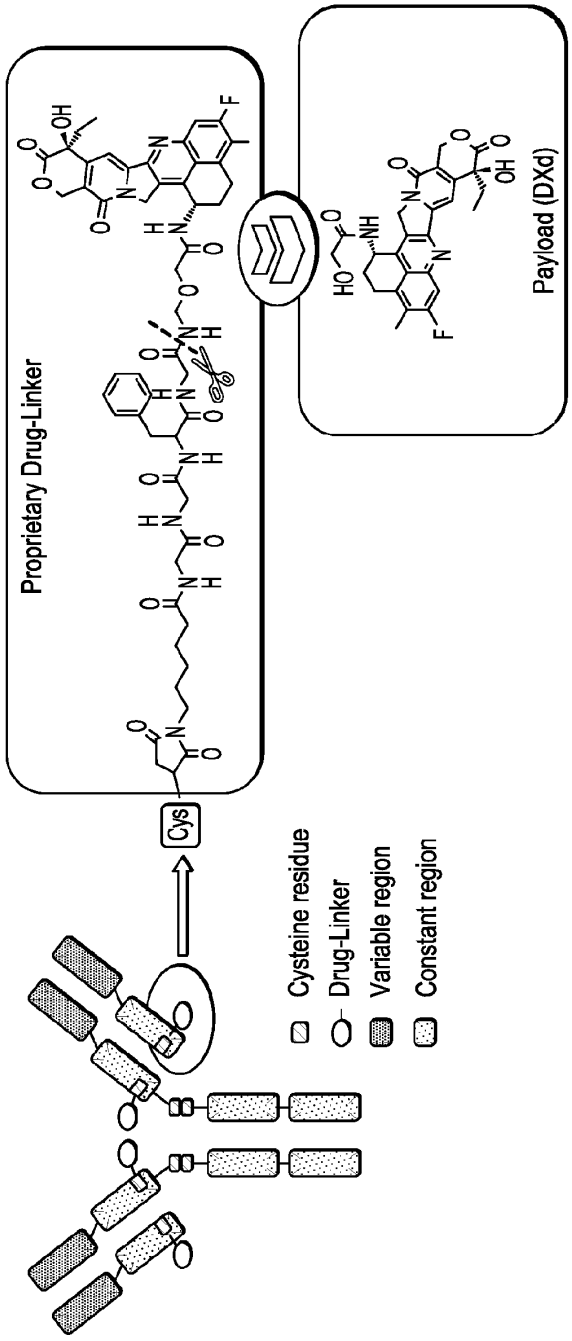

Proprietary Drug-Linker
Payload (DXd)
Cys
Cysteine residue
Drug-Linker
Variable region
Constant region

FIG.1

Heavy chain

QVQLVQSGAE VKKPGASVKV SCKASGYTFT YAGMQWVRQA PGQGLEWMGW
INTHSGVPKY AEDFKGRVTI SADTSTSTAY LQLSSLKSED TAVYYCARSG
FGSSYWYFDV WGQGTLVTVS DADTKGPSVF PLAPSSKSTS GGTAALGCLV
KDYFPEPVTV SWNSGALTSG VHTFPAVLQS SGLYSLSSVV TVPSSSLGTQ
TYICNVNHKP SNTKVDKRVE PKSCDKTHTC PPCPAPELLG GPSVFLFPPK
PKDTLMISRT PEVTCVVVDV SHEDPEVKFN WYVDGVEVHN AKTKPREEQY
NSTYRVVSVL TVLHQDWLNG KEYKCKVSNK ALPAPIEKTI SKAKGQPREP
QVYTLPPSRE EMTKNQVSLT CLVKGFYPSD IAVEWESNGQ PENNYKTTPP
VLDSDGSFFL YSKLTVDKSR WQQGNVFSCS VMHEALHNHY TQKSLSLSPG
K (SEQ ID NO: 45)

Light chain

DIQMTQSPSS LSASVGDRVT ITCKASQDVS TAVAWYQQKP GKAPKLLIYS
ASYRYTGVPS RFSGSGSGTD FTLTISSLQP EDFAVYYCQQ HYITPLTFGQ
GTKLEIKRTV AAPSVFIFPP SDEQLKSGTA SVVCLLNNFY PREAKVQWKV
DNALQSGNSQ ESVTEQDSKD STYSLSSTLT LSKADYEKHK VYACEVTHQG
LSSPVTKSFN RGEC (SEQ ID NO: 46)

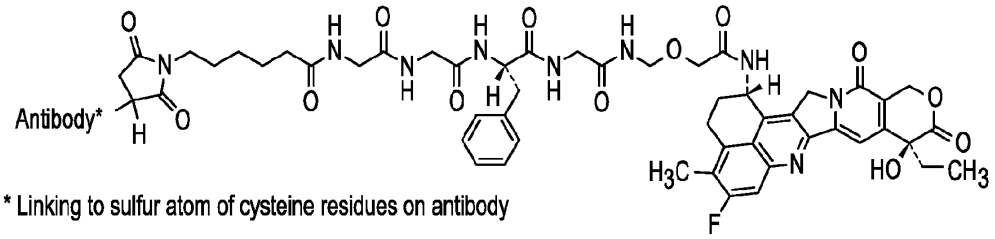


FIG.2

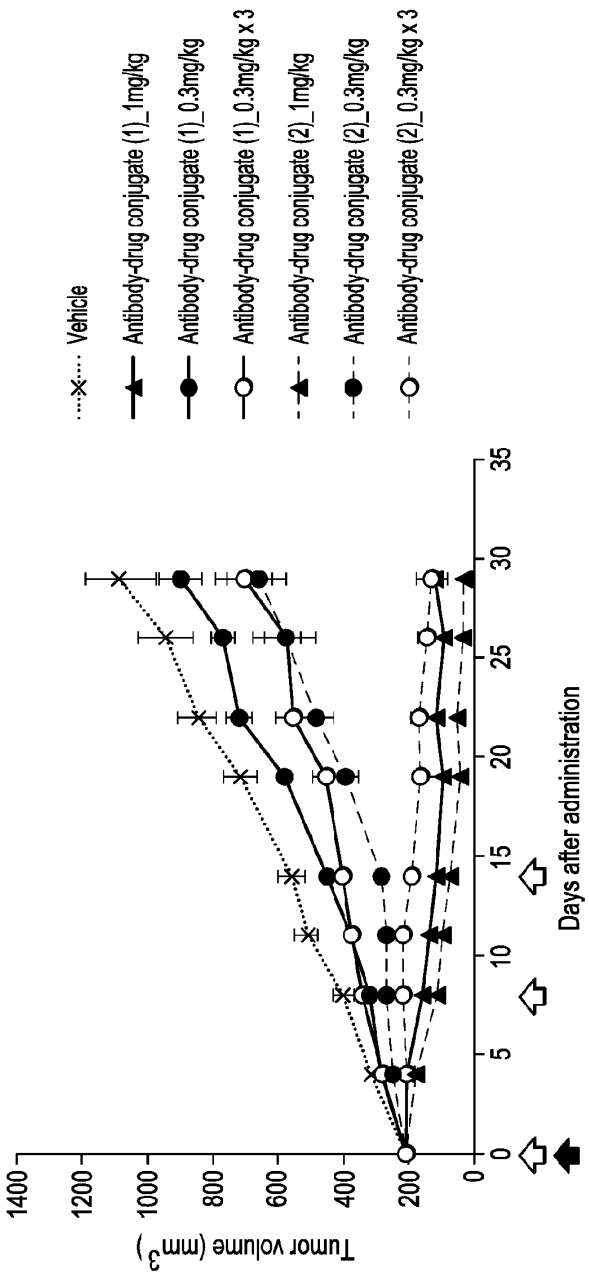

Vehicle
Antibody-drug conjugate (1)_1mg/kg
Antibody-drug conjugate (1)_0.3mg/kg
Antibody-drug conjugate (1)_0.3mg/kg x 3
Antibody-drug conjugate (2)_1mg/kg
Antibody-drug conjugate (2)_0.3mg/kg
Antibody-drug conjugate (2)_0.3mg/kg x 3
Tumor volume (mm3)
1400
1200
1000
800
600
400
200
0
0
5
10
15
20
25
30
35
Days after administration

