## 1 SUPPLEMENTAL DIGITAL CONTENT

- 2 Meaningful Improvement and Worsening in Patients who do not Achieve Low Disease
- 3 Activity and Switch Therapy to a New Biologic or Targeted Disease-modifying Anti-
- 4 Rheumatic Drug: Results from the CorEvitas RA Registry
- 5 Table, Supplemental Digital Content 1. Outcomes and time-variant clinical characteristics at
- 6 each visit for switchers

CDAI, mean (SD)         32.6 (12.7)         22.2 (10.8)         20.5 (13.5)           CDAI category, n (%)         Remission (CDAI < 2.8)         N/A         N/A         45           Low (2.8≤ CDAI < 10)         N/A         N/A         N/A         18 (19.4)           Moderate (10≤ CDAI < 22)         12 (12.9)         60 (64.5)         33 (35.5)         38 (40.9)           TIC, mean (SD)         12.2 (7.8)         7.1 (6.7)         7.0 (6.7)         SIC, mean (SD)         3.6 (8.2)         1.8 (6.8)         1.8 (5.6)         SIC/TIC (38)         5.3 (4.7)         5.3 (5.5)         TIC (28) – SIC (28), mean (SD)         3.6 (8.2)         1.8 (6.8)         1.8 (5.6)         SIC/TIC (30.5)         1.5 (6.1)         1.7 (18.3)         SIC/TIC (30.5)         1.8 (6.8)         1.8 (5.6)         SIC/TIC (30.5)         1.8 (6.8)         1.8 (5.6)         SIC/TIC (30.5)         1.8 (10.5)         1.8 (10.5)         SIC/TIC (30.5)	Characteristic	$V_{Pre-BL}$ ( $N^a = 93$ )	$V_{BL}$ (N <sup>a</sup> = 93)	$V_{F/U}$ (N <sup>a</sup> = 93)
Remission (CDAI < 2.8)         N/A         N/A         N/A         18 (19.4)           Low (2.8≤ CDAI < 10)	CDAI, mean (SD)	32.6 (12.7)	22.2 (10.8)	20.5 (13.5)
Low (2.8≤ CDAI <10) Moderate (10s CDAI <22) High (CDAI ≥22) High (CDAI ≥22)  TJC, mean (SD)  TJC, mean (SD)  SJC, mean (SD)  SJC, mean (SD)  SJC, mean (SD)  SJC, mean (SD)  SJC/TJCb, mean (SD)  SJC/TJCb, mean (SD)  SJC/TJCb, mean (SD)  SJC/TJCb, mean (SD)  SJC/TJCcb, mean (SD)  SJC/TJCcb, mean (SD)  TJC (28) − SJC (28), mean (SD)  SJC/TJCcb, mean (SD)  TJC (28) − SJC (28), mean (SD)  SJC/TJCcb, mean (SD)  TJC (28) − SJC (28), mean (SD)  SJC/TJCcb, mean (SD)  TJC (28) − SJC (28), mean (SD)  SJC/TJCcb, mean (SD)  TJC (28) − SJC (28), mean (SD, mean (SD)  TJC (27) − TJC (20, mean (SD)  TJC (28) − SJC (28)  TJC (29, mean (SD)  TJC (20, mean (SD)  TJ	CDAI category, n (%)			
Moderate (10≤ CDAI <22)       12 (12.9)       60 (64.5)       33 (35.5)         High (CDAI ≥22)       81 (87.1)       33 (35.5)       38 (40.9)         TJC, mean (SD)       12.2 (7.8)       7.1 (6.7)       7.0 (6.7)         SJC, mean (SD)       8.6 (6.2)       5.3 (4.7)       5.3 (5.5)         TJC (28) – SJC (28), mean (SD)       3.6 (8.2)       1.8 (6.8)       1.8 (5.6)         SJC/TJCb, mean (SD)       1.2 (2.1)       1.1 (1.1)       0.9 (1.0)         TJC-SJC ≥ 7, n (%)       30 (32.3)       15 (16.1)       17 (18.3)         SJC/TJC < 0.5b, n (%)	Remission (CDAI <2.8)	N/A	N/A	<5
High (CDAI ≥22)  TJC, mean (SD)  TJC, mean (SD)  TJC (28) — SJC (28), mean (SD)  SJC, mean (SD)  TJC (28) — SJC (28), mean (SD)  TJC (27), mean (SD)  TJC (27), mean (SD)  TJC (20, 5), mean (SD)  TJC (20, 7)  TJC (20, 5), mean (SD)  TJC (20, 7)  TJC (20,	Low (2.8≤ CDAI <10)	N/A	N/A	18 (19.4)
TJC, mean (SD)  SJC, mean (SD)  SJC (28) – SJC (28), mean (SD)  SJC (28) – SJC (28), mean (SD)  SJC/TJC <sup>b</sup> , mean (SD)  1.2 (2.1)  1.1 (1.1)  0.9 (1.0)  TJC-SJC ≥7, n (%)  SJC/TJC <0.5 <sup>b</sup> , n (%)  SJC/TJC <0.50, n (	Moderate (10≤ CDAI <22)	12 (12.9)	60 (64.5)	33 (35.5)
