Table e-1. Cumulative Number of New Gadolinium-Enhancing T1 Lesions at Week 12 (PP Population)

Endpoint	Statistic	Placebo <sup>a</sup>	Ofatumumab 3 mg q12w	Ofatumumab 30 mg q12w	Ofatumumab 60 mg q12w	Ofatumumab 60 mg q4w
	n	42	23	22	25	45
	Mean rate <sup>c</sup>	1.01	0.37	0.37	0.37	0.37
= -	Rate ratio (95% CI)	-	0.36 (0.205, 0.638)	0.36 (0.205, 0.638)	0.36 (0.205, 0.638)	0.36 (0.205, 0.638)
Weeks	Mean rate <sup>c</sup>	0.85	0.12	0.08	0.08	0.08
4–12 <sup>b</sup> (post-hoc analysis) Rate ratio (95% CI)		-	0.14 (0.05, 0.40)	0.10 (0.05, 0.19)	0.09 (0.05, 0.19)	0.09 (0.04, 0.19)

CI, confidence interval; mITT, modified intent-to-treat; MRI, magnetic resonance imaging; PP, per protocol; q4w, every 4 weeks; q12w, every 12 weeks; SD, standard deviation.

Note: The number of patients with an MRI scan showing lesion within the 12 months prior to baseline is shown in Table 1.

<sup>a</sup>Patients randomized to the placebo group received 3 mg of of atumumab at Week 12;  $^{b}E_{max}$  model fitted was E0+E<sub>max</sub>\*dose/(ED<sub>50</sub>+dose)+baseline GdE lesion status;  $^{c}$ rate of the cumulative number of lesions per scan.

Table e-2. Cumulative Volume Analyses of T1 and T2 Lesions at Weeks 12 and 24

Endpoint	Statistic	Pop.	Placeboa	Ofatumumab 3 mg q12w	Ofatumumab 30 mg q12w		Ofatumumab 60 mg q4w
<b>Cumulative V</b>	olume (m	m³) of	New Gado	olinium-Enhan	cing T1 Lesion	is at Weeks 12 a	and 24
	N	mITT	67	33	30	33	62
Weeks 0–12 <sup>b</sup>	Mean rate <sup>d</sup>	mITT	153.14	34.2	75.44	76.69	38.45
	Rate ratio (95% CI)	mITT		0.22 (0.06, 0.84) <sup>h</sup>	0.49 (0.13, 1.86)	0.50 (0.14, 1.78)	0.25 (0.09, 0.71) <sup>g</sup>
Weeks 4-12	( - 7 - 7						
(post-hoc analyses)	Mean rate <sup>d</sup>	mITT	120.24	18.54	14.16	3.72	9.43
	Rate ratio (95% CI)	mITT		0.15 (0.02, 1.00) <sup>h</sup>	0.12 (0.02, 0.72)h	0.03 (0.01, 0.18) <sup>h</sup>	0.08 (0.02, 0.34) <sup>e</sup>
Weeks 0-24 <sup>c</sup>	Mean rate <sup>d</sup>	mITT	109.58	33.93	44.30	38.22	21.01
	Rate ratio (95% CI)	mITT		0.31 (0.09, 1.02)	0.40 (0.12, 1.41)	0.35 (0.11, 1.15)	0.19 (0.07, 0.51) <sup>e</sup>
Week 4–24 (post-hoc analyses) <sup>c</sup>	Mean rate <sup>d</sup>	mITT	89.43	29.57	10.53	1.84	6.12
	Rate ratio (95% CI)	mITT		0.33 (0.07, 1.54)	0.12 (0.02, 0.57) <sup>g</sup>	0.02 (0.00, 0.10) <sup>e</sup>	0.07 (0.02, 0.24) <sup>e</sup>
<b>Cumulative V</b>	olume (m	m³) of	Total (Ne	w/Persisting)	Gadolinium-E	nhancing T1 Le	sions at Week 12
	n	mITT	67	32	30	33	62
Weeks 0–12 <sup>c</sup>	Mean rate <sup>d</sup>	mITT	251.31	44.19	124.99	116.48	61.35
	Rate ratio (95% CI)	mITT		0.18 (0.05, 0.58) <sup>g</sup>	0.50 (0.15, 1.63)	0.46 (0.15, 1.43)	0.24 (0.10, 0.62) <sup>e</sup>
Weeks 4–12 (post-hoc analyses) <sup>c</sup>	Mean rate <sup>d</sup>	mITT	253.46	25.82	62.11	36.35	28.72
	Rate ratio (95% CI)	mITT		0.10 (0.02, 0.46) <sup>e</sup>	0.25 (0.06, 0.97) <sup>f</sup>	0.14 (0.04, 0.54) <sup>e</sup>	0.11 (0.04, 0.36)
<b>Cumulative V</b>		m³) of	New and	Newly Enlargi	ng T2 Lesions a	at Weeks 4-12 a	and 4-24
	n	mITT	67	32	30	33	62
Weeks 4–12 (post-hoc analyses) <sup>c</sup>	Mean rate <sup>d</sup>	mITT	228.36	50.96	13.21	10.71	16.64
	Rate ratio (95% CI)	mITT		0.22 (0.03, 1.46)	0.06 (0.01, 0.37) <sup>g</sup>	0.05 (0.01, 0.28) <sup>e</sup>	0.07 (0.02, 0.33) <sup>e</sup>
Week 4–24 (post-hoc analyses) <sup>c</sup>	Mean rate <sup>d</sup>	mITT	161.21	76.58	9.33	5.87	10.56

