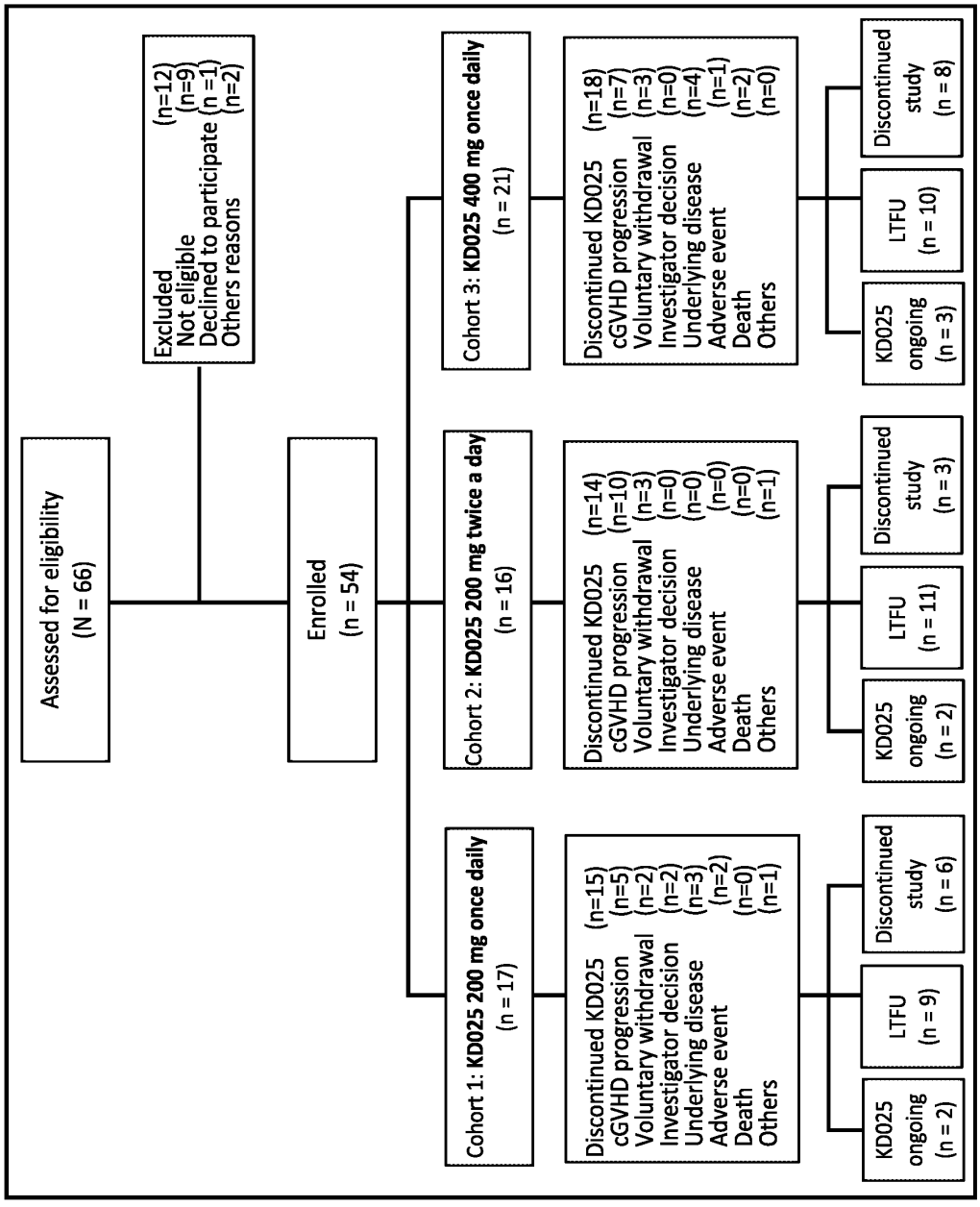
Assessed for eligibility
(N = 66)
Excluded (n=12)
Not eligible (n=9)
Declined to participate (n =1)
Others reasons (n=2)
Enrolled
(n = 54)
Cohort 1: KD025 200 mg once daily
(n = 17)
Discontinued KD025 (n=15)
cGVHD progression (n=5)
Voluntary withdrawal (n=2)
Investigator decision (n=2)
Underlying disease (n=3)
Adverse event (n=2)
Death (n=0)
Others (n=1)
KD025 ongoing (n = 2)
LTFU (n = 9)
Discontinued study (n = 6)
Cohort 2: KD025 200 mg twice a day
(n = 16)
Discontinued KD025 (n=14)
cGVHD progression (n=10)
Voluntary withdrawal (n=3)
Investigator decision (n=0)
Underlying disease (n=0)
Adverse event (n=0)
Death (n=0)
Others (n=1)
KD025 ongoing (n = 2)
LTFU (n = 11)
Discontinued study (n = 3)
Cohort 3: KD025 400 mg once daily
(n = 21)
Discontinued KD025 (n=18)
cGVHD progression (n=7)
Voluntary withdrawal (n=3)
Investigator decision (n=0)
Underlying disease (n=4)
Adverse event (n=1)
Death (n=2)
Others (n=0)
KD025 ongoing (n = 3)
LTFU (n = 10)
Discontinued study (n = 8)

Fig. 1

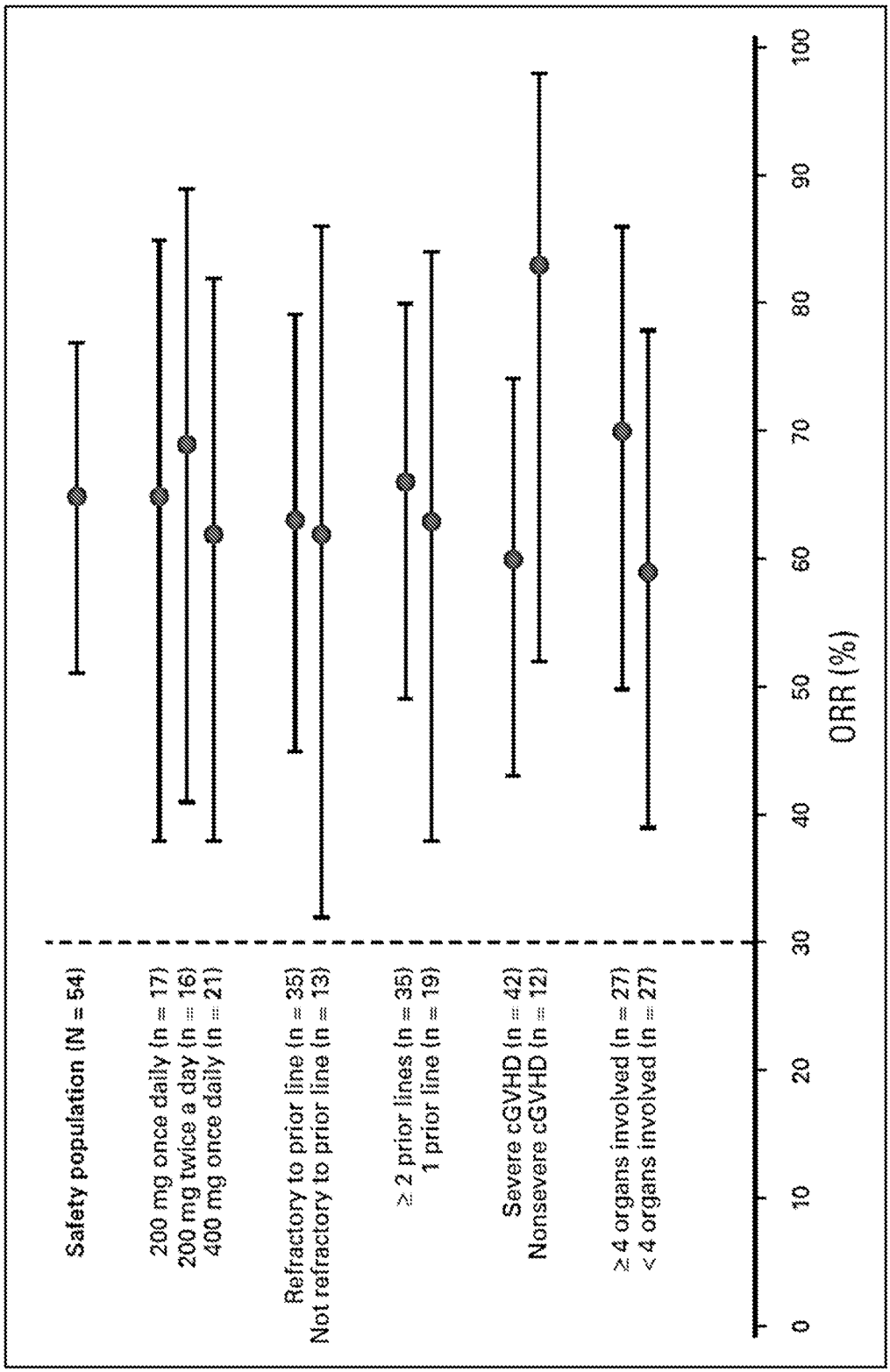
Safety population (N = 54)
200 mg once daily (n = 17)
200 mg twice a day (n = 16)
400 mg once daily (n = 21)
Refractory to prior line (n = 35)
Not refractory to prior line (n = 13)
≥ 2 prior lines (n = 35)
1 prior line (n = 19)
Severe cGVHD (n = 42)
Nonsevere cGVHD (n = 12)
≥ 4 organs involved (n = 27)
< 4 organs involved (n = 27)
0
10
20
30
40
50
60
70
80
90
100
ORR (%)