SJC, mean (SD)  SJC (28) − SJC (28), mean (SD)  SJC/TJC <sup>b</sup> , mean (SD)  1.2 (2.1)  1.1 (1.1)  0.9 (1.0)  TJC-SJC ≥7, n (%)  SJC/TJC o.5 <sup>b</sup> , n (%)  SJC/TJC o.5 <sup>b</sup> , n (%)  SJC/TJC o.5 <sup>b</sup> , n (%)  Physician-reported global assessment, mean (SD)  Physician-reported global assessment, mean (SD)  Patient-reported global assessment, mean (SD)  Patient-reported pain, mean (SD)  Patient-reported fatigue, mean (SD)  Patient-reported fatigue, mean (SD)  Patient-reported fatigue, mean (SD)  Patient-reported fatigue, mean (SD)  Possible difference of the diffe	High (CDAI ≥22)	81 (87.1)	33 (35.5)	38 (40.9)
TJC (28) − SJC (28), mean (SD)  3.6 (8.2)  1.8 (6.8)  1.8 (5.6)  SJC/TJC <sup>b</sup> , mean (SD)  1.2 (2.1)  1.1 (1.1)  0.9 (1.0)  TJC-SJC ≥7, n (%)  30 (32.3)  15 (16.1)  17 (18.3)  SJC/TJC <0.5 <sup>b</sup> , n (%)  25 (26.9)  26 (28.0)  28 (30.1)  Physician-reported global assessment, mean (SD)  Patient-reported global assessment, mean (SD)  Fatient-reported global assessment, mean (SD)  Fatient-reported pain, mean (SD)  Fatient-reported pain, mean (SD)  Fatient-reported fatigue, mean (SD)  Fatient-repor	TJC, mean (SD)	12.2 (7.8)	7.1 (6.7)	7.0 (6.7)
SJC/TJCb, mean (SD)       1.2 (2.1)       1.1 (1.1)       0.9 (1.0)         TJC-SJC ≥7, n (%)       30 (32.3)       15 (16.1)       17 (18.3)         SJC/TJC <0.5b, n (%)	SJC, mean (SD)	8.6 (6.2)	5.3 (4.7)	5.3 (5.5)
TJC-SJC ≥7, n (%) 30 (32.3) 15 (16.1) 17 (18.3) SJC/TJC <0.5 <sup>b</sup> , n (%) 25 (26.9) 26 (28.0) 28 (30.1) Physician-reported global assessment, mean (SD) 52.7 (20.7) 41.2 (22.1) 33.5 (22.6) Patient-reported global assessment, mean (SD) 66.1 (19.7) 56.6 (22.1) 48.2 (24.6) HAQ, mean (SD) 1.3 (0.7) 1.3 (0.7) 1.2 (0.7) Patient-reported pain, mean (SD) 70.1 (20.8) 60.5 (23.7) 53.9 (26.2) Patient-reported fatigue, mean (SD) 67.1 (26.5) 63.9 (29.6) 57.7 (28.4) Morning stiffness, n (%) 87 (93.5) 87 (93.5) 82 (89.1) Morning stiffness duration (h), mean (SD) 3.0 (4.4) 2.7 (4.8) 2.3 (4.4) Current prednisone use, n (%) 87 (93.5) 49 (52.7) 60 (64.5) Current use, missing dose $<5$ $<5$ $<5$ $<5$ $<5$ $<5$ Dose <10 mg daily 22 (23.7) 27 (29.0) 23 (24.7) Dose ≥10 mg daily 13 (14.0) 17 (18.3) 10 (10.8) Treatment modifications Prednisone added, n (%) - 13 (14.0) - 7 (7.5) - 9 Prednisone dose increased by 5+ mg, n (%) - $<5$ $<5$ $<5$ $<5$ $<5$ $<5$ $<5$ $<5$	TJC (28) – SJC (28), mean (SD)	3.6 (8.2)	1.8 (6.8)	1.8 (5.6)
SJC/TJC <0.5°, n (%)	SJC/TJC <sup>b</sup> , mean (SD)	1.2 (2.1)	1.1 (1.1)	0.9 (1.0)
Physician-reported global assessment, mean (SD) 52.7 (20.7) 41.2 (22.1) 33.5 (22.6)  Patient-reported global assessment, mean (SD) 66.1 (19.7) 56.6 (22.1) 48.2 (24.6)  HAQ, mean (SD) 1.3 (0.7) 1.3 (0.7) 1.2 (0.7)  Patient-reported pain, mean (SD) 70.1 (20.8) 60.5 (23.7) 53.9 (26.2)  Patient-reported fatigue, mean (SD) 67.1 (26.5) 63.9 (29.6) 57.7 (28.4)  Morning stiffness, n (%) 87 (93.5) 87 (93.5) 82 (89.1)  Morning stiffness duration (h), mean (SD) 3.0 (4.4) 2.7 (4.8) 2.3 (4.4)  Current prednisone use, n (%) 75 (59.1) 49 (52.7) 60 (64.5)  Current use, missing dose 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	TJC-SJC ≥7, n (%)	30 (32.3)	15 (16.1)	17 (18.3)