FIG.3

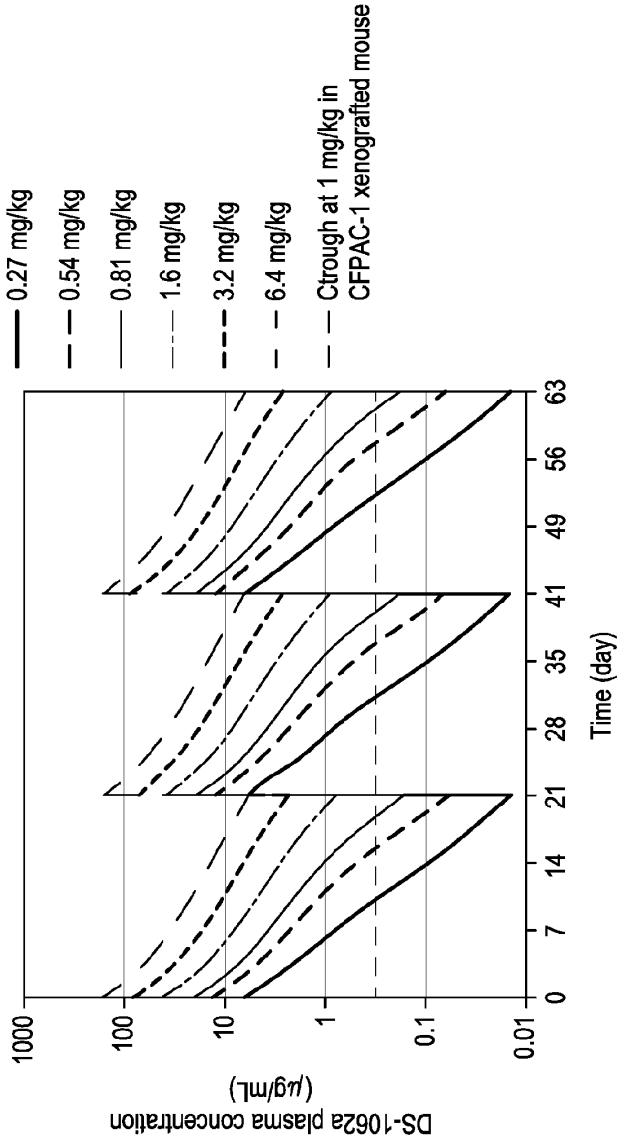

0.27 mg/kg
0.54 mg/kg
0.81 mg/kg
1.6 mg/kg
3.2 mg/kg
6.4 mg/kg
Ctrough at 1 mg/kg in CFPAC-1 xenografted mouse
DS-1062a plasma concentration (μg/mL)
1000
100
10
1
0.1
0.01
0
7
14
21
28
35
41
49
56
63
Time (day)

FIG.4

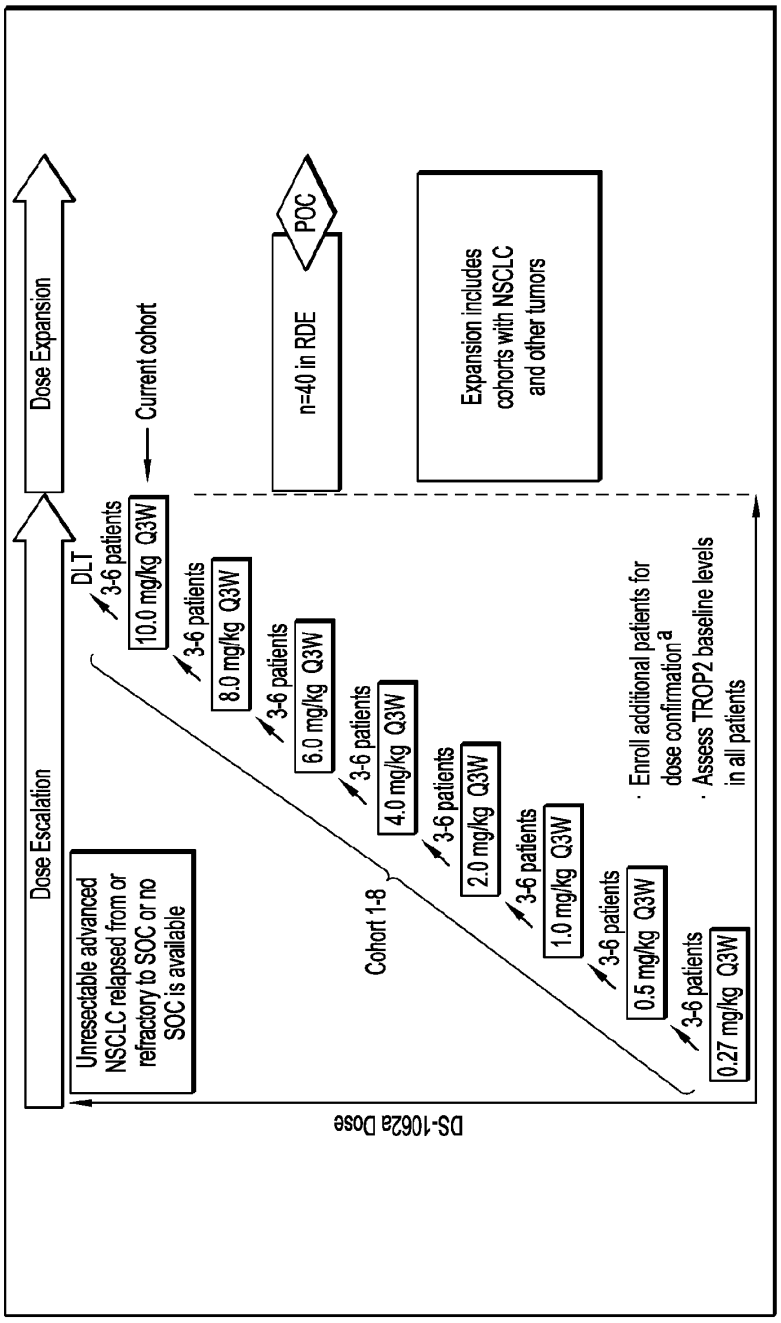


FIG.5

*RDE will be used for additional subjects for dose confirmation.

DLT, dose-limiting toxicity; NSCLC, non-small cell lung cancer, POC, proof-of-concept; Q3W, every 3 weeks; RDE, recommended dose for expansion; SOC, standard of care; TROP2, trophoblast cell-surface antigen 2.

Parameter	DS-1062a dose, mg/kg							Total (N=39)
	0.27 (n=4)	0.5 (n=5)	1.0 (n=7)	2.0 (n=6)	4.0 (n=6)	6.0 (n=8)	8.0 (n=3)	
Male sex, n(%)	1 (25.0)	3 (60.0)	4 (57.1)	4 (66.7)	2 (33.3)	6 (75.0)	3 (100)	23 (59.0)
Age, y, median (range)	64.0 (28-75)	66.0 (45-73)	67.0 (57-74)	60.5 (42-70)	60.5 (38-72)	53.5 (47-60)	69.0 (49-71)	60.0 (28-75)
Country, n(%)								
US	2 (50.0)	4 (80.0)	5 (71.4)	4 (66.7)	5 (83.3)	5 (62.5)	1 (33.3)	26 (66.7)
Japan	2 (50.0)	1 (20.0)	2 (28.6)	2 (33.3)	1 (16.7)	3 (37.5)	2 (66.7)	13 (33.3)
Stage at study entry, n(%)								
IIA	0	0	0	0	0	1 (12.5)	0	1 (2.6)
IIIA	0	0	0	1 (16.7)	0	0	1 (33.3)	2 (5.1)
IVA	1 (25.0)	1 (20.0)	0	0	3 (50.0)	3 (37.5)	0	8 (20.5)
IVB	0	3 (60.0)	5 (71.4)	2 (33.3)	2 (33.3)	0	1 (33.3)	13 (33.3)
Other[a]	3 (75.0)	1 (20.0)	2 (28.6)	3 (50.0)	1 (16.7)	4 (50.0)	1 (33.3)	15 (38.5)
Histology, n(%)								
Adenocarcinoma	4 (100)	3 (60.0)	6 (65.7)	4 (66.7)	3 (50.0)	6 (75.0)	3 (100)	29 (74.4)
Large cell	0	0	0	0	1 (16.7)	0	0	1 (2.6)
Other	0	1 (20.0)[c]	0	0	0	0	0	1 (2.6)
Squamous	0	1 (20.0)	1 (14.3)	2 (33.3)	2 (33.3)	2 (25.0)	0	8 (20.5)
ECOG PS, n(%)								
0	0	1 (20.0)	2 (28.6)	0	2 (33.3)	2 (25.0)	1 (33.3)	8 (20.5)
1	4 (100)	4 (80.0)	5 (71.4)	6 (100)	4 (66.7)	6 (75.0)	2 (66.7)	31 (79.5)

*n=3 EGFR mutations and n=2 ALK mutations; *Stage IV; *TNM T2,2; 2.0nM.
ECOG P5, eastern Cooperartive Oncology Group performance score; EGFR, epidermal growth facror receptor, NSCLC, non-small cell lung cancer.