Fig. 2

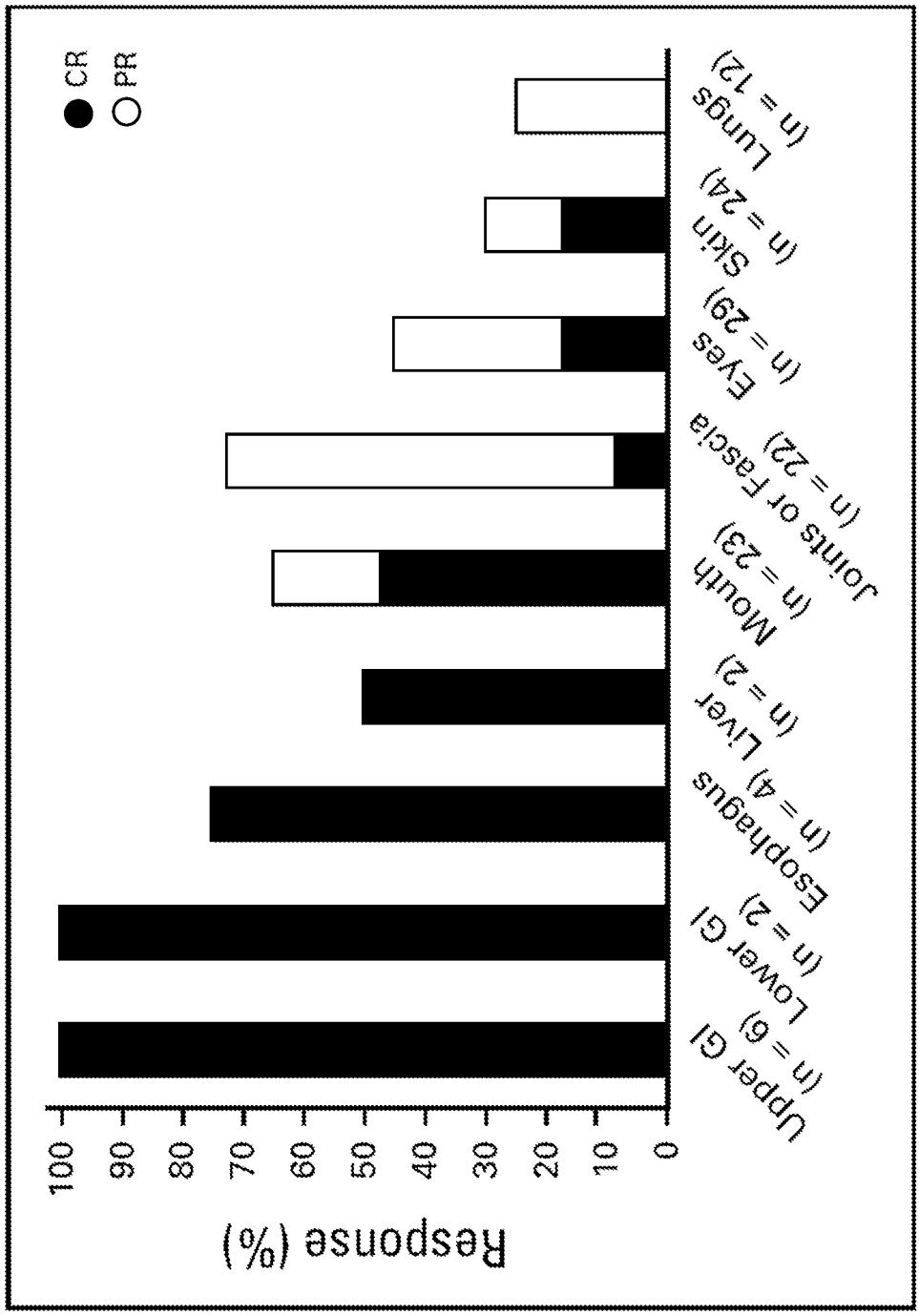
CR
PR
Response (%)
100
90
80
70
60
50
40
30
20
10
0
Upper GI (n = 6)
Lower GI (n = 2)
Esophagus (n = 4)
Liver (n = 2)
Mouth (n = 23)
Joints or Fascia (n = 22)
Eyes (n = 29)
Skin (n = 24)
Lungs (n = 12)

Fig. 3A

	Responder	GSR	Eye	Skin	Mouth	Joints and fascia	Lung	Upper GI	Esophagus	Lower GI	Liver
Cohort 1, 200 mg Once Daily	Y	PR	St	CR	PR	St					
	Y	PR	St	St	St	PR					
	Y	PR	PR		CR						
	Y	PR	PR				St		CR		
	Y	PR	CR		CR			CR		CR	
	Y	PR	St	CR	CR			St		St	
	Y	PR	CR	St	CR	PR					
	Y	St	St	St	St	PR					
	Y	PR	St	PR	PR	PR	St	CR			
	Y	PR	St	St	St	PR	St				
	Y	St	CR				St				
	N	PR	St	P	St						
	N		St	P	St	P					
	N	St	St	St	PR	PR					St
	N	St		P	St	St					
	N	St	St	St	St	St		St	St		
	N	St	St	St	St	St					St
Cohort 2, 200 mg Twice a Day	Y	PR	PR			PR					
	Y	PR	St	St	St	PR		CR			
	Y	PR	St		CR						
	Y	PR		St	CR	PR		CR			St
	Y	PR	CR	CR	CR	St		St		CR	St
	Y	PR	PR	St		St		CR	St		
	Y	St	St	St	PR	St					
	Y	St		St	St	St					CR
	Y	PR	St		St		St	St			
	Y	PR	PR	PR	St	PR					St
	Y	St	St	St	St	PR					St
	N	P		P	St	New					
	N	St	St	St	CR	P	St	CR		CR	
	N	St		St	St	St		St	St	St	
	N	St	St	St	St	St					
	N	St					St				
Cohort 3, 400 mg Once Daily	Y	PR	St	CR	PR						
	Y	PR		St		St					
	Y	PR	St	St	CR	PR	PR				
	Y	St		St	St	CR			CR		St
	Y	St	St	St	St		PR				
	Y	PR	St	St	St	PR	St	St	St		
	Y	PR	PR		St		St			St	
	Y	St	St	St	CR	PR	St		St		
	Y	PR	St	PR	CR	St			CR		
	Y	PR	PR				PR		St		
	Y	PR	PR		St		St				
	Y	PR	CR	St	CR	PR					
	Y	PR	St	St		CR		CR			
	N	St	St	St	P	St					
	N	St	St	St	St						
	N	St		St		St					
	N	St	St				St	St	St		
	N	St	St				St	St			

	Responder	GSR	Eye	Skin	Mouth	Joints and fascia	Lung	Upper GI	Esophagus	Lower GI	Liver
Cohort 1, 200 mg Once Daily	N	St		St	PR	P[a]					
	N	PR	St	St		PR					
	N	PR	PR		CR						
	N	St	St				P		CR		
	N	St	St		St			CR		P	
	N	PR	P	PR	Pr			St		St	
	N	PR	CR	St	CR	PR					
	N	St	St	St	St	PR					
	N	PR	St	St	St	PR	St	CR			
	N	St	St	St	St	St	St				
	N	St	CR				St				
	Y	PR	St	P	St						
	Y		St	P	St	P[a]					
	Y	St	P	St	PR	PR					St
	Y	St		P	St	St					
	Y	St	St	St	St	St			St		
	Y	St	St	St	P	St					St
Cohort 2, 200 mg Twice a Day	N	PR	PR			P					
	N	St	St	St	St	P[a]		CR			
	N	PR	St		PR						
	N	PR		P	CR	P[a]		St			
	N	PR	St	PR	St					CR	New
	N	PR	PR	St		P[a]		CR			
	N	St	P	St	PR	St					
	N	P	New	St	St	St					
	N	St	St				St				
	N	St	PR	St	St	PR					St
	N	St	St	St	St	PR					St
	Y	P		P	St	New					
	Y	St	St	St	PR	P	P	CR		CR	
	Y	St		St	St	St					
	Y	St	St	St	St	St					
	Y	St					St				
Cohort 3, 400 mg Once Daily	N	PR	St	CR	PR						
	N	St		St		P[a]					
	N	PR	P	St	PR	St	PR				
	N	St		St	St	CR			CR		St
	N	St	St	St	St		St				
	N	PR	St	St	P	PR	St	St	St		
	N	St	St				St				
	N	St	P	P	CR	P[a]	P		St		
	N	PR	St	PR	St	St			CR		
	N	St	PR				P		New		
	N	St	St		St		St				
	N	PR	St	St	CR	PR					
	N	PR	St			P		CR			
	Y	St	St	St	P	St					
	Y	St	St	St	P						
	Y	St		St		St					
	Y	St	St				St				
	Y	St	St				P				

New - New onset cGVHD in organ
P - Progression
St - Stable cGVHD
PR - Partial response
CR - Complete response
P[a] - Progression in joints and facia based in P-ROM reduction of 1 point

Fig. 3B

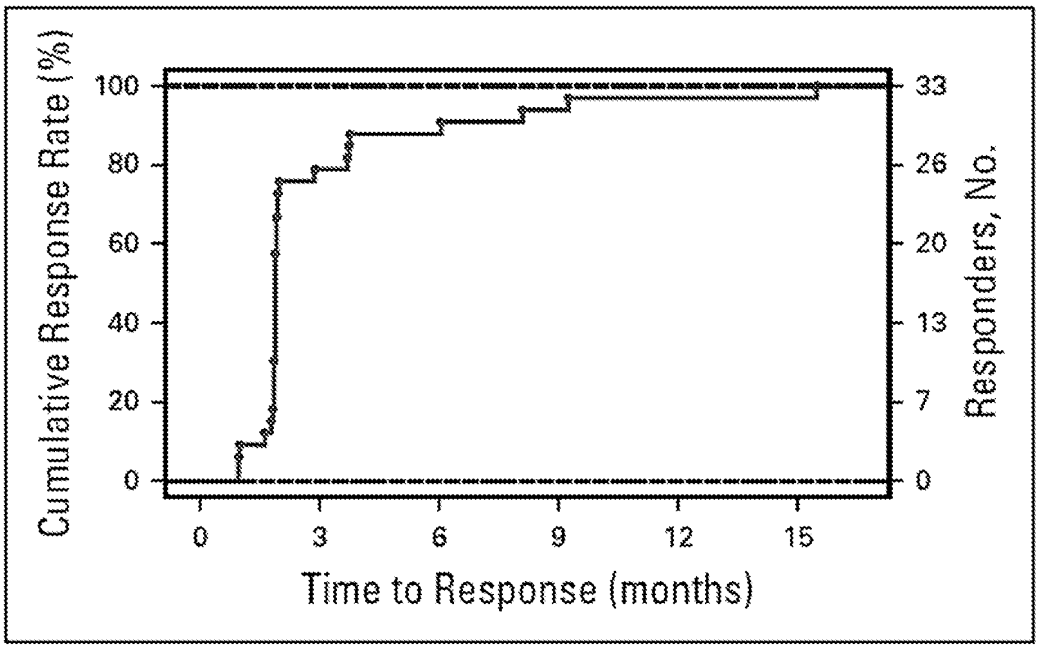
Cumulative Response Rate (%)
100
80
60
40
20
0
33
26
20
13
7
0
Responders, No.
0
3
6
9
12
15
Time to Response (months)