Patient-reported global assessment, mean (SD) 66.1 (19.7) 56.6 (22.1) 48.2 (24.6) HAQ, mean (SD) 1.3 (0.7) 1.3 (0.7) 1.2 (0.7) Patient-reported pain, mean (SD) 70.1 (20.8) 60.5 (23.7) 53.9 (26.2) Patient-reported fatigue, mean (SD) 67.1 (26.5) 63.9 (29.6) 57.7 (28.4) Morning stiffness, n (%) 87 (93.5) 87 (93.5) 82 (89.1) Morning stiffness duration (h), mean (SD) 3.0 (4.4) 2.7 (4.8) 2.3 (4.4) Current prednisone use, n (%) 55 (59.1) 49 (52.7) 60 (64.5) Current use, missing dose 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	SJC/TJC <0.5 <sup>b</sup> , n (%)	25 (26.9)	26 (28.0)	28 (30.1)
HAQ, mean (SD)  Patient-reported pain, mean (SD)  Patient-reported fatigue, mean (SD)  Patient (SD)  Patien	Physician-reported global assessment, mean (SD)	52.7 (20.7)	41.2 (22.1)	33.5 (22.6)
Patient-reported pain, mean (SD)       70.1 (20.8)       60.5 (23.7)       53.9 (26.2)         Patient-reported fatigue, mean (SD)       67.1 (26.5)       63.9 (29.6)       57.7 (28.4)         Morning stiffness, n (%)       87 (93.5)       82 (89.1)         Morning stiffness duration (h), mean (SD)       3.0 (4.4)       2.7 (4.8)       2.3 (4.4)         Current prednisone use, n (%)       3.0 (4.4)       2.7 (4.8)       2.3 (4.4)         Current use, missing dose       <5 (59.1)	Patient-reported global assessment, mean (SD)	66.1 (19.7)	56.6 (22.1)	48.2 (24.6)
Patient-reported fatigue, mean (SD) 67.1 (26.5) 63.9 (29.6) 57.7 (28.4)  Morning stiffness, n (%) 87 (93.5) 87 (93.5) 82 (89.1)  Morning stiffness duration (h), mean (SD) 3.0 (4.4) 2.7 (4.8) 2.3 (4.4)  Current prednisone use, n (%)  Not using 55 (59.1) 49 (52.7) 60 (64.5)  Current use, missing dose <5 <5 <5  Dose <10 mg daily 22 (23.7) 27 (29.0) 23 (24.7)  Dose ≥10 mg daily 13 (14.0) 17 (18.3) 10 (10.8)  Treatment modifications <sup>c</sup> Prednisone added, n (%) - 13 (14.0) -  Prednisone stopped, n (%) - 7 (7.5) -  Prednisone dose increased by 5+ mg, n (%) - <5 -  MTX use, n (%) - <5 -  MTX added, n (%) - <5 -  MTX stopped, n (%) - <5 -  MTX dose increased by 5+ mg, n (%) - <5 -  MTX dose increased by 5+ mg, n (%) - <5 -  CSDMARD use - not including MTX, n (%) - (7.5) -  cSDMARD started - not including MTX, n (%) - 7 (7.5) -	HAQ, mean (SD)	1.3 (0.7)	1.3 (0.7)	1.2 (0.7)
Morning stiffness, n (%)       87 (93.5)       87 (93.5)       82 (89.1)         Morning stiffness duration (h), mean (SD)       3.0 (4.4)       2.7 (4.8)       2.3 (4.4)         Current prednisone use, n (%)             Not using       55 (59.1)       49 (52.7)       60 (64.5)          Current use, missing dose       <5	Patient-reported pain, mean (SD)	70.1 (20.8)	60.5 (23.7)	53.9 (26.2)
Morning stiffness duration (h), mean (SD)       3.0 (4.4)       2.7 (4.8)       2.3 (4.4)         Current prednisone use, n (%)         Not using       55 (59.1)       49 (52.7)       60 (64.5)         Current use, missing dose       <5	Patient-reported fatigue, mean (SD)	67.1 (26.5)	63.9 (29.6)	57.7 (28.4)
Current prednisone use, n (%)       55 (59.1)       49 (52.7)       60 (64.5)         Current use, missing dose       <5	Morning stiffness, n (%)	87 (93.5)	87 (93.5)	82 (89.1)
Not using       55 (59.1)       49 (52.7)       60 (64.5)         Current use, missing dose       <5	Morning stiffness duration (h), mean (SD)	3.0 (4.4)	2.7 (4.8)	2.3 (4.4)