FIG.6

TEAE, n(%)	N=39	
	All grades	Grade ≥ 3[a]
Any TEAE	34 (87.2)	16 (41.0)
TEAE, by preferred term (in ≥ 10% of patients)		
Fatigue	13 (33.3)	2 (5.1)
Nausea	12 (30.8)	0
Anemia	9 (23.1)	0
Decreased appetite	9 (23.1)	0
Alopecia	8 (20.5)	0
Infusion related reaction	8 (20.5)	0
Constipation	6 (15.4)	0
Vomiting	6 (15.4)	0
Cough	5 (12.8)	0
Dyspnea	5 (12.8)	1 (2.6)
Rash	5 (12.8)	0
UNCODED	5 (12.8)	1 (2.6)
Diarrhea	4 (10.3)	0
Pain	4 (10.3)	1 (2.6)
Weight decreased	4 (10.3)	0

*The majority of TEAEs were grade 3 (n=6; 20.5%), except for one grade 2 and 1 grade 5 TEAE (grade 5 sepsis; 6.0mg/kg treatment group).
TEAE, treatment-emergent adverse event.

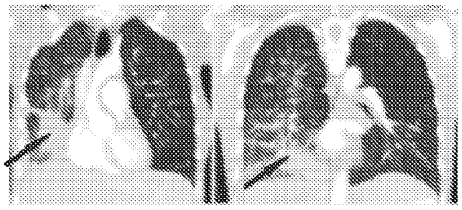
FIG.7

Parameter	DS-1062a dose, mg/kg							Total (N=35)
	0.27 (n=4)	0.5 (n=5)	1.0 (n=7)	2.0 (n=6)	4.0 (n=5)	6.0 (n=7)	8.0 (n=1)	
Best overall response, n(%)								
PR*	0	0	0	1 (16.7)	2 (40.0)	3 (42.9)	1 (100)	7 (20.6)
SD	0	1 (25.0)	6 (85.7)	3 (50.0)	2 (40.0)	4 (57.1)	0	16 (47.1)
PD	4 (100)	3 (75.0)	1 (14.3)	2 (33.3)	1 (20.0)	0	0	11 (32.4)

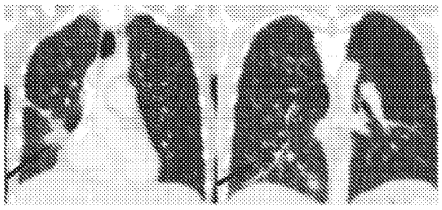
*Per RECIST, but including single-point PRs, not confirmed responses.
PD, progressive disease; PR, partial response, SD, stable disease.

FIG.8

A. Reduction in the size of target lesion in a patient treated with 4.0 mg/kg DS-1062a

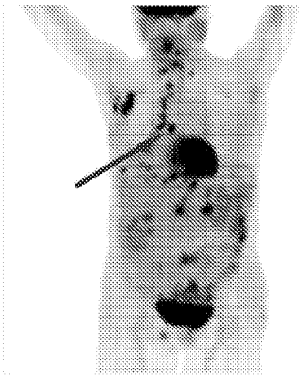


Baseline: Begin 4.0-mg/kg DS-1062a

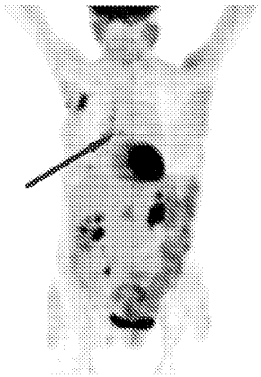


Post-Cycle 6: After 4.5 months of treatment
Maximum percent decrease in tumor size 36.6%

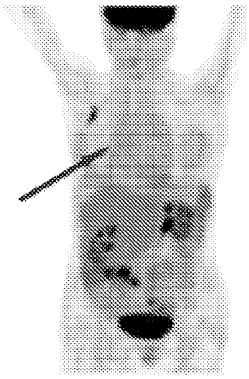
B. Reduction in the size of target lesion in another patient treated with 4.0 mg/kg DS-1062a



Baseline: Begin 4.0 mg/kg DS-1062a



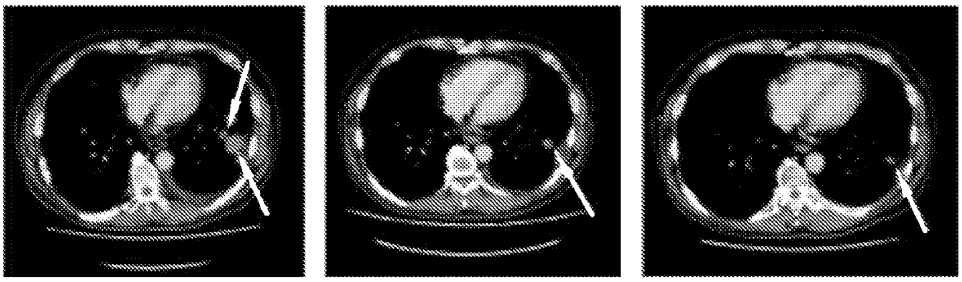
Post-Cycle 2: After 6 weeks of treatment



Post-Cycle 6: After 18 weeks of treatment (ongoing PR)
Maximum percent drcrease in tumor size: 36.4%

FIG.9

C. Reduction in the size of target lesions in a patient treated with 2.0 mg/kg DS-1062a

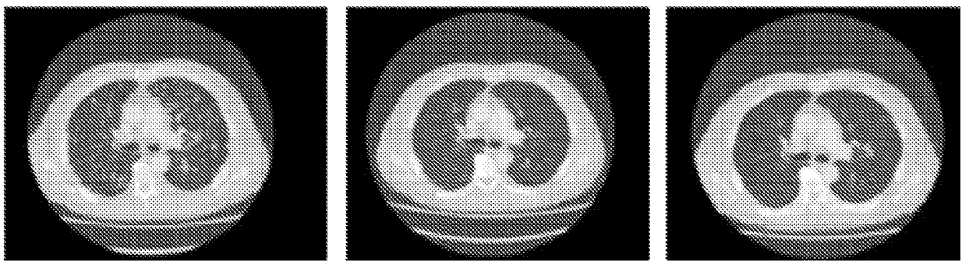


Baseline: Begin 2.0-mg/kg DS-1062a

Post-Cycle 4: After 3 months of treatment
Maximum percent decrease in tumor size: 65.5%

Post-Cycle 10: After 7 months of treatment
Maximum percent decrease in tumor size: 62.0%