Fig. 4

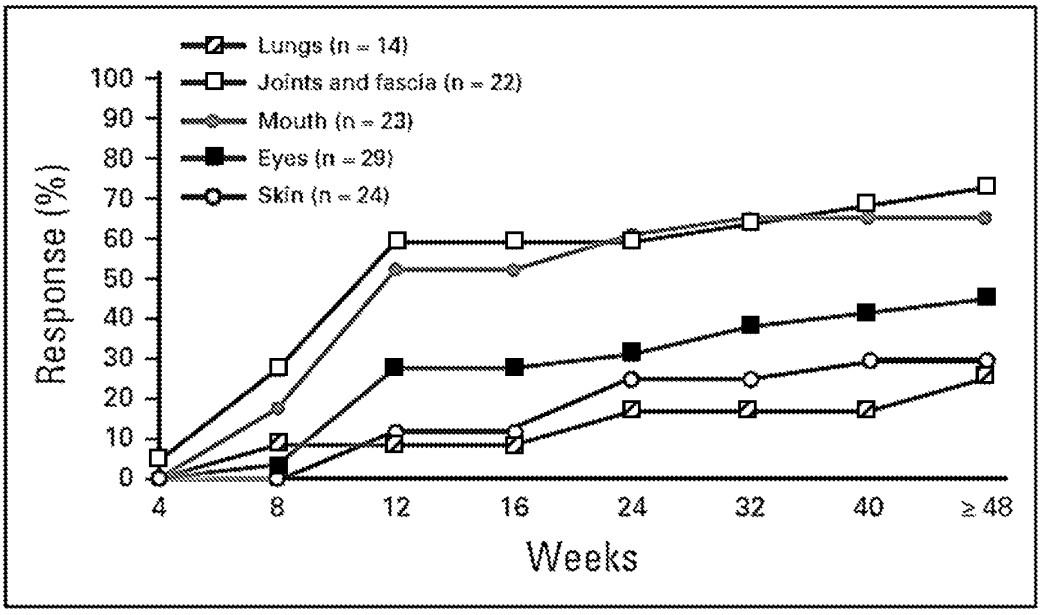
Lungs (n = 14)
Joints and fascia (n = 22)
Mouth (n = 23)
Eyes (n = 29)
Skin (n = 24)
Response (%)
100
90
80
70
60
50
40
30
20
10
0
4
8
12
16
24
32
40
≥ 48
Weeks

Fig. 5

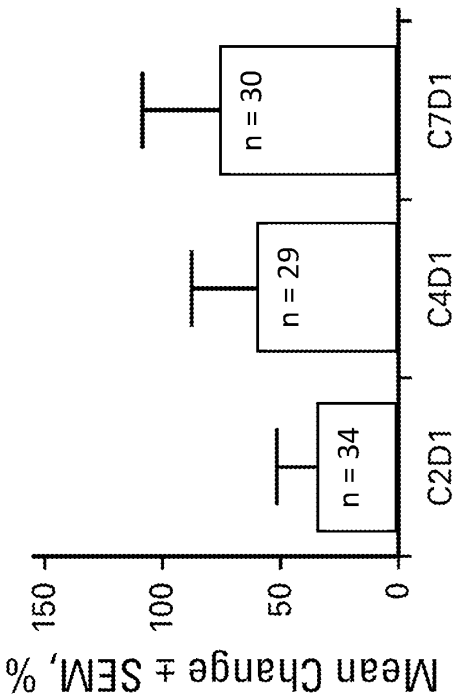

Fig. 6A

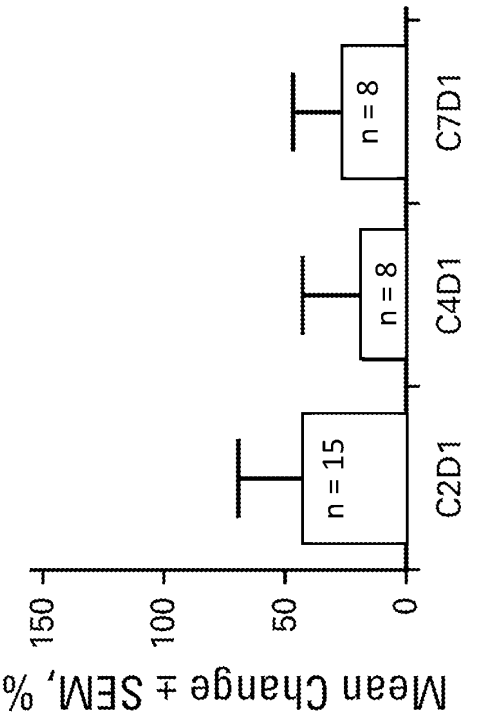

Fig. 6C

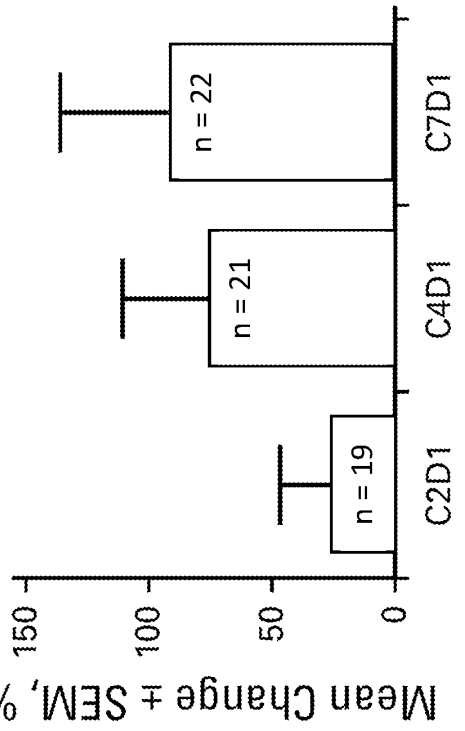

Fig. 6B

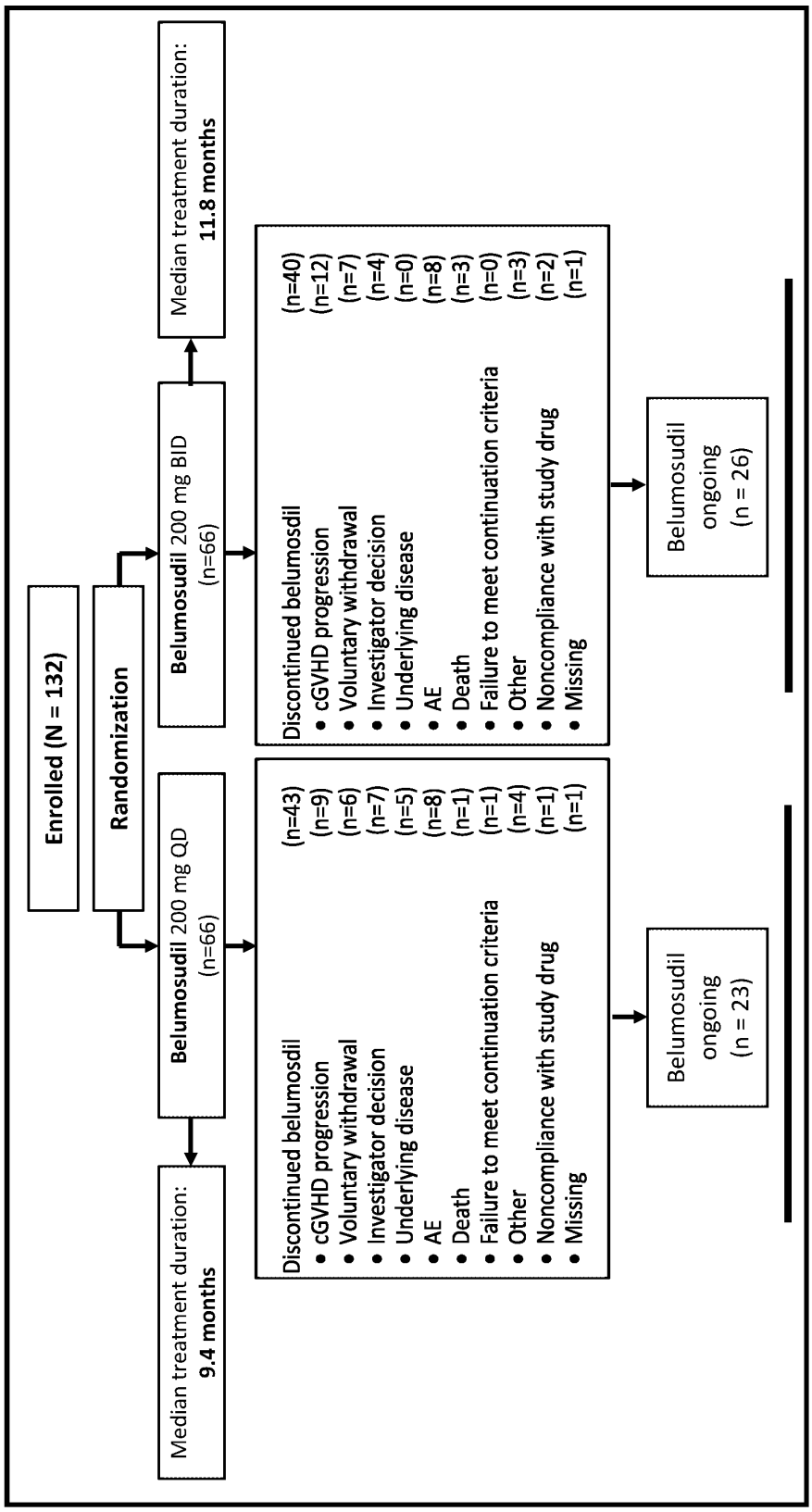
Enrolled (N = 132)
Randomization
Belumosudil 200 mg QD (n=66)
Belumosudil 200 mg BID (n=66)
Median treatment duration: 9.4 months
Median treatment duration: 11.8 months
Discontinued belumosdil (n=43)
• cGVHD progression (n=9)
• Voluntary withdrawal (n=6)
• Investigator decision (n=7)
• Underlying disease (n=5)
• AE (n=8)
• Death (n=1)
• Failure to meet continuation criteria (n=1)
• Other (n=4)
• Noncompliance with study drug (n=1)
• Missing (n=1)
Discontinued belumosdil (n=40)
• cGVHD progression (n=12)
• Voluntary withdrawal (n=7)
• Investigator decision (n=4)
• Underlying disease (n=0)
• AE (n=8)
• Death (n=3)
• Failure to meet continuation criteria (n=0)
• Other (n=3)
• Noncompliance with study drug (n=2)
• Missing (n=1)
Belumosudil ongoing (n = 23)
Belumosudil ongoing (n = 26)

