

Online Supplementary Material

The Paradox of Life Extension with Traditional Cost-Effectiveness Analysis: A Case Study with Duchenne Muscular Dystrophy. *JHEOR*. 2026;13(1):56-62. [doi:10.36469/jheor.2026.156118](https://doi.org/10.36469/jheor.2026.156118)

Figure S1: Markov Traces for Each Treatment in (A) EA Population and (B) ENA Population

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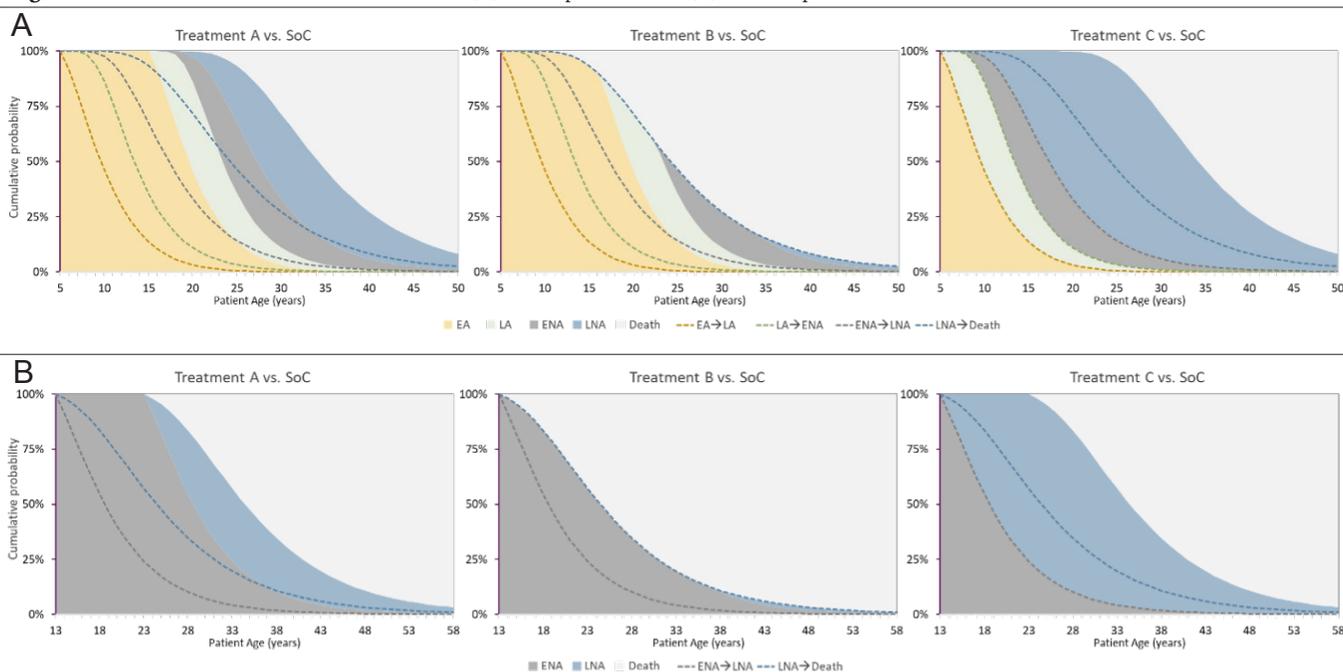
Table S6: EA Results with 10-Year Pause and 1.5% Benefit Discount Rate

Table S7: ENA Results with 10-Year Pause and 1.5% Benefit Discount Rate

This supplementary material has been provided by the authors to give readers additional information about their work.



Figure S1. Markov Traces for Each Treatment for (A) EA Population and (B) ENA Population



Abbreviations: EA, early ambulatory; ENA, early nonambulatory; LA, late ambulatory; LNA, late nonambulatory; SoC, standard of care. EA (A) and ENA (B) populations with a 10-year pause. Dashed lines represent SoC risk curves; shaded areas represent the survival partition for treated patients. Treatment A delays nonfatal progression and mortality; Treatment B delays nonfatal progression only; Treatment C delays mortality only.

Table S1. Treatment C:^a Exclusion of Background Costs

	EA	ENA
QALYs gained vs SoC	0.88	1.10
Incremental costs vs SoC, \$	0	0
Total LY	20.15	16.55
Maximum annual treatment price, \$		
\$50 000/QALY	2179	3325
\$100 000/QALY	4358	6650
\$150 000/QALY	6537	9975
\$200 000/QALY	8716	13 300

Abbreviations: EA, early ambulatory; ENA, early nonambulatory; LY, life-years; QALY, quality-adjusted life-year; SoC, standard of care. Maximum annual treatment price represents the average across the full treatment time, which is different between the EA and ENA populations (20.15 and 16.55 discounted LY, respectively).
^aDelays death only.