D. Decrease in the number of nontarget lesions in the same patient (as panel C) treated with 2.0 mg/kg DS-1062a



Baseline: Begin 2.0-mg/kg DS-1062a

Post-Cycle 4: After 3 months of treatment

Post-Cycle 10: After 7 months of treatment

FIG.9, CON'T

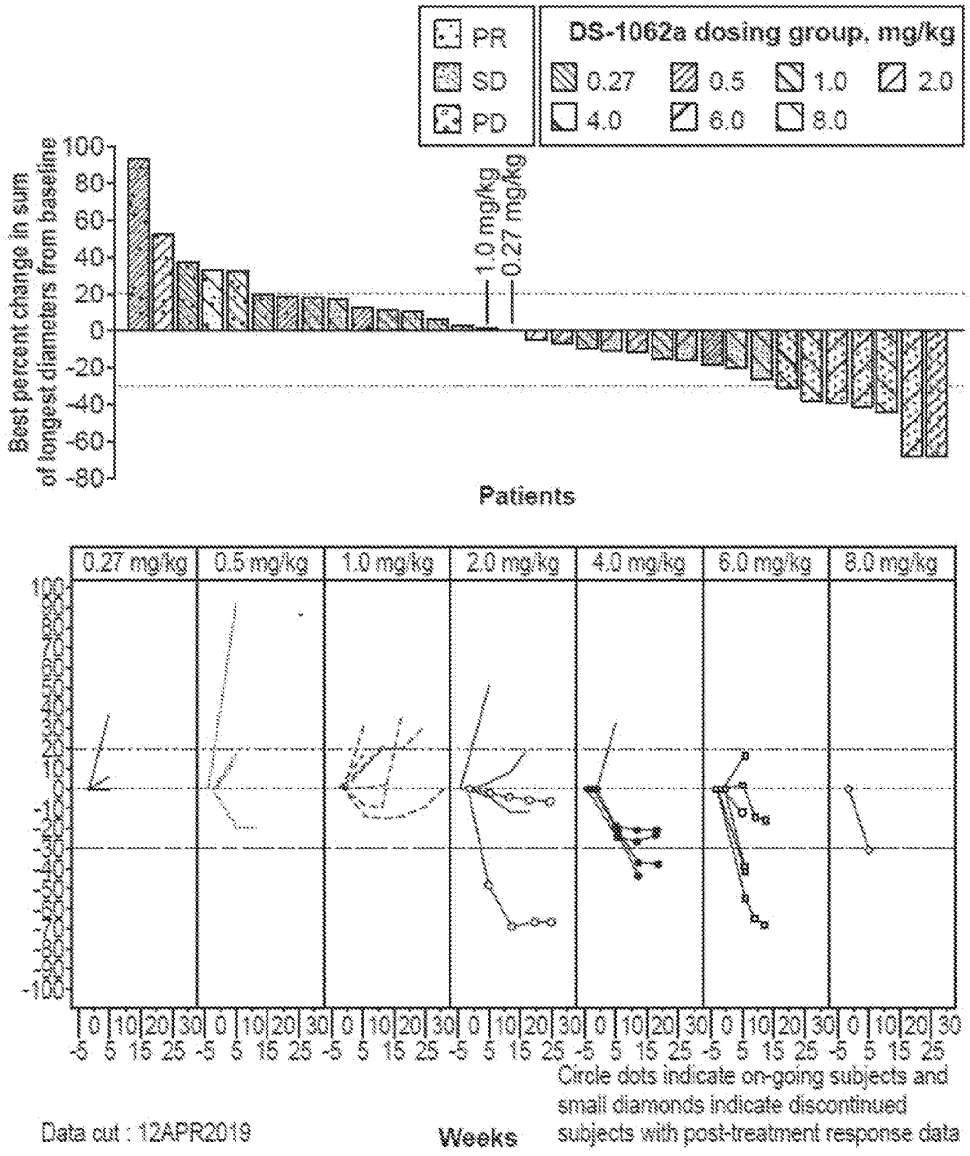

PR
SD
PD
DS-1062a dosing group, mg/kg
0.27
0.5
1.0
2.0
4.0
6.0
8.0
Best percent change in sum of longest diameters from baseline
100
80
60
40
20
0
-20
-40
-60
-80
1.0 mg/kg
0.27 mg/kg
Patients
0.27 mg/kg
0.5 mg/kg
1.0 mg/kg
2.0 mg/kg
4.0 mg/kg
6.0 mg/kg
8.0 mg/kg
Data cut : 12APR2019
Weeks
Circle dots indicate on-going subjects and small diamonds indicate discontinued subjects with post-treatment response data

FIG.10

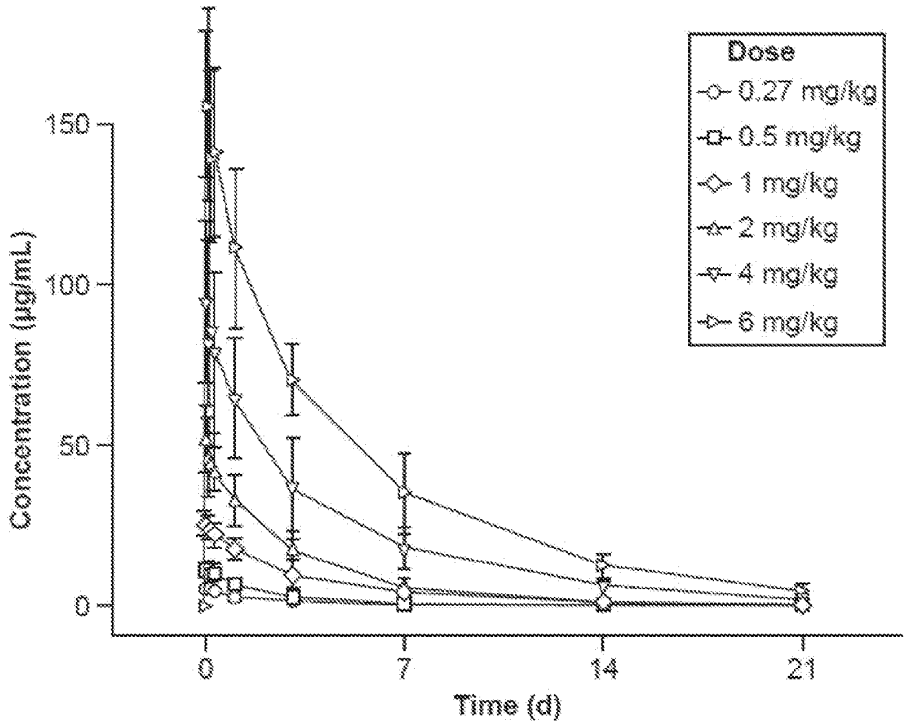

Dose
0.27 mg/kg
0.5 mg/kg
1 mg/kg
2 mg/kg
4 mg/kg
6 mg/kg
Concentration (µg/mL)
150
100
50
0
0
7
14
21
Time (d)

FIG.11

44 subjects dosed in total; 10 PRs

Cohort	Best ORR %	Duration of Response	Status	Number of prior anticancer regimens	Prior EGFR-TKI/ALK/CPI Treatments
4 (2.0 mg/kg)	-68.5%	30 weeks	Ongoing	5	TKI (GEFITINIB, ERLOTINIB and OSIMERTINIB)
5 (4.0 mg/kg)	-37.6%	13 weeks	Ongoing	9	ALK (CRIZOTINIB, ALECTINIB and CERITINIB)
6 (6.0 mg/kg)	-67.7%	11 weeks	Ongoing	3	CPI (DURVALUMAB)
6 (6.0 mg/kg)	-52.3%	10 weeks	Ongoing	3	CPI (NIVOLUMAB)
6 (6.0 mg/kg)	-50.0%	8 weeks	Ongoing	2	CPI (AVELUMAB)
5 (4.0 mg/kg)	-43.8%	7 weeks	Ongoing	3	CPI (NIVOLUMAB)
7 (8.0 mg/kg)	-30.8%	4 weeks	Ongoing	5	CPI (NIVOLUMAB)
7 (8.0 mg/kg)	-56.4%	2 week	Ongoing	4	CPI (NIVOLUMAB and DURVALUMAB)
7 (8.0 mg/kg)	-40.5%	2 week	Ongoing	3	CPI (ATEZOLIZUMAB)
7 (8.0 mg/kg)	-30.5%	1 week	Ongoing	8	CPI (ATEZOLIZUMAB)

Objective Response Rate

Cohort	Dose	# of PRs # of Subjects	ORR%
4	2.0mg/kg	1/6	16.7%
5	4.0mg/kg	2/6	33.3%
6	6.0mg/kg	3/8	37.5%
7	8.0mg/kg	4/4	100%*

*4 subjects in cohort 7 had PR on first follow-up scans. Remaining cohort subjects expected scans in late May/June, 2019

FIG.12

TEAEs, regardless of causality, (in ≥ 10% of pts(, n(%) (N=52)					
	All Grades	Grade ≥ 3		All Grades	Grade ≥ 3
Any TEAE	48 (92.3)	22 (42.3)	Constipation	7 (13.5)	0
Fatigue	19 (36.5)	2 (3.8)	Cough	7 (13.5)	0
Nausea	19 (36.5)	0	Diarrhea	7 (13.5)	0
Alopecia	15 (28.8)	0	ALT increased	6 (11.5)	0
Decreased appetite	14 (26.9)	0	Weight decreased	6 (11.5)	0
Anemia	12 (23.1)	0	Dehydration	5 (9.6)	0
Stomatitis/mucosal inflammation	12 (23.1)	2 (3.8)	Dyspnea	5 (9.6)	1 (1.9)
Vomiting	12 (23.1)	0	Headache	5 (9.6)	0
Infused related reaction	11 (21.2)	0	Pain	5 (9.6)	1 (1.9)
Rash	8 (15.4)	0			