Fig. 7

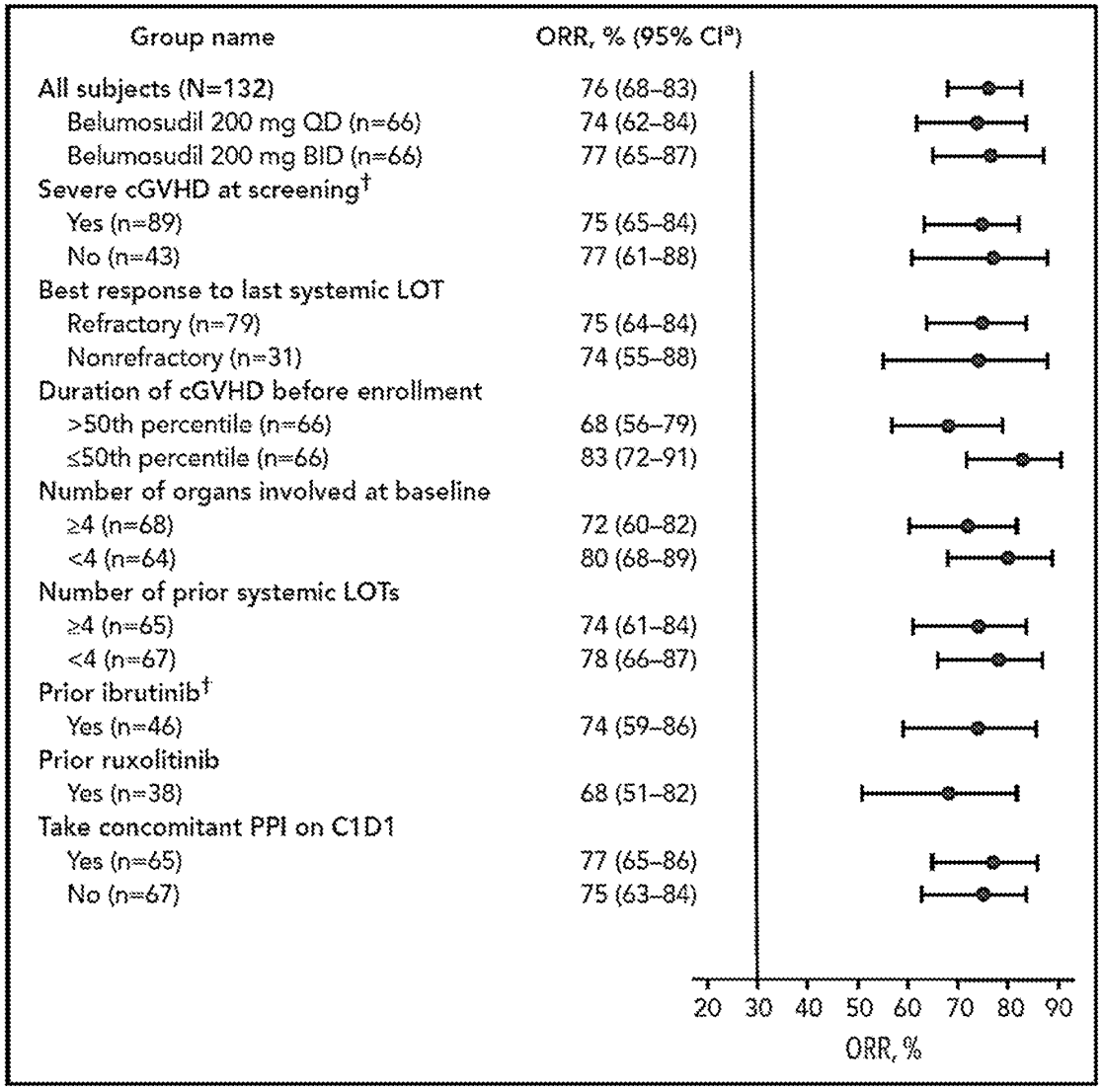
Group name
ORR, % (95% CI[a])
All subjects (N=132) 76 (68–83)
Belumosudil 200 mg QD (n=66) 74 (62–84)
Belumosudil 200 mg BID (n=66) 77 (65–87)
Severe cGVHD at screening[†]
Yes (n=89) 75 (65–84)
No (n=43) 77 (61–88)
Best response to last systemic LOT
Refractory (n=79) 75 (64–84)
Nonrefractory (n=31) 74 (55–88)
Duration of cGVHD before enrollment
>50th percentile (n=66) 68 (56–79)
≤50th percentile (n=66) 83 (72–91)
Number of organs involved at baseline
≥4 (n=68) 72 (60–82)
<4 (n=64) 80 (68–89)
Number of prior systemic LOTs
≥4 (n=65) 74 (61–84)
<4 (n=67) 78 (66–87)
Prior ibrutinib[†]
Yes (n=46) 74 (59–86)
Prior ruxolitinib
Yes (n=38) 68 (51–82)
Take concomitant PPI on C1D1
Yes (n=65) 77 (65–86)
No (n=67) 75 (63–84)
20 30 40 50 60 70 80 90
ORR, %

Fig. 8

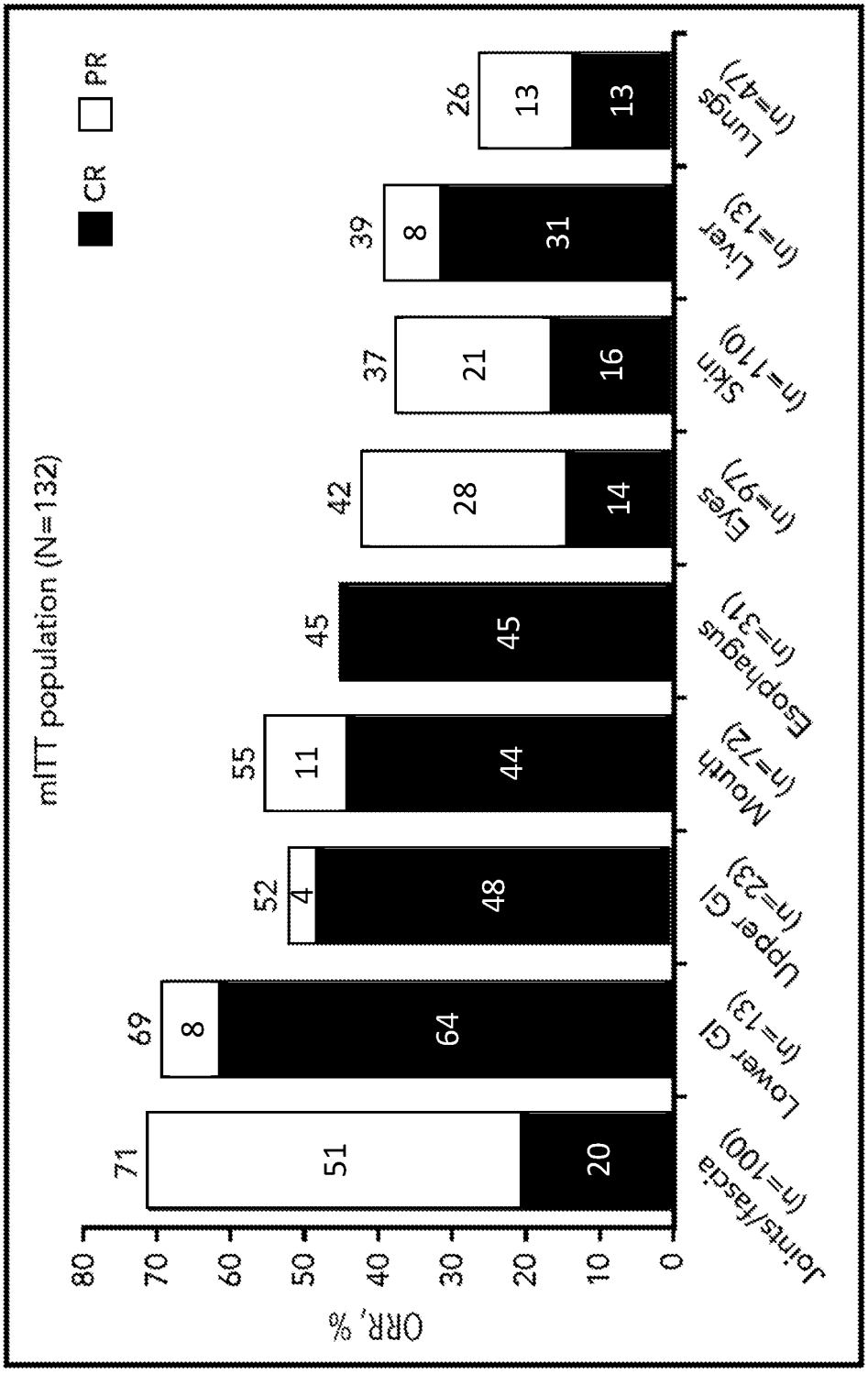
mITT population (N=132)
CR
PR
ORR, %
0
10
20
30
40
50
60
70
80
71
51
20
69
8
64
52
4
48
55
11
44
45
45
42
28
14
37
21
16
39
8
31
26
13
13
Joints/fascia (n=100)
Lower GI (n=13)
Upper GI (n=23)
Mouth (n=72)
Esophagus (n=31)
Eyes (n=97)
Skin (n=110)
Liver (n=13)
Lungs (n=47)