Rate	0.47	0.06	0.04	0.07
ratio mITT	(0.10, 2.17)	(0.01, 0.28) <sup>e</sup>	(0.01_0.17)e	(0.02, 0.23) <sup>e</sup>
(95% CI)	(0.10, 2.17)	$(0.01, 0.28)^{e}$	$(0.01, 0.17)^{e}$	(0.02, 0.23) <sup>e</sup>

CI, confidence interval; mITT, modified intent-to-treat; MRI, magnetic resonance imaging; PP, per protocol; q4w, every 4 weeks; q12w, every 12 weeks; SD, standard deviation.

Note: The number of patients with an MRI scan showing lesion within the 12 months prior to baseline is shown in Table 1.

<sup>a</sup>Patients randomized to the placebo group received 3 mg of ofatumumab at Week 12;  ${}^{b}E_{max}$  model fitted was E0+ $E_{max}$ \*dose/(ED<sub>50</sub>+dose)+baseline GdE lesion status; <sup>c</sup>statistical model adjusted for treatment and baseline lesion value; <sup>d</sup>rate of the cumulative number of lesions per scan;  ${}^{e}P \le 0.001$ ;  ${}^{f}P = 0.002$ ;  ${}^{g}P < 0.01$ ;  ${}^{h}P < 0.05$ .

 Table e-3. Summary of Relapses (Safety Population)

	Placeboa	Ofatumumab	Ofatumumab	Ofatumumab	Ofatumumab
Parameter		3 mg q12w	30 mg q12w	60 mg q12w	60 mg q4w
	(N=67)	(N=34)	(N=32)	(N=34)	(N=64)
Treatment phase:	67	34	32	34	64
Weeks 0–12, N					
Number of patients relapsing,	9 (13)	2 (6) <sup>b</sup>	4 (13) <sup>c</sup>	4 (12) <sup>c</sup>	7 (11) <sup>c</sup>
n (%)					
Total number of relapses	9	2	6	4	7
Absolute risk reduction, %		7.6 (-3.82,	0.9 (-13.14,	1.7 (-11.90,	2.5 (-8.69,
(95% CI)		18.92)	15.00)	15.23)	13.68)
Numbers needed to treat, n		13 (NA)	107 (NA)	60 (NA)	40 (NA)
(95% CI) <sup>d</sup>					
Treatment phase:					
Weeks 4–12, <sup>e</sup> N	66	33	30	33	62
Number of patients relapsing,	7 (11)	1 (3)	3 (10)	1 (3)	3 (5)
n (%)					
Total number of relapses	7	1	3	1	3
Absolute risk reduction, %		7.6 (-1.88,	0.6 (-12.45,	7.6 (-1.88,	5.8 (-3.38,
(95% CI)		17.03)	13.66)	17.03)	14.92)
Numbers needed to treat, n		13 (NA)	165 (NA)	13 (NA)	17 (NA)
(95% CI) <sup>d</sup>					
Treatment phase:					
Weeks 12–24, N	65	31	30	33	60
Number of patients relapsing,	9 (14)	1 (3)	3 (10)	2 (6)	3 (5)
n (%)					
Total number of relapses	9	1	3	2	3