- DLT reached at 10mg/kg;[a] MTD at 8mg/kg is also RDE, median exposure duration was 10.6 (range 3.0-43.1) weeks Data cut-off: July 3, 2019
- SeriousTEAEs occurred in 14 (26.9%) pts and death in 3 (5.8%) pts; no deaths were related to study drug
- TEAEs associated with dose reduction,[D] interruption, or discontinuation in 5 (9.6%), and 2 (3.8%) pts, respectively
- One pt (1.9%) with disease progression treated with the 6.0 mg/kg dose developed a pulmonary adverse event of special interest of respiratory failure (grade 5), adjudicated as not an ILD
  - Including cases post-data cutoff, 4 not-yet adjudicated possible ILD reports were observed (1 grade 2 pneumonitis [6.0 mg/kg], 1 grade 3 organized pneumonia [8 mg/kg], 1 grade 2 pneumonitis [8 mg/kg], and 1 grade 5 [respiratory failure in a pt with disease progression; 8.0 mg/kg])

[a] 2 DLTs occurred at the 10-mg/kg dose; 1 pt with mucosal inflammation and another pt with stomatitus. One DLT occurred at the 6-mg/kg dose in a pt with rash maculopapular.
[b] The most frequent TEAE leading to dose reduction was mucosal inflammation (2 pts [3.8%], 10-mg/kg group).
[c] TEAEs leading to drug discontinuation (1 pt each) were pleural effusion (0.27 mk/kg) and pain (2.0 mg/kg).
ALT, alanine aminotransferase; DLT, dose-limiting toxicity, ILD, Interstitial lung disease; MTD, maximum tolerated dose; PD, progressive disease; Pt, patient; RDE, recommended dose for expansion; TEAE; treatment-emergent adverse event.

FIG.13

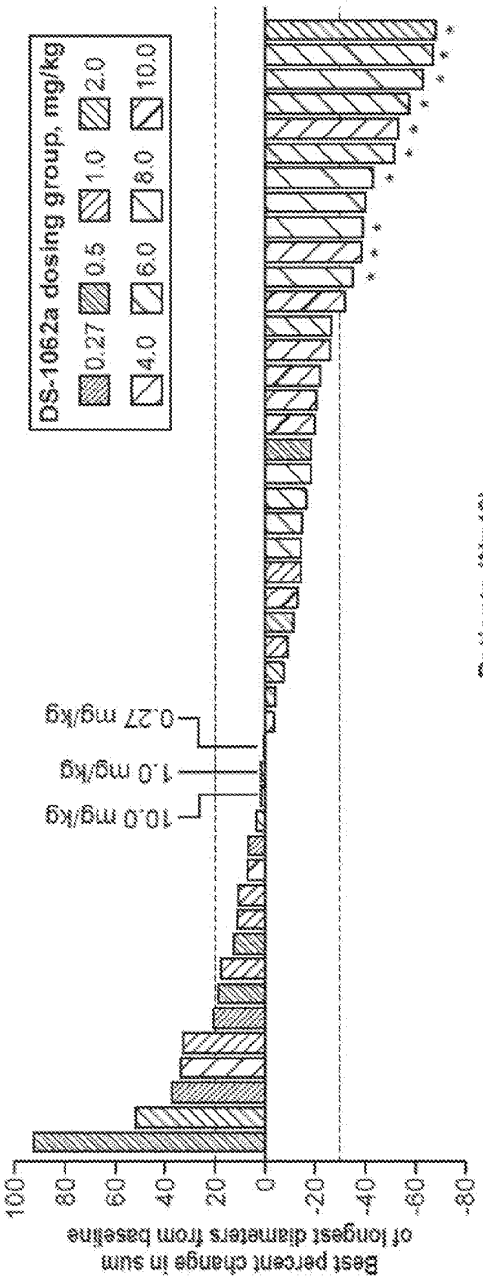

DS-1062a dosing group, mg/kg
0.27
0.5
1.0
2.0
4.0
6.0
8.0
10.0
0.27 mg/kg
1.0 mg/kg
10.0 mg/kg
Patients (N=46)
Best percent change in sum of longest diameters from baseline
100
80
60
40
20
0
-20
-40
-60
-80

FIG.14

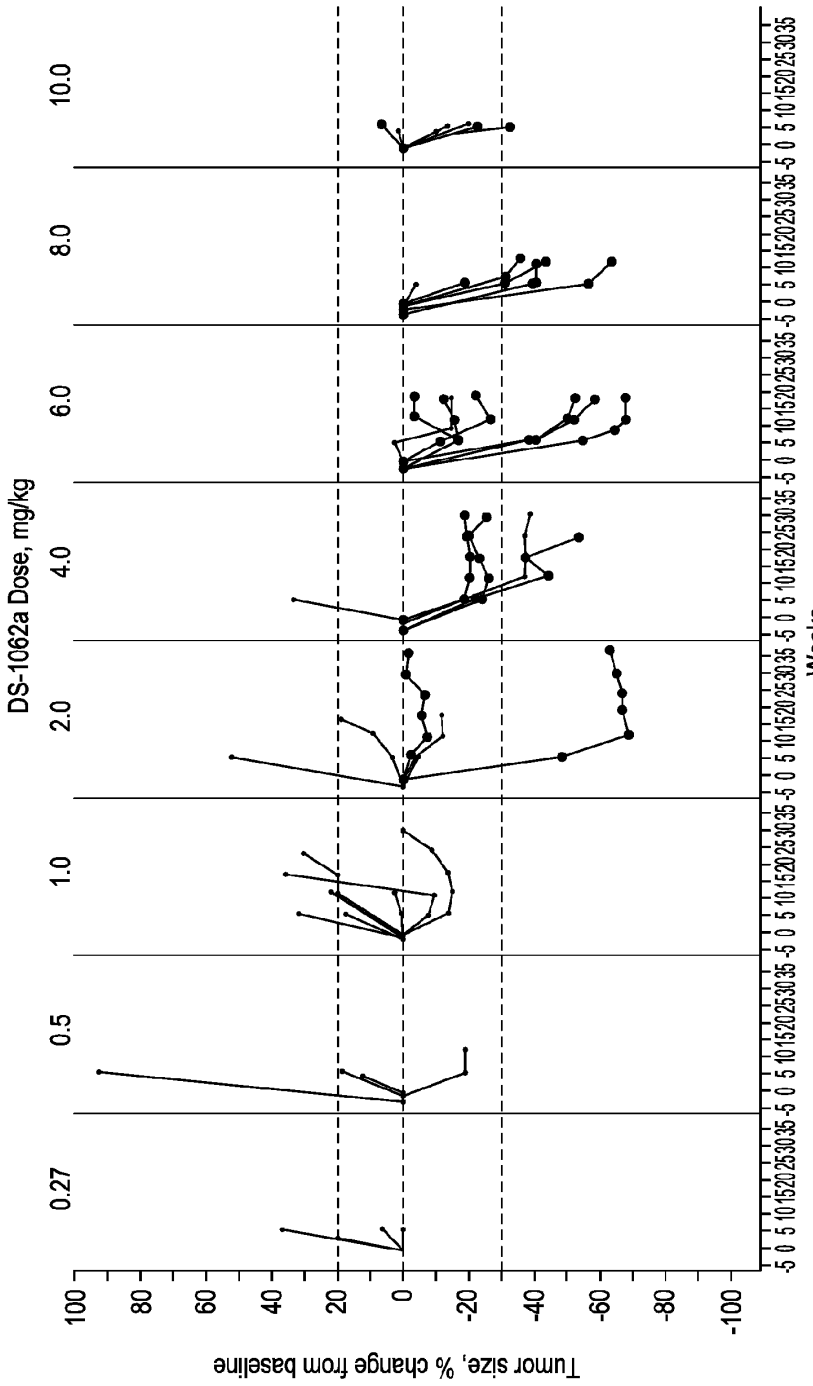

DS-1062a Dose, mg/kg
0.27
0.5
1.0
2.0
4.0
6.0
8.0
10.0
Weeks
Tumor size, % change from baseline
100
80
60
40
20
0
-20
-40
-60
-80
-100

