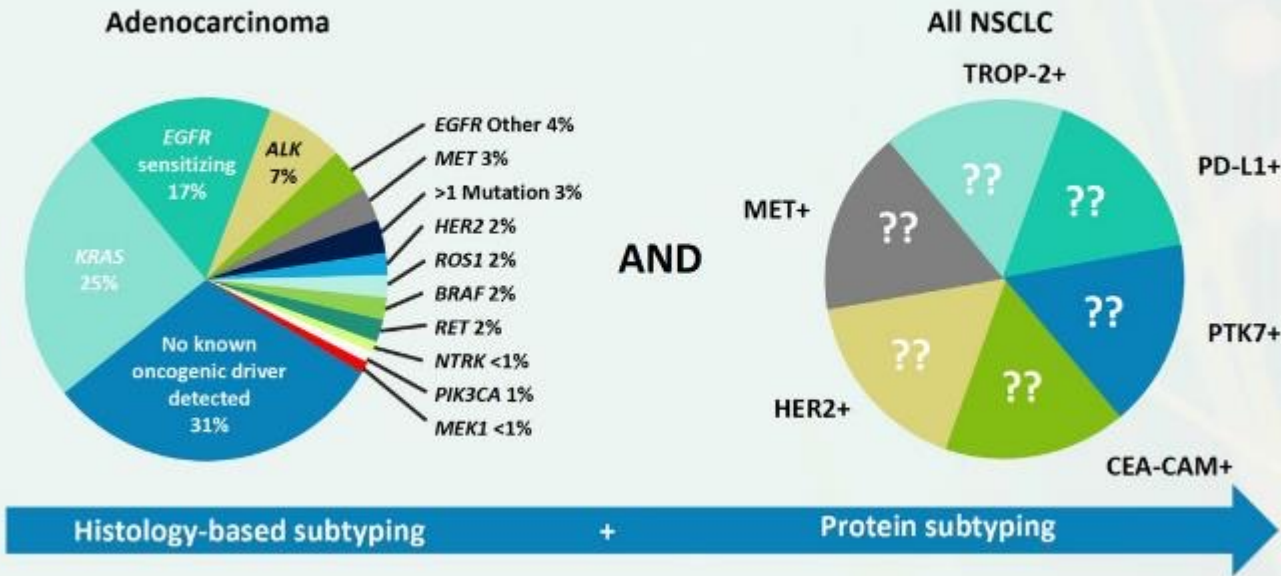
Adjudicated Drug-Related ILD

	Safety analysis set ^b		Prespecified early cohort ^c	
	T-DXd 5.4 mg/kg n = 101	T-DXd 6.4 mg/kg n = 50	T-DXd 5.4 mg/kg n = 51	T-DXd 6.4 mg/kg n = 28
Adjudicated as drug-related ILD ^a				
Any grade, n (%)	6 (5.9)	7 (14.0)	4 (7.8)	5 (17.9)
Grade 1	3 (3.0)	1 (2.0)	3 (5.9)	1 (3.6)
Grade 2	2 (2.0)	6 (12.0)	1 (2.0)	4 (14.3)
Grade 3	1 (1.0)	0	0	0
Grade 4	0	0	0	0
Grade 5	0	0	0	0
Cases resolved, n (%)	3 (50.0)	1 (14.3)	1 (25.0)	1 (20.0)
Median time to onset of first adjudicated ILD, days (range)	67.5 (40-207)	41.0 (36-208)	104.5 (40-207)	43.0 (36-208)

- Most cases of adjudicated drug-related ILD were low grade (grade 1/2)
- The rate of adjudicated drug-related ILD was lower in the T-DXd 5.4 mg/kg arm compared with the 6.4 mg/kg arm

Future directions for ADCs

Can we further classify NSCLC by protein targets?



1. Li T, et al. *J Clin Oncol* 2013; 31:1039-1049; 2. Tseu A, et al. *J Thorac Oncol* 2016; 11:613-638.

- How to prioritize sequencing? (genomic vs protein subtyping)
- How to sequence payloads? (MMAE vs topoisomerase)
- How to combine with TKIs? Which patients would benefit?
- How to combine with immunotherapy? What PDL1 subtypes?
- What dose is appropriate?
- Biomarker restricted or broad?

Summary

- Docetaxel +/- ramucirumab current 2nd line chemotherapy option
- Sotorasib and adagrasib are options for KRAS G12C NSCLC, but limited single agent activity and toxicity.
 - Newer trials in development with KRAS TKI and KRAS combinations
- Amivantamab is an option for EGFR Exon 20 NSCLC
 - Newer trials include novel EGFR Exon 20 TKIs and amivantamab combinations
- Trastuzumab deruxtecan an option for HER2 altered NSCLC
 - ILD and neutropenia are class toxicities
 - Response rates modest and unclear relationship between HER2 IHC expression
- **After progression on first line treatment for NSCLC, please strongly consider referral for a clinical trial**



THANK YOU

Email: tejas.patil@cuanschutz.edu

Twitter: @TejasPatilMD