Fig. 9

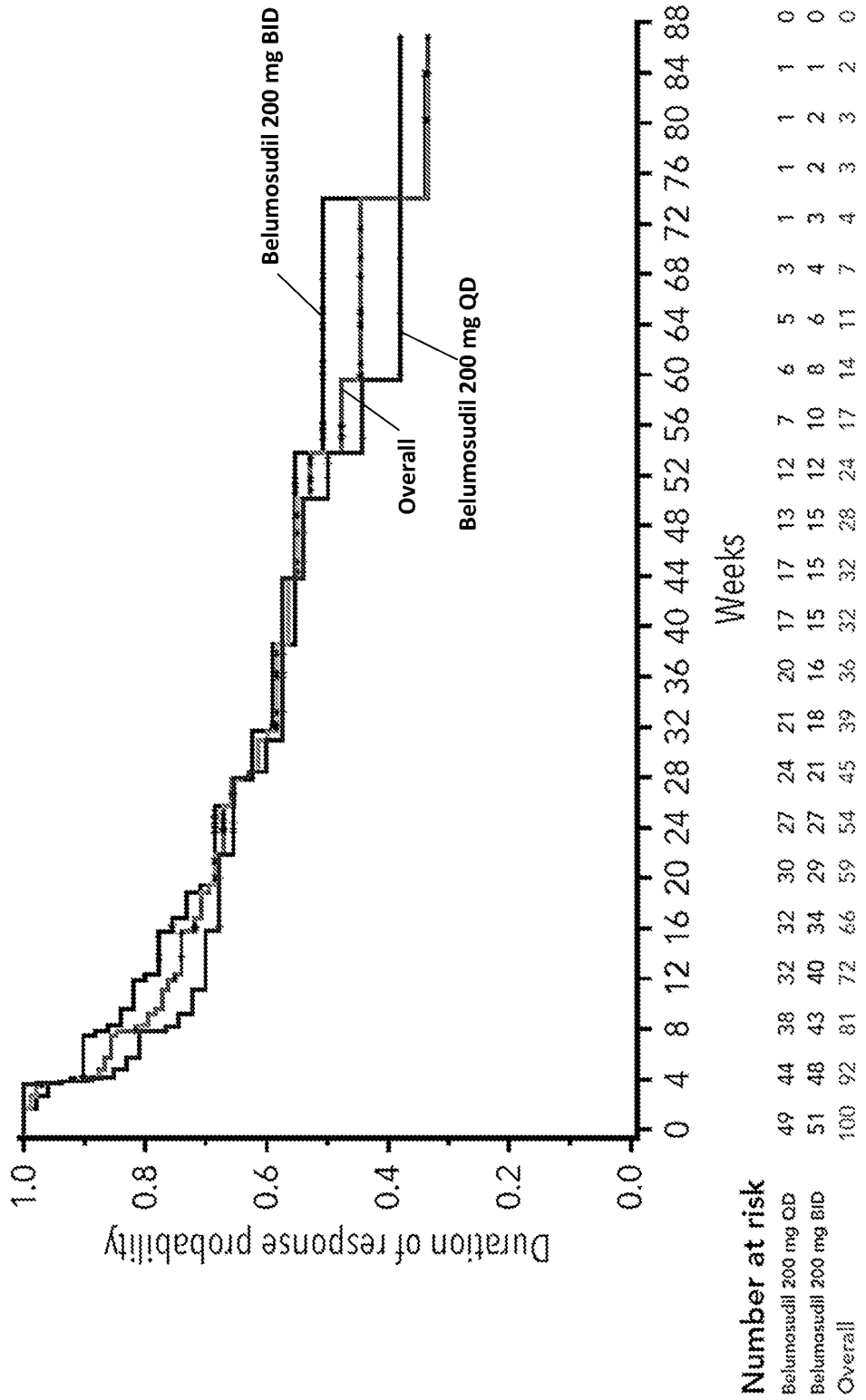
Belumosudil 200 mg BID
Overall
Belumosudil 200 mg QD
Duration of response probability
1.0
0.8
0.6
0.4
0.2
0.0
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88
Weeks
Number at risk
Belumosudil 200 mg QD 49 44 38 32 32 30 27 24 21 20 17 17 13 12 7 6 5 3 1 1 1 0
Belumosudil 200 mg BID 51 48 43 40 34 29 27 21 18 16 15 15 15 12 10 8 6 4 3 2 2 1 0
Overall 100 92 81 72 66 59 54 45 39 36 32 32 28 24 17 14 11 7 4 3 3 2 0

Fig. 10A

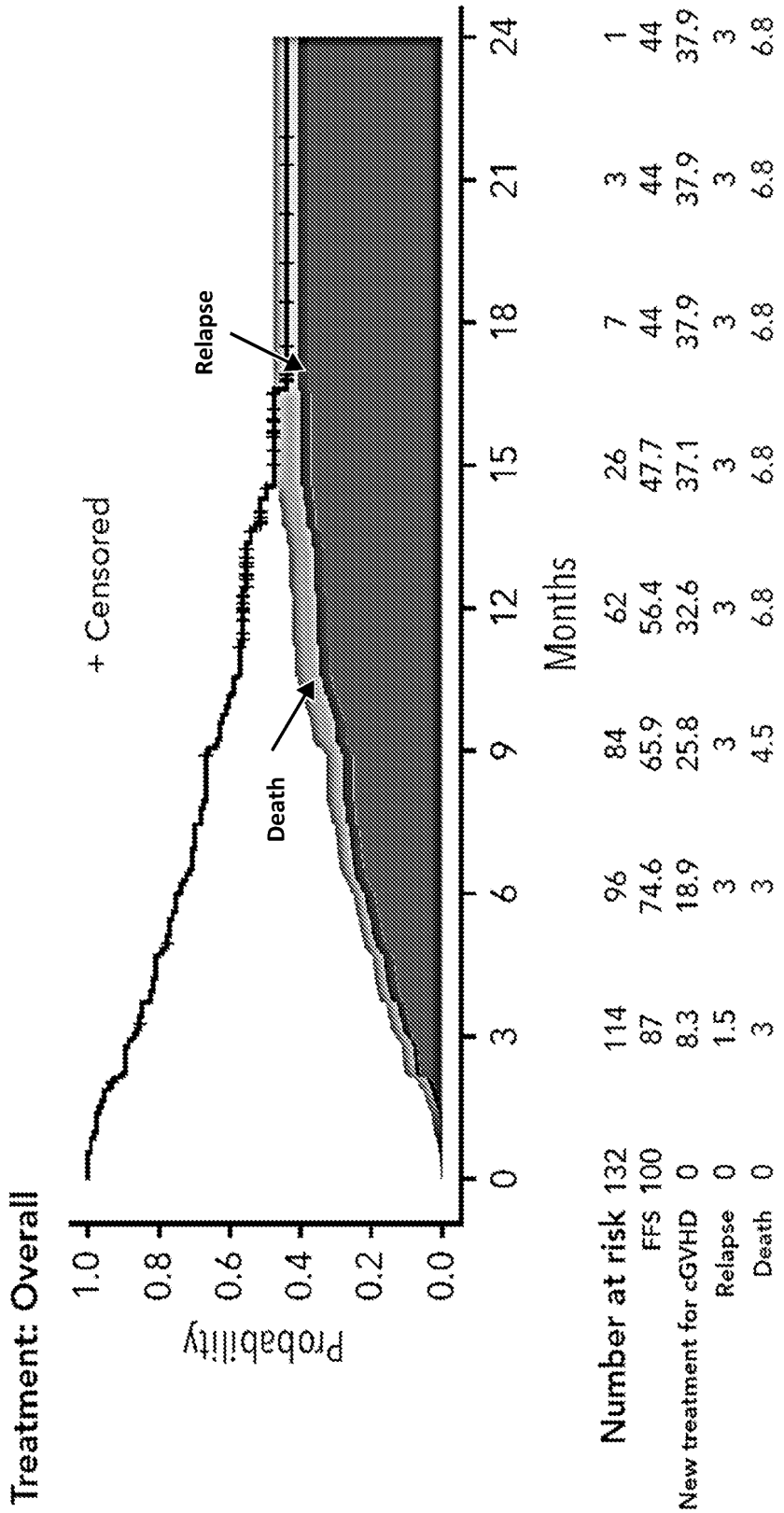
Treatment: Overall
Probability
1.0
0.8
0.6
0.4
0.2
0.0
+ Censored
Relapse
Death
0
3
6
9
12
15
18
21
24
Months
Number at risk 132 114 96 84 62 26 7 3 1
FFS 100 87 74.6 65.9 56.4 47.7 44 44 44
New treatment for cGVHD 0 8.3 18.9 25.8 32.6 37.1 37.9 37.9 37.9
Relapse 0 1.5 3 3 3 3 3 3 3
Death 0 3 3 4.5 6.8 6.8 6.8 6.8 6.8