FIG.15

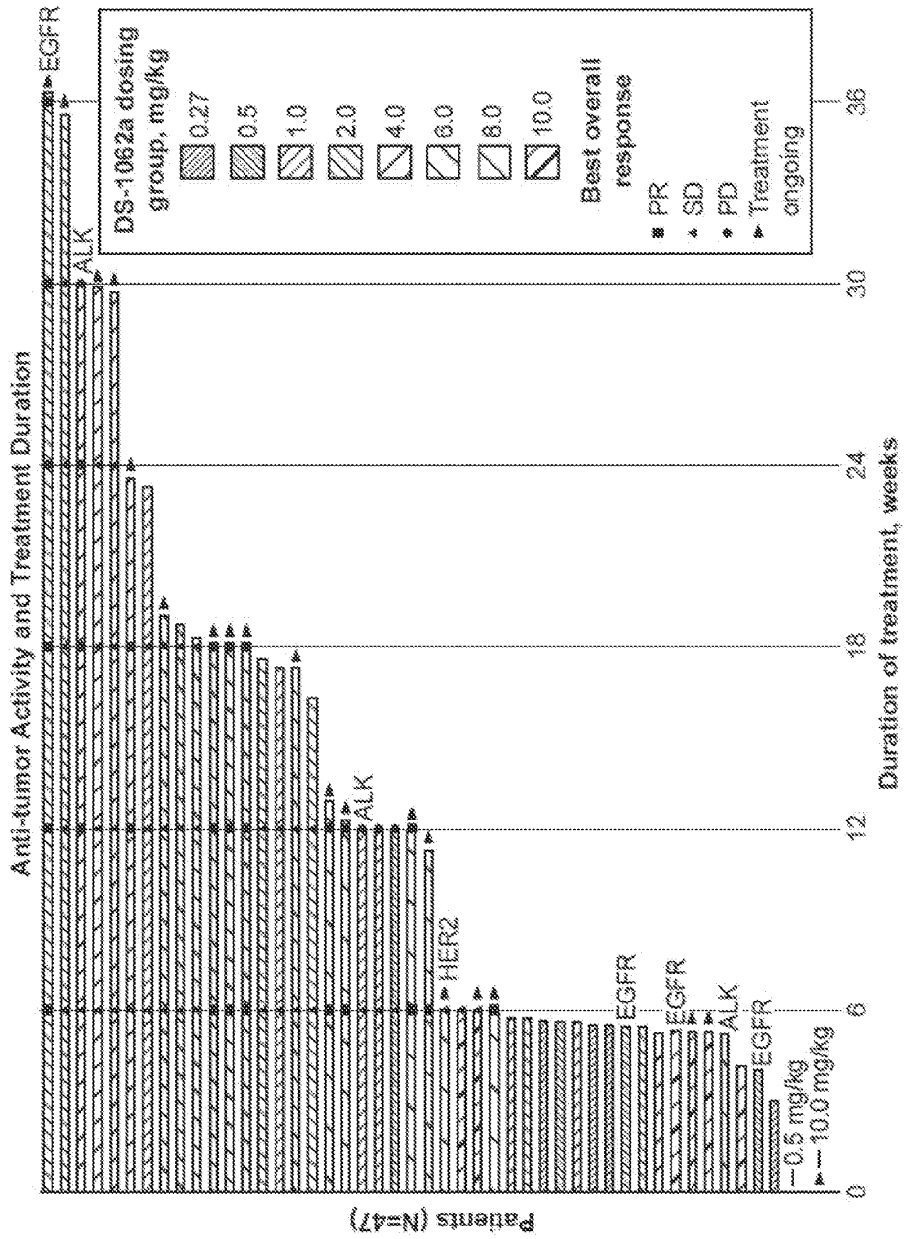

Anti-tumor Activity and Treatment Duration
Patients (N=47)
Duration of treatment, weeks
0
6
12
18
24
30
36
DS-1062a dosing group, mg/kg
0.27
0.5
1.0
2.0
4.0
6.0
8.0
10.0
Best overall response
PR
SD
PD
Treatment ongoing
EGFR
ALK
HER2
EGFR
EGFR
ALK
EGFR
0.5 mg/kg
10.0 mg/kg

FIG.16

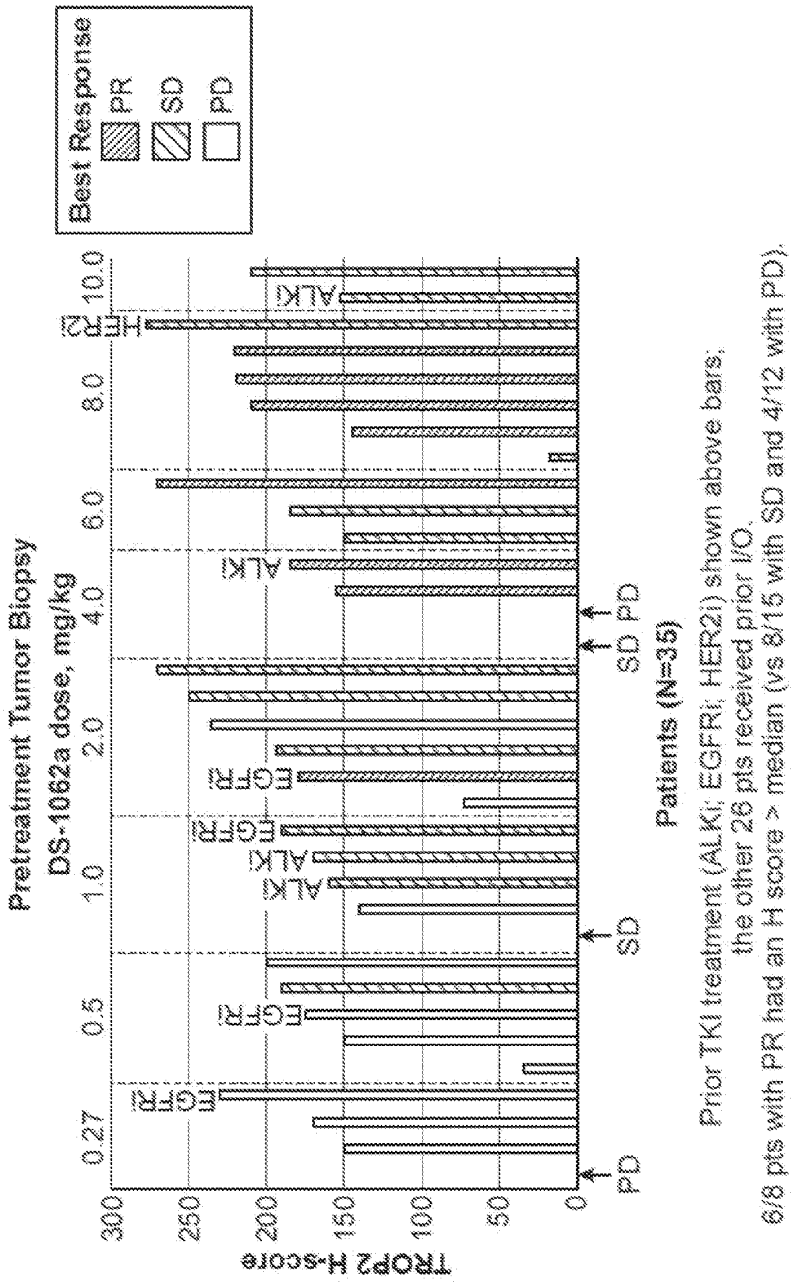

Best Response
PR
SD
PD
Pretreatment Tumor Biopsy
DS-1062a dose, mg/kg
0.27
0.5
1.0
2.0
4.0
6.0
8.0
10.0
HER2i
ALKi
EGFRi
TROP2 H-score
300
250
200
150
100
50
0
PD
SD
SD PD
Patients (N=35)
Prior TKI treatment (ALKi, EGFRi, HER2i) shown above bars;
the other 26 pts received prior I/O.
6/8 pts with PR had an H score > median (vs 8/15 with SD and 4/12 with PD).