Table S2. EA Results with 5-Year Pause

	Treatment A	Treatment B	Treatment C
QALYs gained vs SoC	2.48	2.00	0.47
Incremental costs vs SoC, \$	43 658	-72 046	117 524
Total LY	17.89	15.27	17.89
Maximum annual treatment price, \$			
\$50 000/QALY	4497	11 264	-5252
\$100 000/QALY	11 435	17 811	-3934
\$150 000/QALY	18 373	24 357	-2617
\$200 000/QALY	25 310	30 904	-1299

Abbreviations: EA, early ambulatory; LY, life-years; QALY, quality-adjusted life-year; SoC, standard of care. Maximum annual treatment price represents the average across the full treatment time, which is different between Treatments A and C (17.89 discounted LY) and Treatment B (15.27 discounted LY). Treatment A delays nonfatal progression and mortality; Treatment B delays nonfatal progression only; Treatment C delays mortality only.

Table S3. ENA Results with 5-Year Pause

	Treatment A	Treatment B	Treatment C
QALYs gained vs SoC	0.71	0.10	0.59
Incremental costs vs SoC, \$	103 780	-36 792	147 325
Total LYs	13.72	10.44	13.72
Maximum annual treatment price, \$			
\$50 000/QALY	-4987	3996	-8584
\$100 000/QALY	-2409	4467	-6431
\$150 000/QALY	169	4938	-4277
\$200 000/QALY	2746	5409	-2123

Abbreviations: ENA, early nonambulatory; LY, life-year; QALY, quality-adjusted life-year; SoC, standard of care.

Maximum annual treatment price represents the average across the full treatment time, which is different between Treatments A and C (13.72 discounted LY) and Treatment B (10.44 discounted LY). Treatment A delays nonfatal progression and mortality; Treatment B delays nonfatal progression only; Treatment C delays mortality only.

Table S4. EA Results with 20-Year Pause

	Treatment A	Treatment B	Treatment C
QALYs gained vs SoC	8.06	4.10	1.53
Incremental costs vs SoC, \$	141 816	-122 514	381 776
Total LYs	23.78	15.27	23.78
Maximum annual treatment price, \$			
\$50 000/QALY	10 992	21 457	-12 835
\$100 000/QALY	27 948	34 890	-9615
\$150 000/QALY	44 903	48 324	-6395
\$200 000/QALY	61 859	61 758	-3175

Abbreviations: EA, early ambulatory; LY, life-year; QALY, quality-adjusted life-year; SoC, standard of care.

Maximum annual treatment price represents the average across the full treatment time, which is different between Treatments A and C (23.78 discounted LYs) and Treatment B (15.27 discounted LYs). Treatment A delays nonfatal progression and mortality; Treatment B delays nonfatal progression only; Treatment C delays mortality only.

Table S5. ENA Results with 20-Year Pause

	Treatment A	Treatment B	Treatment C
QALYs gained vs SoC	2.30	0.13	1.92
Incremental costs vs SoC, \$	337 124	-48 573	478 581
Total LYs	21.10	10.44	21.10
Maximum annual treatment price, \$			
\$50 000/QALY	-10 532	5276	-18 131
\$100 000/QALY	-5088	5897	-13 582
\$150 000/QALY	356	6519	-9033
\$200 000/QALY	5800	7141	-4485

Abbreviations: ENA, early nonambulatory; LY, life-year; QALY, quality-adjusted life-year; SoC, standard of care.

Maximum annual treatment price represents the average across the full treatment time, which is different between Treatments A and C (21.10 discounted LYs) and Treatment B (10.44 discounted LYs). Treatment A delays nonfatal progression and mortality; Treatment B delays nonfatal progression only; Treatment C delays mortality only.

Table S6. EA Results with 10-Year Pause and 1.5% Benefit Discount Rate

	Treatment A	Treatment B	Treatment C
QALYs gained vs SoC	5.76	4.08	1.24
Incremental costs vs SoC, \$	81 317	-109 694	218 901
Total LYs	24.68	17.78	24.68
Maximum annual treatment price, \$			
\$50 000/QALY	8373	17 645	-6354
\$100 000/QALY	20 041	29 118	-3837
\$150 000/QALY	31 710	40 592	-1320
\$200 000/QALY	43 378	52 065	1197

Abbreviations: EA, early ambulatory; LY, life-year; QALY, quality-adjusted life-year; SoC, standard of care.

Maximum annual treatment price represents the average across the full treatment time, which is different between Treatments A and C (24.68 discounted LY) and Treatment B (17.78 discounted LY). Treatment A delays nonfatal progression and mortality; Treatment B delays nonfatal progression only; Treatment C delays mortality only.

Table S7. ENA Results with 10-Year Pause and 1.5% Benefit Discount Rate

	Treatment A	Treatment B	Treatment C
QALYs gained vs SoC	1.65	0.15	1.39
Incremental costs vs SoC, \$	193 301	-47 347	274 407
Total LYs	19.48	11.74	19.48
Maximum annual treatment price, \$			
\$50 000/QALY	-5699	4668	-10 513
\$100 000/QALY	-1474	5304	-6939
\$150 000/QALY	2751	5940	-3365
\$200 000/QALY	6975	6576	209

Abbreviations: ENA, early nonambulatory; LY, life-year; QALY, quality-adjusted life-year; SoC, standard of care.

Maximum annual treatment price represents the average across the full treatment time, which is different between Treatments A and C (19.48 discounted LY) and Treatment B (11.74 discounted LY). Treatment A delays nonfatal progression and mortality; Treatment B delays nonfatal progression only; Treatment C delays mortality only.