Fig. 10B

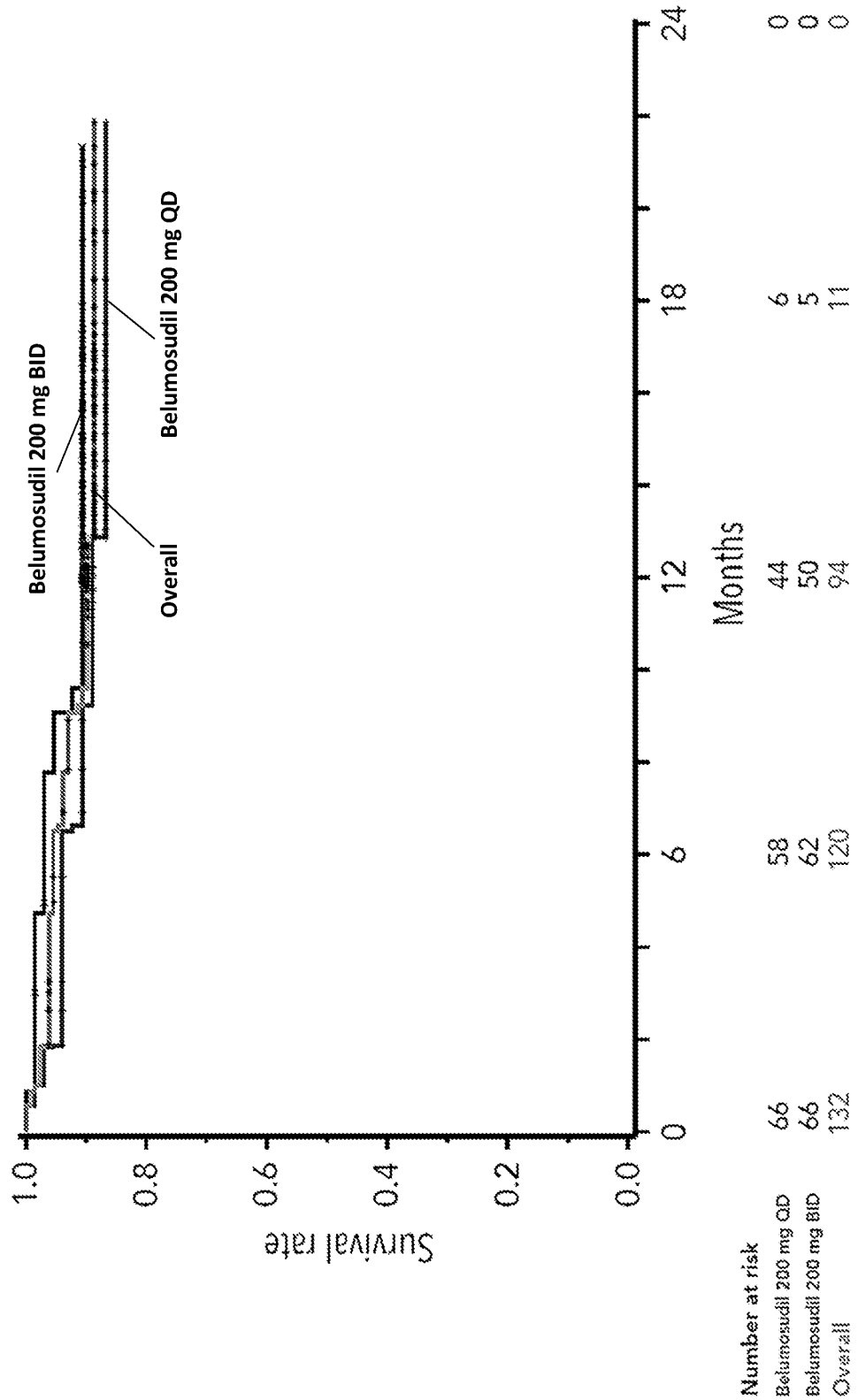
Belumosudil 200 mg BID
Belumosudil 200 mg QD
Overall
Survival rate
1.0
0.8
0.6
0.4
0.2
0.0
0
6
12
18
24
Months
Number at risk
Belumosudil 200 mg QD 66 58 44 6 0
Belumosudil 200 mg BID 66 62 50 5 0
Overall 132 120 94 11 0

Fig. 10C

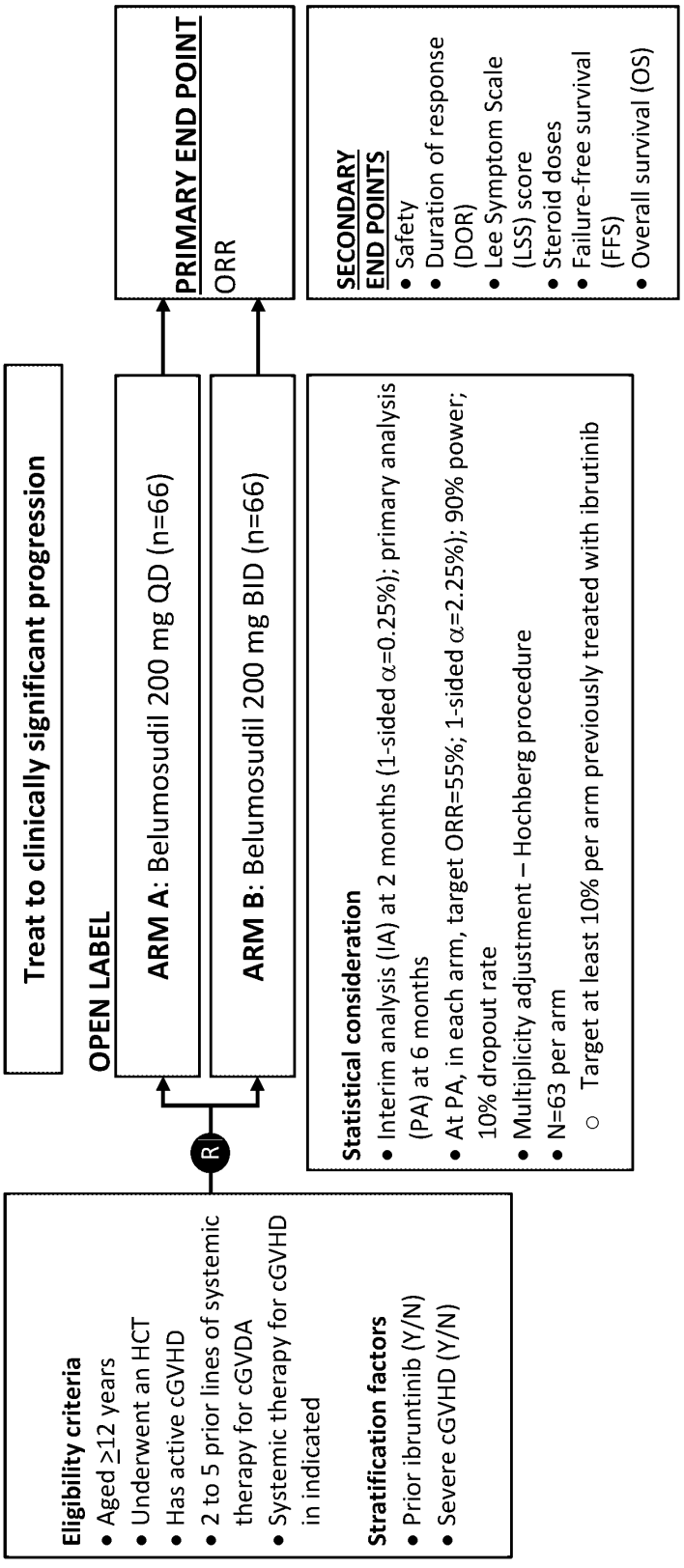
Eligibility criteria
• Aged ≥12 years
• Underwent an HCT
• Has active cGVHD
• 2 to 5 prior lines of systemic therapy for cGVDA
• Systemic therapy for cGVHD in indicated
Stratification factors
• Prior ibruntinib (Y/N)
• Severe cGVHD (Y/N)
R
OPEN LABEL
ARM A: Belumosudil 200 mg QD (n=66)
ARM B: Belumosudil 200 mg BID (n=66)
Treat to clinically significant progression
PRIMARY END POINT
ORR
SECONDARY END POINTS
• Safety
• Duration of response (DOR)
• Lee Symptom Scale (LSS) score
• Steroid doses
• Failure-free survival (FFS)
• Overall survival (OS)
Statistical consideration
• Interim analysis (IA) at 2 months (1-sided α=0.25%); primary analysis (PA) at 6 months
• At PA, in each arm, target ORR=55%; 1-sided α=2.25%); 90% power; 10% dropout rate
• Multiplicity adjustment – Hochberg procedure
• N=63 per arm
○ Target at least 10% per arm previously treated with ibrutinib