FIG.17

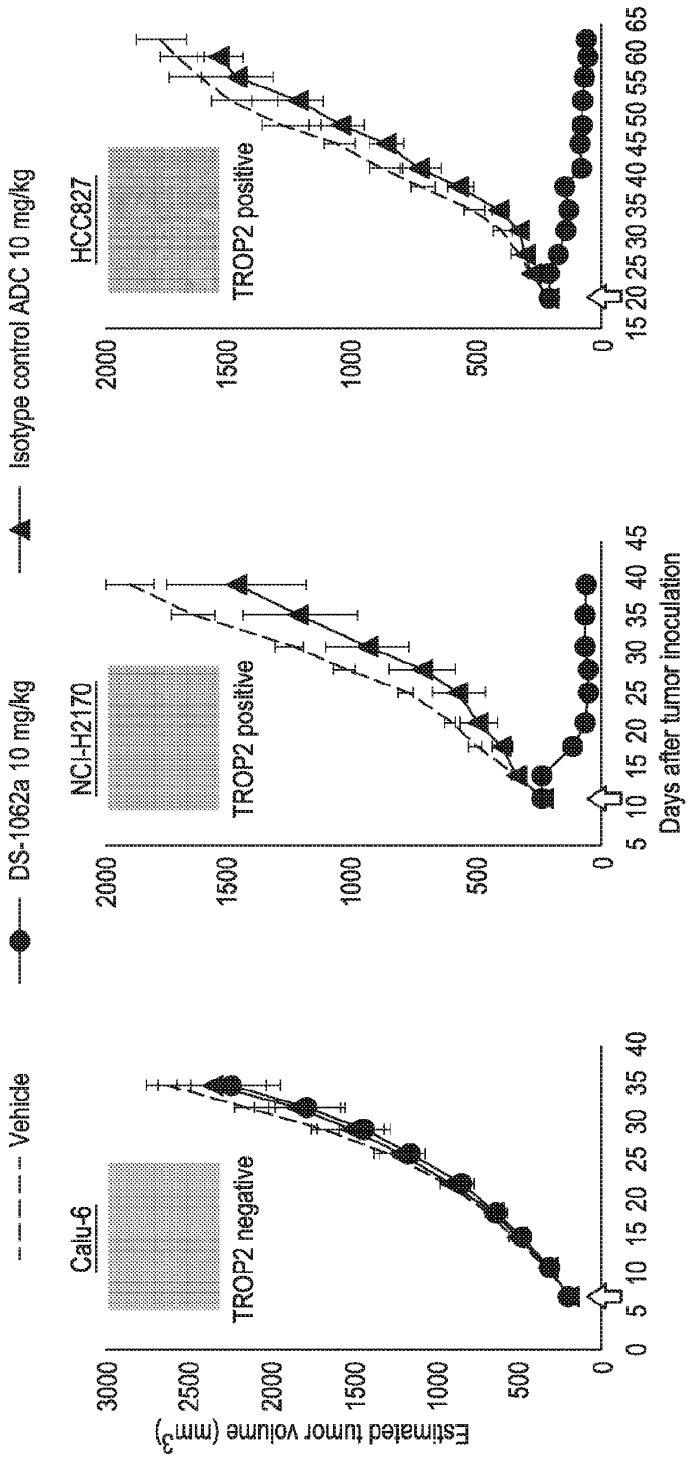

Vehicle
DS-1062a 10 mg/kg
Isotype control ADC 10 mg/kg
Calu-6
TROP2 negative
NCI-H2170
TROP2 positive
HCC827
TROP2 positive
Estimated tumor volume (mm3)
Days after tumor inoculation

FIG.18

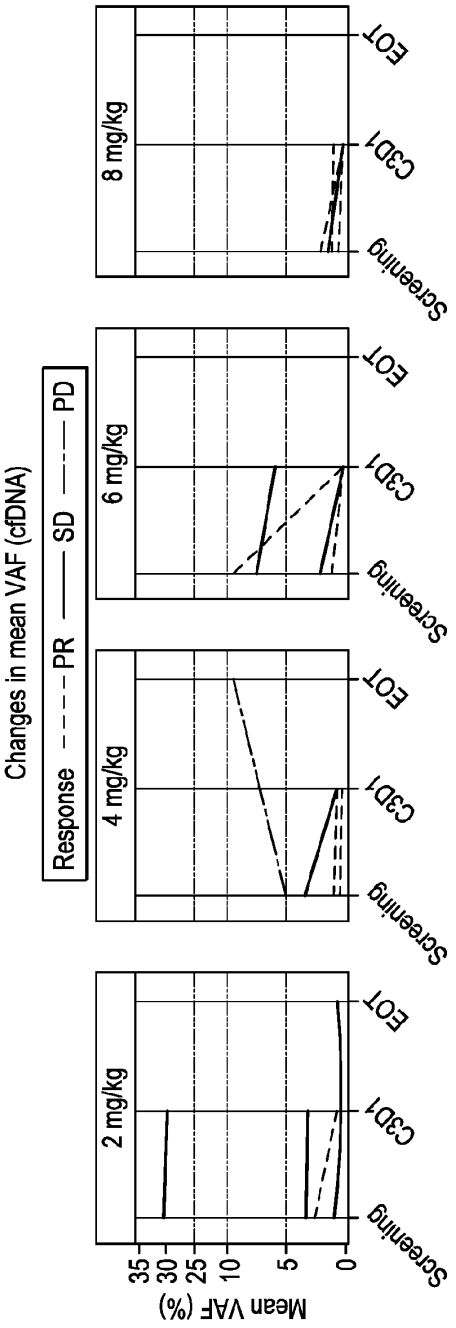
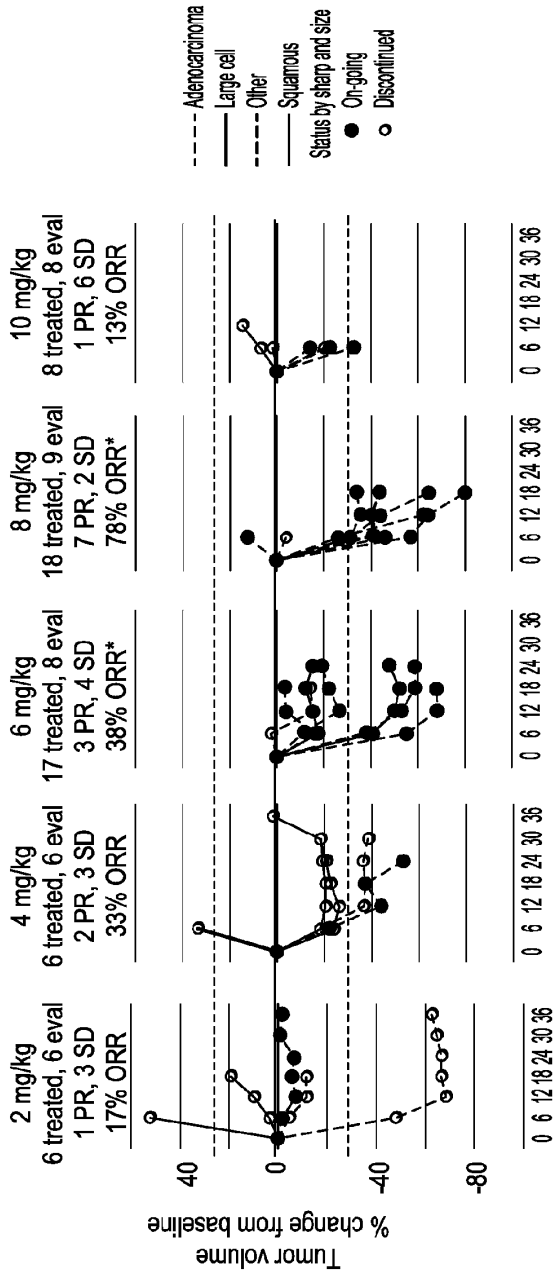

Changes in mean VAF (cfDNA)
Response PR SD PD
2 mg/kg
4 mg/kg
6 mg/kg
8 mg/kg
Screening
C3D1
EOT
Mean VAF (%)
35
30
25
10
5
0