Absolute risk reduction, %		10.6 (0.17,	3.8 (-9.78,	7.8 (-3.91,	8.8 (-1.2,
(95% CI)		21.07)	17.48)	19.48)	18.89)
Numbers needed to treat, n		9 (4.7, 584.6)	26 (NA)	13 (NA)	11 (NA)
(95% CI) <sup>d</sup>					
Treatment phase:	67	34	32	34	64
Weeks 0–24, N	07	34	32	34	04
Number of patients relapsing,	17 (25)	3 (9)	7 (22)	5 (15)	10 (16)
n (%)					
Total number of relapses	18	3	9	6	10
Absolute risk reduction, %		16.5 (2.43,	3.5 (-14.21,	10.7 (-5.15,	9.7 (-3.95,
(95% CI)		30.67)	21.21)	26.49)	23.45)
Numbers needed to treat, n		6 (3.3, 41.2)	29 (NA)	9 (NA)	10 (NA)
(95% CI) <sup>d</sup>					
Follow-Up phase:	66	31	32	33	59
Weeks 24–48, N					
Number of patients relapsing,	8 (12)	2 (6)	2 (6)	2 (6)	9 (15)
n (%)					
Total number of relapses	9	2	3	2	9
Absolute risk reduction, %		5.7 (-6.03,	5.9 (-5.63,	6.1 (-5.27,	-3.1 (-15.22,
(95% CI)		17.37)	17.38)	17.39)	8.96)
Numbers needed to treat, n		18 (NA)	17 (NA)	17 (NA)	"32" <sup>f</sup> (NA)
(95% CI) <sup>d</sup>					

CI, confidence interval; NA, not applicable

<sup>a</sup>Patients randomized to placebo group received 3 mg of atumumab at Week 12; <sup>b</sup>P=0.488; <sup>c</sup>P=1.000; <sup>d</sup> 95% CI not applicable for the numbers needed to treat when the 95% CI for the absolute risk reduction versus placebo contains 0; <sup>e</sup>post-hoc analysis; <sup>f</sup>Number needed to harm

**Table e-4.** Summary of Time from Last Active Dose until CD19+ B Cell Count >0.11 GI/L or ≥ to the Subject's Baseline CD19 Value (Safety Population)

	Placebo <sup>a</sup>	Ofatumumab	Ofatumumab	Ofatumumab	Ofatumuma
		3 mg q12w	30 mg q12w	60 mg q12w	60 mg q4w
	(N=67)	(N=34)	(N=32)	(N=34)	(N=64)
ubject's CD19					
tatus					
n	65	31	30	33	62
Repleted, n (%)	39 (60)	23 (74)	22 (73)	21 (64)	41 (66)
Did not replete,	5 (8)	7 (23)	8 (27)	12 (36)	21 (34)
n (%)					
Did not	21 (32)	1 (3)	0	0	0
deplete, n (%) <sup>b</sup>					
Time (days) to reple	tion (based o	n observed events	s) <sup>c</sup>		
N	39	23	22	21	41
Mean	208.8	292.5	288.1	323.4	355.3
SD	153.70	175.61	153.03	179.91	163.18
Median	168.0	329.0	257.0	253.0	343.0
Min, Max	57, 602	56,750	53, 680	85, 777	101, 713
Kaplan–Meier estim	nates of days t	o repletion (accor	unting for censor	ed data) <sup>d</sup>	
25 <sup>th</sup> percentile	102.0	203.0	214.0	221.09	281.0
Median days	169.5	334.0	329.0	421.0	428.0
75 <sup>th</sup> percentile	429.0	505.0	504.0	777.0	588.0

Max, maximum; Min, minimum; SD, standard deviation.

<sup>a</sup>Patients randomized to placebo group received 3 mg of atumumab at Week 12; <sup>b</sup>considered to have not depleted if a patient's CD19 value was  $\geq$  their baseline value or above 0.11 GI/L on the dates of their last

active dose and their subsequent evaluable CD19 laboratory test assessment;  $^{c}$ time to repletion was calculated as the number of days between the last active dose date and the date the CD19 value was  $\geq$  the patient's baseline value or >0.11 GI/L. If a subject withdrew prior to their CD19 value being baseline value or >0.11 GI/L, they have been censored at the date of their last evaluable CD19 assessment;  $^{d}$ the median, 25th, and 75th percentiles of time to repletion were derived from Kaplan–Meier survival estimates and thus account for censored data