Fig. 11

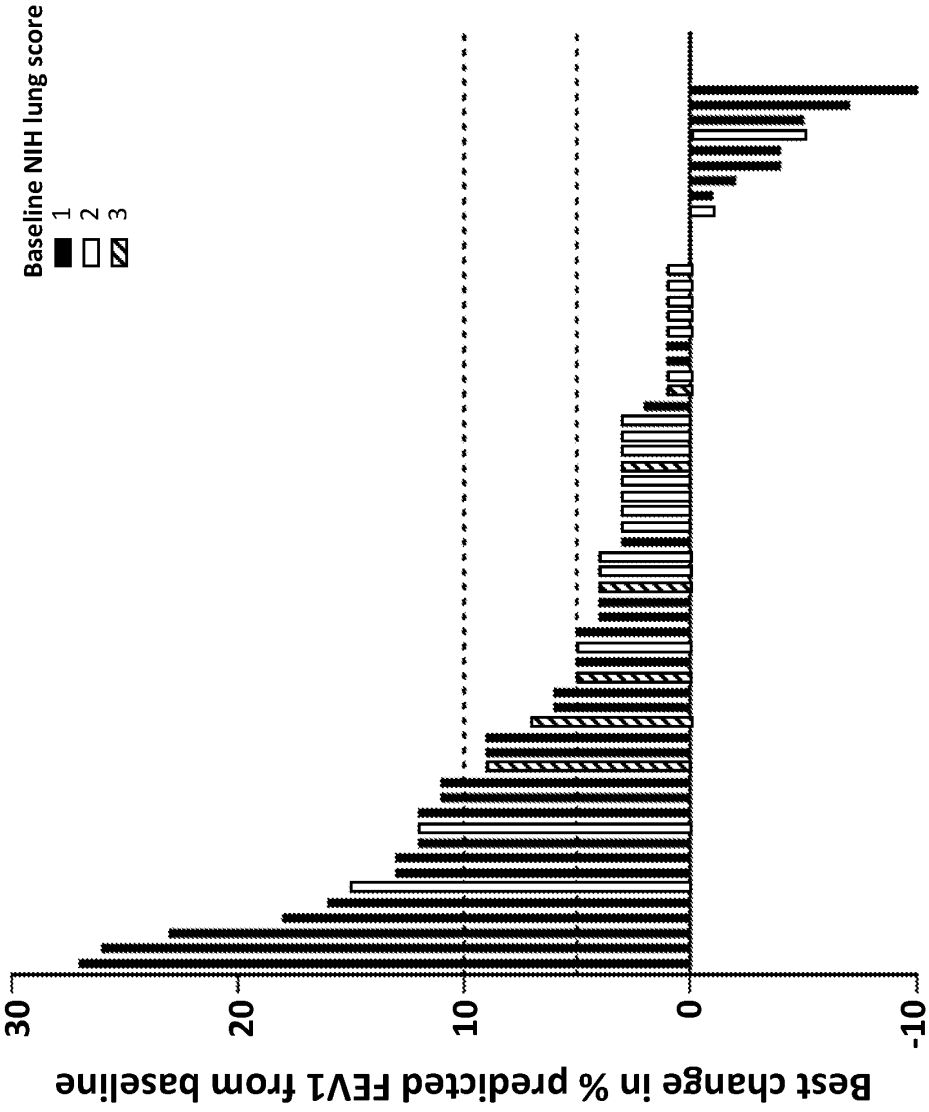
Baseline NIH lung score
1
2
3
30
20
10
0
-10
Best change in % predicted FEV1 from baseline

Fig. 12

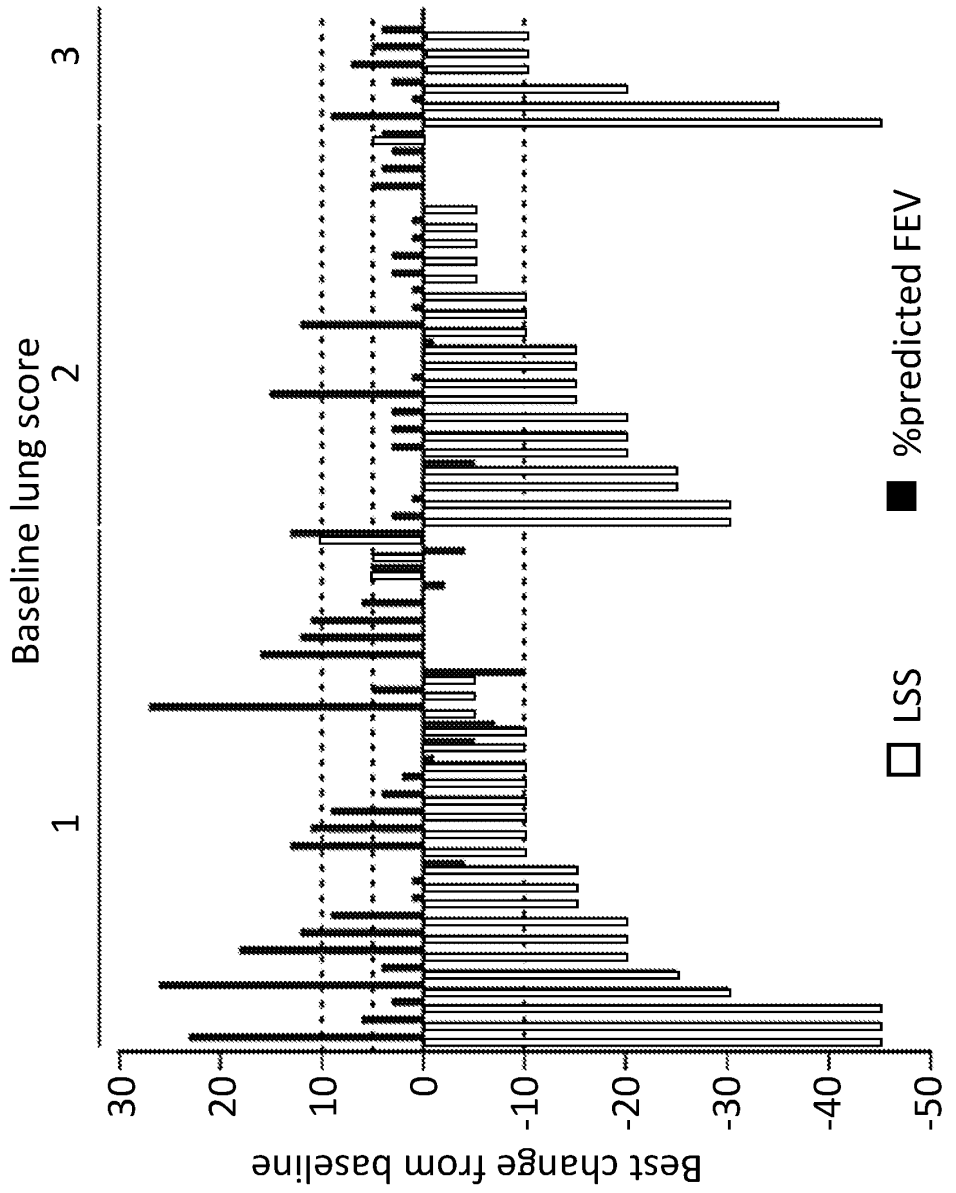
Baseline lung score
1
2
3
Best change from baseline
30
20
10
0
-10
-20
-30
-40
-50
LSS
%predicted FEV

Fig. 13

Subject ID	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Subject sex	M	M	M	M	F	M	M	M	M	M	F	M	M	F	M	M	M	M	M	F
NIH severity at enrollment	Mod.	Mod.	Mod.	Sev.	Mod.	Sev.	Mod.	Sev.	Mod.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Mod.
Best response prior to belumosudil	PD	SD	UNK	UNK	PR	UNK	SD	SD	PD	PD	PR	SD	PR	PR	PR	PR	SD	PR	PD	SD
NIH lung score at enrollment	1	1	1	1	1	1	1	2	1	1	1	1	1	1	2	1	1	2	2	1
Best NIH response	CR	CR	CR	CR	CR	CR	CR	CR	CR	PR	PR	PR	PR	PR	PR	PR	PR	PR	PR	NR
Best NIH response by PFT	CR	CR	CR	CR	CR	CR	PR	PR	NR	PR	PR	PR	PR	PR	PR	NR	NR	NR	NR	NR
Best NIH lung score	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	2	2	1
Best NIH lung symptom score	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	0	1	0	1	0
Best % pred. FEV1 response	1-< 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	1-< 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	≤0%
Best % improvement in FEV1 in L	1-<10%	UNK	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	1-< 10%	≥ 10%	UNK	≥ 10%	≥ 10%	≤0%	≥ 10%	1-< 10%	UNK	UNK	≤0%	≤0%
Best improvement in mL	1-200	UNK	>200	>200	>200	>200	>200	>200	1-200	>200	UNK	>200	>200	≤0	>200	1-200	UNK	UNK	≤0	≤0
Best improvement Lee lung score	≥0↑	≥0↑	≥20↓	≥20↓	≥20↓	5↓	≥20↓	10-15↓	10-15↓	≥0↑	≥0↑	10-15↓	10-15↓	≥0↑	10-15↓	10-15↓	≥20↓	≥20↓	5↓	≥0↑

Fig. 14

Subject ID	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
Subject sex	F	M	F	M	F	F	F	M	F	F	F	M	F	F	M	M	M	M	F	F
NIH severity at enrollment	Mod.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Mod.	Sev.	Mod.	Sev.
Best response prior to belumosudil	PD	SD	PR	SD	UNK	PR	PD	PR	PR	SD	UNK	SD	PD	SD	SD	PR	PD	UNK	UNK	PD
NIH lung score at enrollment	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	1	2	2	2
Best NIH response	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Best NIH response by PFT	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Best NIH lung score	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2
Best NIH lung symptom score	0	0	0	1	1	1	1	1	2	2	2	0	0	0	0	0	1	1	1	1
Best % pred. FEV1 response	≥ 10%	≥ 10%	≥ 10%	≤0%	≤0%	≤0%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≥ 10%	≤0%	≤0%	≤0%	≥ 10%	≥ 10%	≤0%	≤0%	≤0%	1-< 10%
Best % improvement in FEV1 in L	1-< 10%	UNK	1-< 10%	UNK	≤0%	≥ 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	UNK	≤0%	≥ 10%	UNK	1-< 10%	UNK	UNK	≤0%	UNK	≤0%
Best improvement in mL	1-200	UNK	1-200	UNK	≤0	>200	1-200	1-200	1-200	1-200	UNK	≤0	>200	UNK	1-200	UNK	UNK	>200	UNK	≤0
Best improvement Lee lung score	10-15↓	5↓	≥0↑	10-15↓	10-15↓	10-15↓	10-15↓	≥20↓	10-15↓	≥20↓	≥20↓	10-15↓	≥0↑	5↓	10-15↓	≥0↑	5↓	≥20↓	10-15↓	10-15↓

Fig. 14 (cont.)