FIG.19



* ORR in 6, 8 mg/kg based on patients with at least 6 w since C1D1

FIG.20

55 subjects dosed in total; 14 PRs

Cohort	Best ORR %	Duration of Response	Status	Number of prior anticancer regimens	Prior EGFR-TKI/ALK/CPI Treatments
4 (2.0mg/kg)	-68.5%	41 weeks	Discontinued	5	TKI (GEFITINIB, ERLOTINIB and OSIMERTINIB)
5 (4.0mg/kg)	-37.6%	18 weeks	Discontinued	9	ALK (CRIZOTINIB, ALECTINIB and CERITINIB)
6 (6.0 mg/kg)	-67.7%	25 weeks	Ongoing	3	CPI (DURVALUMAB)
6 (6.0 mg/kg)	-58.5%	24 weeks	Ongoing	3	CPI (NIVOLUMAB)
6 (6.0 mg/kg)	-53.3%	22 weeks	Ongoing	2	CPI (AVELUMAB)
5 (4.0 mg/kg)	-53.1%	21 weeks	Ongoing	3	CPI (NIVOLUMAB)
7 (8.0 mg/kg)	-64.1%	18 weeks	Ongoing	5	CPI (NIVOLUMAB)
7 (8.0 mg/kg)	-80.0%	16 weeks	Ongoing	4	CPI (NIVOLUMAB and DURVALUMAB)
7 (8.0 mg/kg)	-43.2%	16 weeks	Ongoing	3	CPI (ATEZOLIZUMAB, AVELMAB)
7 (8.0 mg/kg)	-35.5%	15 weeks	Ongoing	8	CPI (ATEZOLIZUMAB)
8 (10.0 mg/kg)	-32.1%	7 weeks	Ongoing	6	CPI (NIBOLUMAB, ATEZOLIZUMAB)
7 (8.0 mg/kg)	-62.0%	6 weeks	Ongoing	6	CPI (NIVOLUMAB)
7 (8.0 mg/kg)	-39.7%	6 weeks	Discontinued	3	CPI (KEYTRUDA)
7 (8.0 mg/kg)	-46.0%	1 week	Ongoing	4	CPI (NIVOLUMAB)

Objective Response Rate

Cohort	Dose	Number of PRs # of Subjects	ORR%
4	2.0mg/kg	1/6	17%
5	4.0mg/kg	2/6	33%
6	6.0mg/kg	3/8	38%
7	8.0mg/kg	7/9	78%
8	10.0mg/kg	1/8	13%

FIG.21

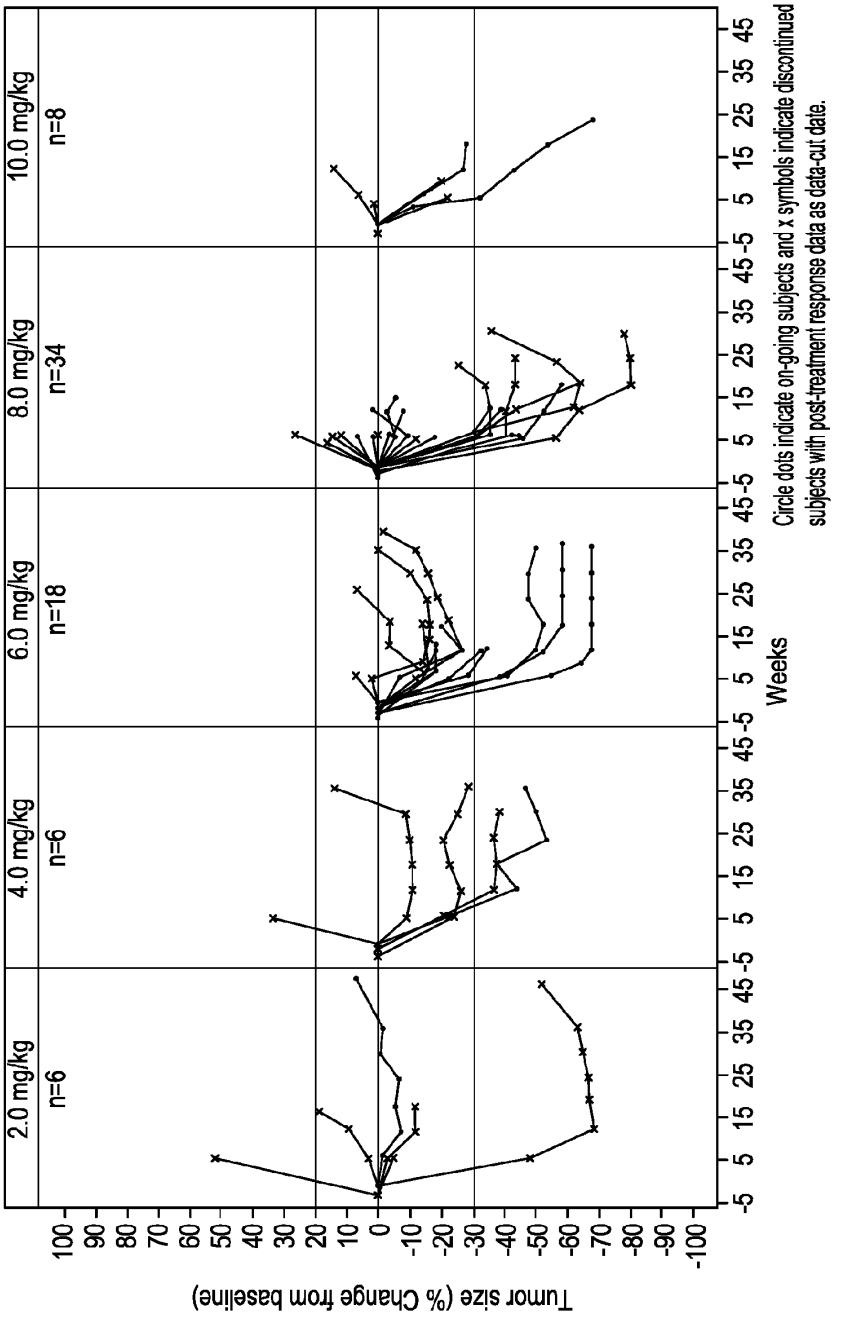

2.0 mg/kg
n=6
4.0 mg/kg
n=6
6.0 mg/kg
n=18
8.0 mg/kg
n=34
10.0 mg/kg
n=8
Tumor size (% Change from baseline)
Weeks
Circle dots indicate on-going subjects and x symbols indicate discontinued subjects with post-treatment response data as data-cut date.

FIG.22

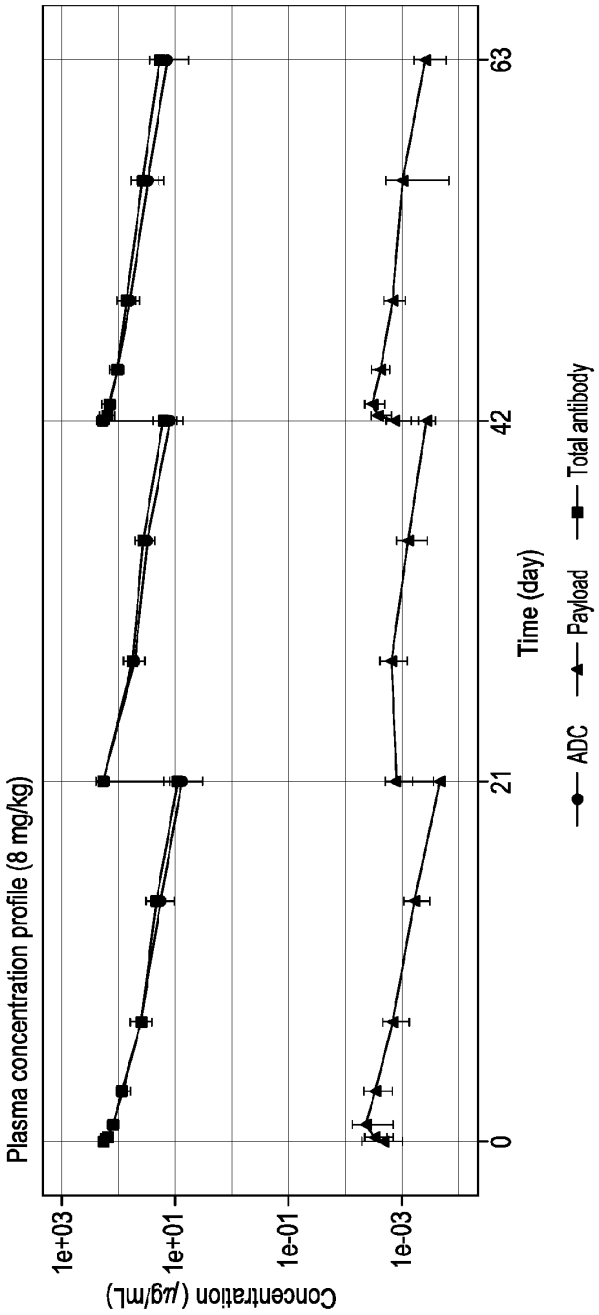

Plasma concentration profile (8 mg/kg)
Concentration (μg/mL)
1e+03
1e+01
1e-01
1e-03
0
21
42
63
Time (day)
ADC
Payload
Total antibody

FIG.23