Estimating Healthy Life Expectancies by Level of Education in Mexico using IMaCh

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Introduction

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- Higher level of education has been associated with:
  - reduced periods of morbidity (Crimmins & Saito 2001).
  - lower likelihood of functional limitation in late life (Freedman & Martin 1999).
  - lower hazard of death (Elo & Preston 1996).

Background

- Mexican population experienced an important increase in the level of education after the 1930s (Ham-Chande 2003).
- The opening of the economy to forces of globalization resulted in higher returns to better educated people, penalizing those with less schooling (Frank and Finch 2004).
- Mexico's old-age health dynamics are characterized by chronic conditions (currently dominating the morbidity-mortality patterns) and infectious diseases (residual to an earlier epidemiological regime) (Kohler & Soldo 2004).

Purpose

- In this paper we study how education and sex associate with healthy life expectancy in the Mexican older adult population using a longitudinal dataset.

Data & Methods

- I use two waves of the Mexican Health and Aging Study: 2001-2003.
- The baseline sample included 15,186 people who were nationally representative of the 13 million Mexicans born prior to 1951 with national and urban/rural representation.
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Data & Methods

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- In this paper we analyzed a sample of 13,116 aged 50 or older in 2001.
- Applied the IMaCh approach developed by Nicolas Brouard and Agnès Lièvre - INED.

Measures

- "Disabled" is defined as having at least one difficulty with ADLs (walking, bathing, eating, getting in and out of bed, toileting).
- "Active" is defined as having no difficulties with ADLs.
- Education is categorized into 3 groups based on years of schooling:
  - "No education": zero years of schooling.
  - "Some Elementary education": incomplete elementary school (1 to 5 years of schooling).
  - "Elementary +": completed elementary school or more.

Sample Distribution by Level of Education and Sex: MHAS 2001

	Women		Men	
	N	%	N	%
No ed	1,907	27.32	1,372	22.36
Some elem	2,506	35.90	2,128	34.69
Elem+	2,568	36.79	2,635	42.95

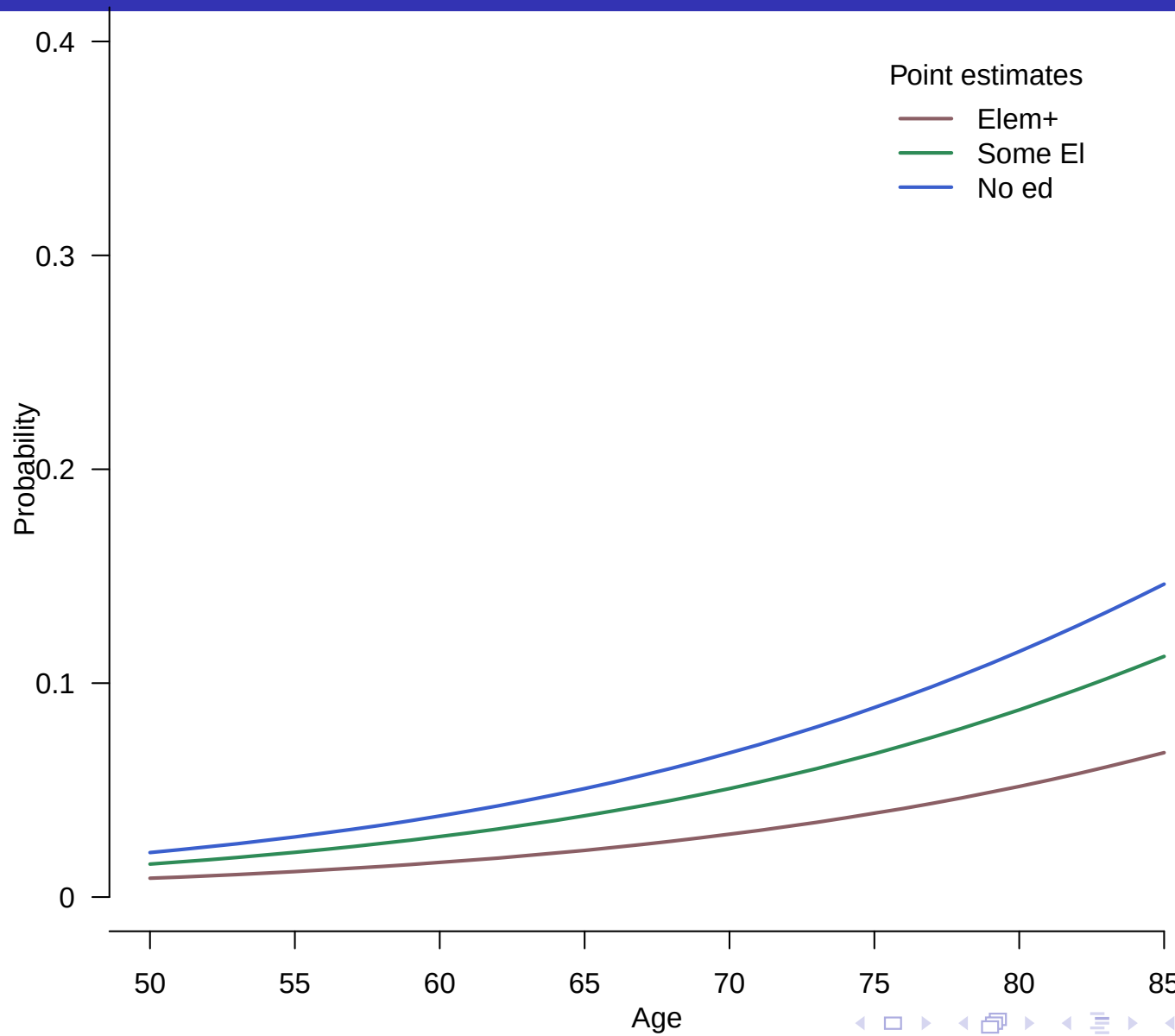
Observed Transitions for Men: MHAS 2001-2003