Adverse Event	Placeboa	Ofatumumab	Ofatumumab	Ofatumumab	Ofatumumab	Total
Adverse Event		3 mg q12w	30 mg q12w	60 mg q12w	60 mg q4w	Ofatumumab
Weeks 0-12	_					
Any infection-related AE	17 (25)	8 (24)	8 (25)	13 (38)	16 (25)	45 (27)
Injection-related reaction	10 (15)	16 (47)	13 (41)	15 (44)	42 (66)	86 (52)
Nasopharyngitis	4 (6)	1 (3)	2 (6)	6 (18)	6 (9)	15 (9)
Headache	4 (6)	1 (3)	1 (3)	3 (9)	3 (5)	8 (5)
Fatigue	7 (10)	0	3 (9)	1 (3)	2 (3)	6 (4)
Weeks 12-24						
Any infection-related AE	19 (29)	5 (16)	6 (20)	6 (18)	9 (15)	45 (21)
Injection-related reaction	9 (14)	6 (19)	3 (10)	6 (18)	5 (8)	29 (13)
Headache	4 (6)	1 (3)	1 (3)	0	4 (7)	10 (5)
Nasopharyngitis	4 (6)	0	2 (7)	1 (3)	3 (5)	10 (5)
Fatigue	7 (10)	0	3 (9)	1 (3)	2 (3)	6 (4)
Back pain	4 (6)	0	1 (3)	0	1 (2)	6 (3)
24-Week Follow-Up phase	_					
Nasopharyngitis	3 (5)	4 (13)	1 (3)	2 (6)	3 (5)	13 (6)

Urinary tract infection	1 (2)	1 (3)	3 (9)	2 (6)	3 (5)	10 (5)
Fall	2 (3)	2 (6)	1 (3)	2 (6)	0	7 (3)
Pain in extremity	2 (3)	2 (6)	0	0	1 (2)	5 (2)
Sinusitis	0	0	1 (3)	0	3 (5)	4 (2)
Bronchitis	0	0	2 (6)	0	0	2 (<1)

<sup>&</sup>lt;sup>a</sup>Patients randomized to the placebo group received 3 mg of ofatumumab at Week 12

AE, adverse event; q4w, every 4 weeks; q12w, every 12 weeks

**Table e-6.** Summary of Injection-Related Reactions (≥5% Incidence in any Dose Group) which Occurred within 7 days following placebo<sup>a</sup> or each dose of Ofatumumab (including pre-conditioning dose<sup>b</sup>) during Weeks 0–24 (Safety Population)

	Placebo	Placebo (N=67)	Ofatumumab 3 mg q12w	Ofatumumab 30 mg q12w	Ofatumumab 30 mg q12w + CD	Ofatumumab 60 mg q12w	Ofatumumab 60 mg q12w + CD	Ofatumumab 60 mg q4w	Ofatumumab 60 mg q4w + CD
		(N=34)	(N=16)	(N=16)	(N=17)	(N=17)	(N=32)	(N=32)	
Week 0 Dose, n (%)	4 (6)	3 (9)	1 (6)	8 (50)	3 (18)	5 (29)	4 (13)	16 (50)	
Mild	3	2	0	7	1	3	3	6	
Moderate	1	0	1	1	1	2	1	8	
Severe	0	1	0	0	1	0	0	2	
Week 1 Dose, n (%)	7 (10)	14 (41)	3 (19)	2 (13)	8 (47) <sup>c</sup>	2 (12)	16 (50)	9 (28)	
Mild	0	9	3	1	2	2	13	8	
Moderate	7	5	0	1	6	0	3	1	
Severe	0	0	0	0	0	0	0	0	
Week 4 Dose, n (%)	0	1 (3)	1 (6)	0	0	0	2 (6)	1 (3)	
Mild	0	0	0	0	0	0	2	0	
Moderate	0	1	1	0	0	0	0	0	
Severe	0	0	0	0	0	0	0	0	

Week 8 Dose, n (%)	0	0	0	0	0	1 (6)	3 (9)	0
Mild	0	0	0	0	0	0	2	0
Moderate	0	0	0	0	0	1	1	0
Severe	0	0	0	0	0	0	0	0
Week 12 Dose, n (%)	9 (13)	6 (18)	1 (6)	1 (6)	3 (18)	3 (18)	3 (9)	1 (3)
Mild	4	2	1	1	1?	1	2	1
Moderate	5	4	0	0	1?	2	1	0
Severe	0	0	0	0	0	0	0	0
Any Dose (Weeks 0–24), n (%)	17 (25)	16 (47)	5 (31)	8 (50)	10 (59)	7 (41)	20 (63)	22 (69)

AE, adverse event; CD, conditioning dose, q12w, every 12 weeks

Note: AEs included in this display were selected based on a clinical review of all injection-related AEs observed in the study. <sup>a</sup>Patients randomized to placebo group received 3 mg of atumumab at Week 12; <sup>b</sup>to preserve the blind, all randomized patients received a CD of of atumumab 3 mg or placebo at Week 0. Of all patients, half assigned to the 30 mg arm or either of the two 60 mg arms received a 3 mg CD at Week 0 (1 week prior to the assigned dose), and the remaining patients, including those assigned to the 3 mg dose or placebo arms, received a placebo CD; <sup>c</sup>in addition, 1 subject in the of atumumab 60 mg q12w dose group reported cytokine release syndrome following the first dose