Subject ID	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59
Subject sex	F	M	F	M	F	M	M	M	F	F	M	F	F	F	M	M	F	M	F
NIH severity at enrollment	Sev.	Mod.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.	Sev.
Best response prior to belumosudil	UNK	SD	SD	SD	SD	UNK	SD	SD	PD	SD	SD	PD	PD	SD	SD	SD	UNK	SD	SD
NIH lung score at enrollment	2	2	2	2	2	2	2	3	2	2	2	2	2	2	3	3	3	3	3
Best NIH response	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Best NIH response by PFT	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Best NIH lung score	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	3	3	3	3
Best NIH lung symptom score	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	3
Best % pred. FEV1 response	1-< 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	≤0%	≤0%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%	1-< 10%
Best % improvement in FEV1 in L	1-< 10%	UNK	1-< 10%	≤0%	≤0%	≤0%	1-< 10%	UNK	1-< 10%	≤0%	≥ 10%	≤0%	≤0%	1-< 10%	≥ 10%	UNK	UNK	UNK	UNK
Best improvement in mL	1-200	UNK	1-200	≤0%	≤0%	≤0%	>200	UNK	1-200	≤0%	>200	≤0%	≤0%	1-200	1-200	UNK	UNK	UNK	UNK
Best improvement Lee lung score	10-15↓	≥20↓	≥0↑	≥20↓	≥20↓	≥0↑	≥0↑	10-15↓	≥20↓	10-15↓	5↓	≥20↓	5↓	5↓	10-15↓	≥20↓	10-15↓	≥20↓	≥20↓

Fig. 14 (cont.)

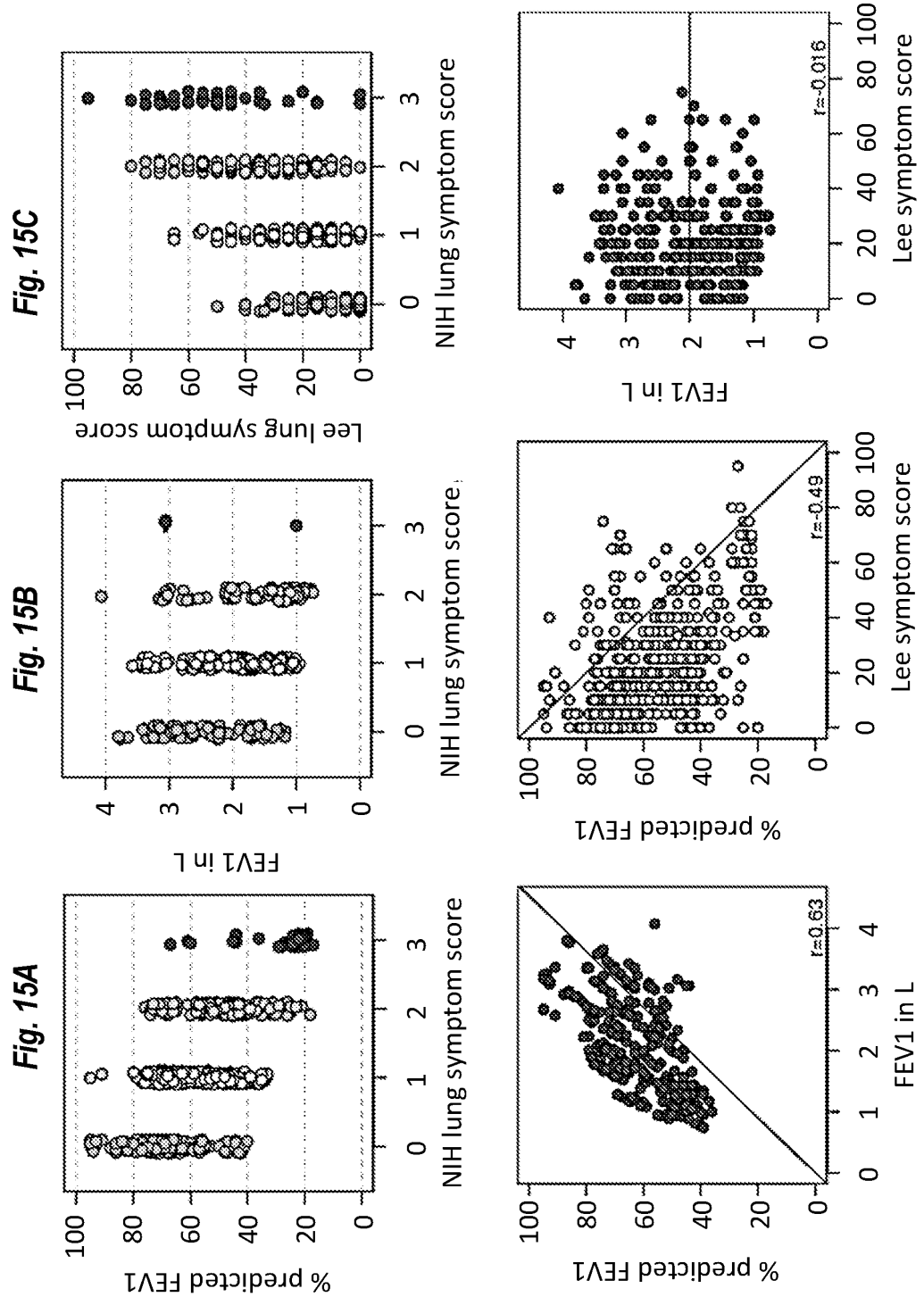

Fig. 15A

Fig. 15B

Fig. 15C

Fig. 15D

Fig. 15E

Fig. 15F

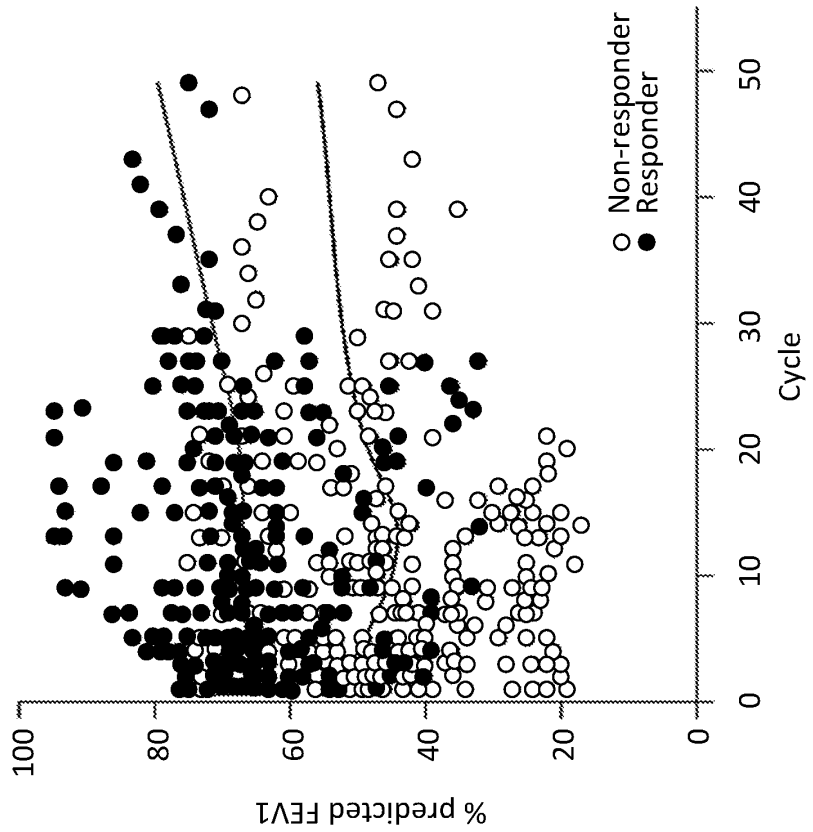

Fig. 16

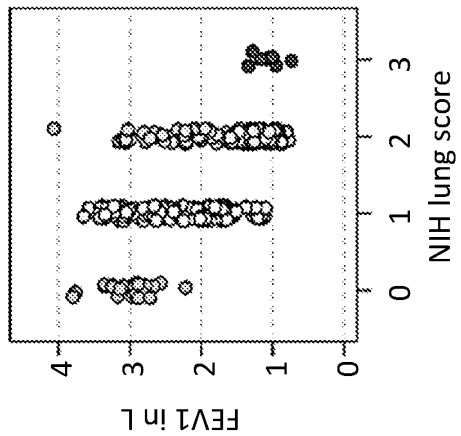

Fig. 15G

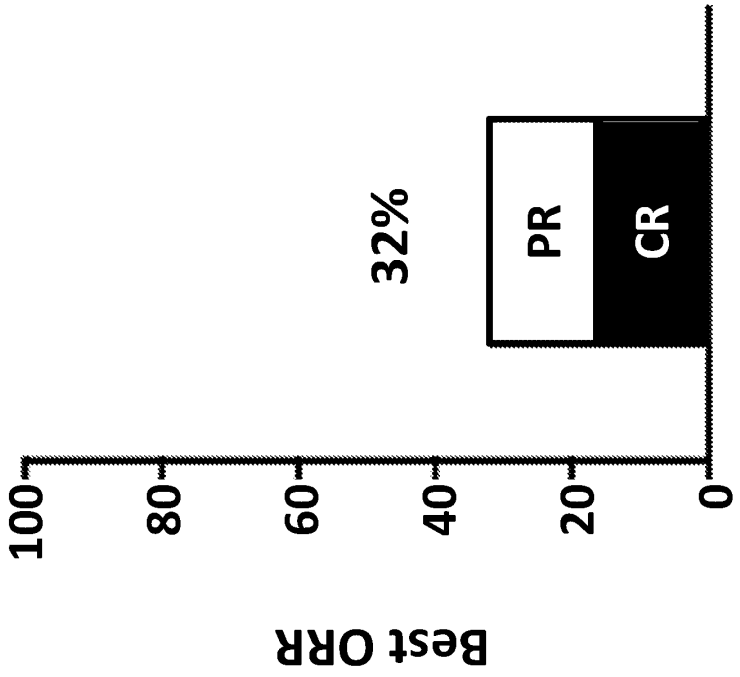

Fig. 17