

Online-Only Supplemental Tables

eTable 1. Secondary Clinical Outcomes: Additional Relapse Outcomes

eTable 2. Secondary Clinical Outcomes: MSFC (and components), LCLA and FAMS

eTable 3. Secondary Imaging Outcomes: Volumetric Outcomes

eTable 4. Secondary Imaging Outcomes: Lesion Count Outcomes

eTable 1. Secondary Clinical Outcomes: Additional Relapse Outcomes

Outcome	Vitamin D <sub>3</sub> 600 IU/day (n=82)	Vitamin D <sub>3</sub> 5000 IU/day (n=83)	Hazard Ratio (HR; 95% CI)	p-value
Proportion with Confirmed or Probable Relapse at 96 Weeks	0.43 (0.31, 0.53)	0.49 (0.37, 0.59)	1.21 (0.75, 1.94)	0.43
Annualized Relapse Rate (confirmed relapses only; 95% CI)	0.20 (0.11, 0.35)	0.34 (0.20, 0.56)	1.70 (0.97, 2.97)	0.06
Annualized Relapse Rate (confirmed or probable relapses; 95% CI)	0.28 (0.17, 0.46)	0.44 (0.28, 0.70)	1.58 (0.98, 2.56)	0.06
Rate of Confirmed Relapses Requiring Steroids	0.15 (0.08, 0.30)	0.28 (0.15, 0.51)	1.80 <sup>a</sup> (0.94, 3.35)	0.07

Abbreviation: CI (Confidence Interval)

<sup>a</sup> Relative Risk (RR) and 95% CI

eTable 2. Secondary Clinical Outcomes: MSFC (and components), LCLA and FAMS

Outcome	Vitamin D <sub>3</sub> 600 IU/day (n=82)	Vitamin D <sub>3</sub> 5000 IU/day (n=83)	Mean Difference in Outcome Changes between Dose Groups (95% CI)	p-value
Change in MSFC Z-score, mean (95% CI)	0.05 (0.02, 0.079)	0.022 (-0.006, 0.050)	-0.03 (-0.07, 0.01)	0.16
Change in Timed 25-foot walk test <sup>a</sup> geometric mean (95% CI)	1.02 (1.00, 1.04)	1.01 (0.99, 1.03)	0.99 <sup>a</sup> (0.96, 1.01)	0.35
Change in 9-hole peg test <sup>a</sup> geometric mean (95% CI)	0.98 (0.97, 0.99)	1.00 (0.99, 1.01)	1.02 <sup>a</sup> (1.00, 1.03)	0.01
Change in PASAT-3 second test score, mean (95% CI)	1.15 (0.53, 1.76)	0.78 (0.16, 1.41)	1.02 (-1.29, 0.41)	0.41
Change in binocular 2.5% LCLA, mean (95% CI)	0.82 (-0.08, 1.71)	1.09 (0.20, 1.99)	0.28 (-0.99, 1.54)	0.67
Change in overall FAMS score, mean (95% CI)	-0.78 (-2.38, 0.82)	-2.29 (-3.89, -0.70)	-1.51 (-3.77, 0.75)	0.19

Abbreviations: MSFC (Multiple Sclerosis Functional Composite); PASAT (Paced Auditory Serial Addition Test); LCLA (low-contrast letter acuity); FAMS (Functional Assessment of Multiple Sclerosis); CI (Confidence Interval)

<sup>a</sup> Geometric mean ratio and 95% CI

eTable 3. Secondary Imaging Outcomes: Volumetric Outcomes

Volumetric Outcome	Vitamin D <sub>3</sub> 600 IU/day (n=78)	Vitamin D <sub>3</sub> 5000 IU/day (n=82)	Mean Difference in Outcome Changes between Dose Groups (95% CI)	p-value
Change in normalized brain parenchymal volume (%), mean (95% CI)	-0.26 (-0.75, 0.23)	-0.78 (-1.25, -0.31)	-0.52 (-1.20, 0.16)	0.13
Change in normalized grey matter volume (%), mean (95% CI)	-0.12 (-0.71, 0.47)	-0.82 (-1.39, -0.26)	-0.70 (-1.52, 0.12)	0.09
Change in T2 lesion volume geometric mean (95% CI)	1.03 (0.98, 1.08)	1.09 (1.04, 1.15)	1.06 <sup>a</sup> (0.99, 1.14)	0.12

Abbreviation: CI (Confidence Interval)

<sup>a</sup> Geometric mean ratio and 95% CI

eTable 4. Secondary Imaging Outcomes: Lesion Count Outcomes

Lesion Count Outcome	Vitamin D <sub>3</sub> 600 IU/day (n=78)	Vitamin D <sub>3</sub> 5000 IU/day (n=82)	Rate Ratio Comparing Dose Groups (95% CI)	p-value
Rate of new or enlarged T2 lesions, mean (95% CI)	1.96 (1.17, 3.30)	2.89 (1.79, 4.65)	1.47 (0.88, 2.46)	0.14
Rate of gadolinium positive (Gd+) enhancing lesions, mean (95% CI)	0.32 (0.10, 0.98)	0.22 (0.08, 0.62)	0.68 (0.22, 2.10)	0.48
Rate of new/enlarged T2 or Gd+ enhancing lesions, mean (95% CI)	2.25 (1.31, 3.84)	3.17 (1.93, 5.19)	1.41 (0.83, 2.39)	0.20

Abbreviation: CI (Confidence Interval)