Current use, missing dose       <5	Current prednisone use, n (%)			
Dose <10 mg daily	Not using	55 (59.1)	49 (52.7)	60 (64.5)
Dose ≥10 mg daily       13 (14.0)       17 (18.3)       10 (10.8)         Treatment modifications <sup>c</sup> Prednisone added, n (%)       -       13 (14.0)       -         Prednisone stopped, n (%)       -       7 (7.5)       -         Prednisone dose increased by 5+ mg, n (%)       -       <5	Current use, missing dose	<5	<5	<5
Treatment modifications <sup>c</sup> -       13 (14.0)       -         Prednisone added, n (%)       -       7 (7.5)       -         Prednisone stopped, n (%)       -       7 (7.5)       -         Prednisone dose increased by 5+ mg, n (%)       -       <5	Dose <10 mg daily	22 (23.7)	27 (29.0)	23 (24.7)
Prednisone added, n (%)       -       13 (14.0)       -         Prednisone stopped, n (%)       -       7 (7.5)       -         Prednisone dose increased by 5+ mg, n (%)       -       <5	Dose ≥10 mg daily	13 (14.0)	17 (18.3)	10 (10.8)
Prednisone stopped, n (%)       -       7 (7.5)       -         Prednisone dose increased by 5+ mg, n (%)       -       <5	Treatment modifications <sup>c</sup>			
Prednisone dose increased by 5+ mg, n (%)       -       <5	Prednisone added, n (%)	-	13 (14.0)	-
MTX use, n (%)       -       42 (45.2)       -         MTX added, n (%)       -       <5	Prednisone stopped, n (%)	-	7 (7.5)	-
MTX added, n (%)       -       <5	Prednisone dose increased by 5+ mg, n (%)	-	<5	-
MTX stopped, n (%)       -       <5	MTX use, n (%)	-	42 (45.2)	-
MTX dose increased by 5+ mg, n (%) - <5 - csDMARD use – not including MTX, n (%) - 29 (31.2) - csDMARD started – not including MTX, n (%) - 7 (7.5) - csDMARD stopped – not including MTX, n (%) - 7 (7.5) -	MTX added, n (%)	-	<5	-
csDMARD use – not including MTX, n (%) - 29 (31.2) - csDMARD started – not including MTX, n (%) - 7 (7.5) - csDMARD stopped – not including MTX, n (%) - 7 (7.5) -	MTX stopped, n (%)	-	<5	-
csDMARD started – not including MTX, n (%) - 7 (7.5) - csDMARD stopped – not including MTX, n (%) - 7 (7.5) -	MTX dose increased by 5+ mg, n (%)	-	<5	-
csDMARD stopped – not including MTX, n (%) - 7 (7.5) -	csDMARD use – not including MTX, n (%)	-	29 (31.2)	-
	csDMARD started – not including MTX, n (%)	-	7 (7.5)	-
csDMARD use, n (%) - 64 (68.8) -	csDMARD stopped – not including MTX, n (%)	-	7 (7.5)	-
	csDMARD use, n (%)	-	64 (68.8)	-

csDMARD added, n (%)	-	9 (9.7)	-	
csDMARD stopped, n (%)	-	11 (11.8)	-	
Biologic dose increased, n (%)	-	<5	-	
Biologic dose decreased, n (%)	-	<5	-	
Corticosteroid injection, n (%)	-	<5	-	

<sup>&</sup>lt;sup>a</sup>N refers to initiation episodes; a total of 87 patients contributed 1 initiation and 3 patients contributed 2 initiations each to the cohort. <sup>b</sup>Among those reporting TJC > 0. <sup>c</sup>Treatment modifications were identified only at  $V_{BL}$ , at or prior to the switch.

CDAI, clinical disease activity index; csDMARDs, conventional disease modifying anti-rheumatic drugs; IL-6, interleukin-6; HAQ, health assessment questionnaire; JAKi, Janus kinase inhibitor; MTX, methotrexate; N/A, not applicable, indicates zero count by cohort definition; SD, standard deviation; SJC, swollen joint counts; TJC, tender joint counts;  $V_{Pre-BL}$ , index visit;  $V_{BL}$ , baseline visit;  $V_{FU}$ , follow-up visit.