	Status in 2003						
	Active		Disabled		Death		Total
	N	%	N	%	N	%	N
Active	5,265	85.8	256	4.2	163	2.7	5,684
Disabled	212	3.5	153	2.5	86	1.4	451
Total	5,477	89.3	409	6.7	249	4.1	6,135

Observed Transitions for Women: MHAS 2001-2003

	Status in 2003						
	Active		Disabled		Death		Total
	N	%	N	%	N	%	N
Active	5,674	81.3	431	6.2	133	1.9	6,238
Disabled	384	5.5	262	3.8	97	1.4	743
Total	6,058	86.8	693	9.9	230	3.3	6,981

Estimated Probabilities of Becoming Disabled by Level of Education for Men: `IMaCh results`



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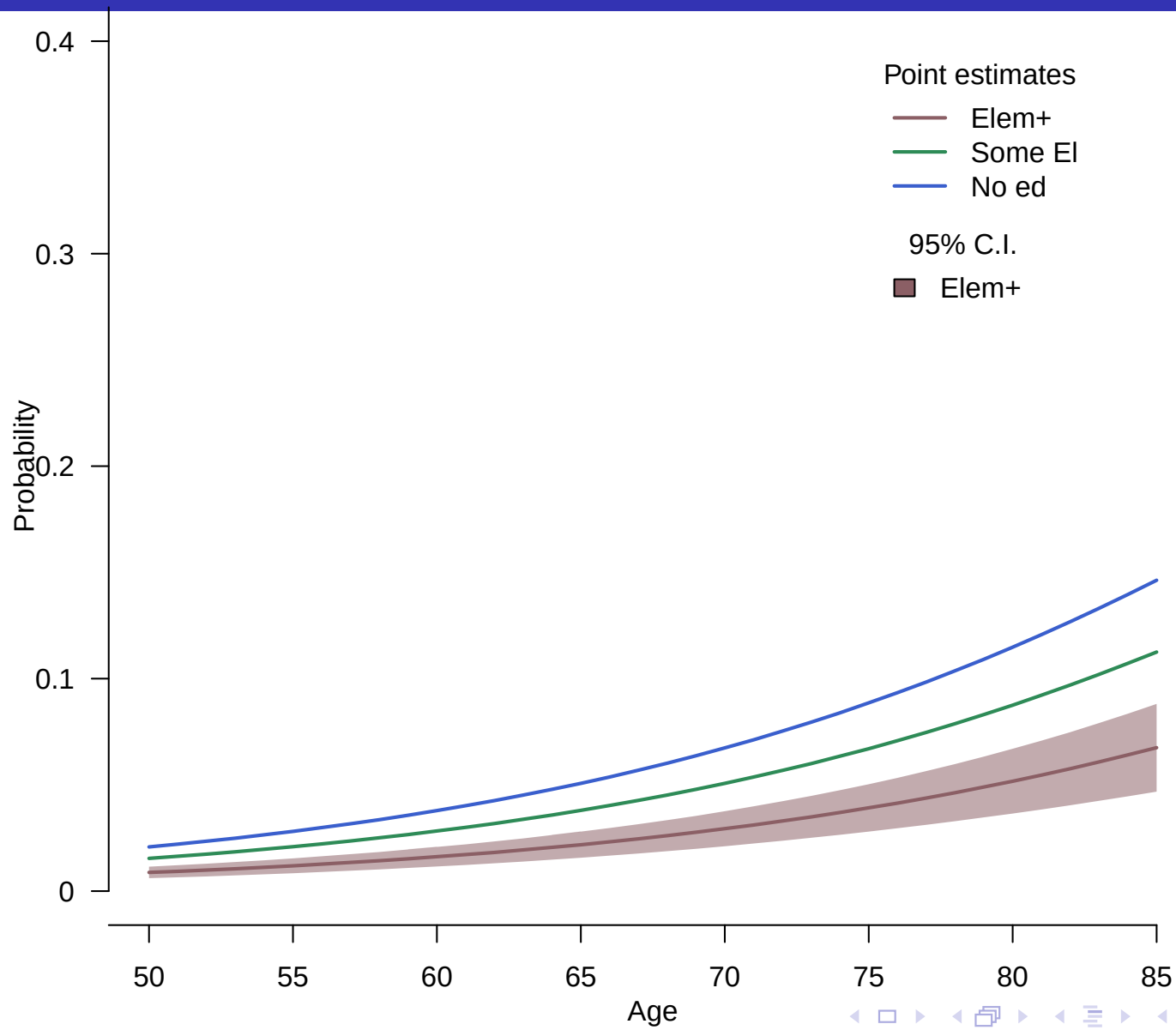

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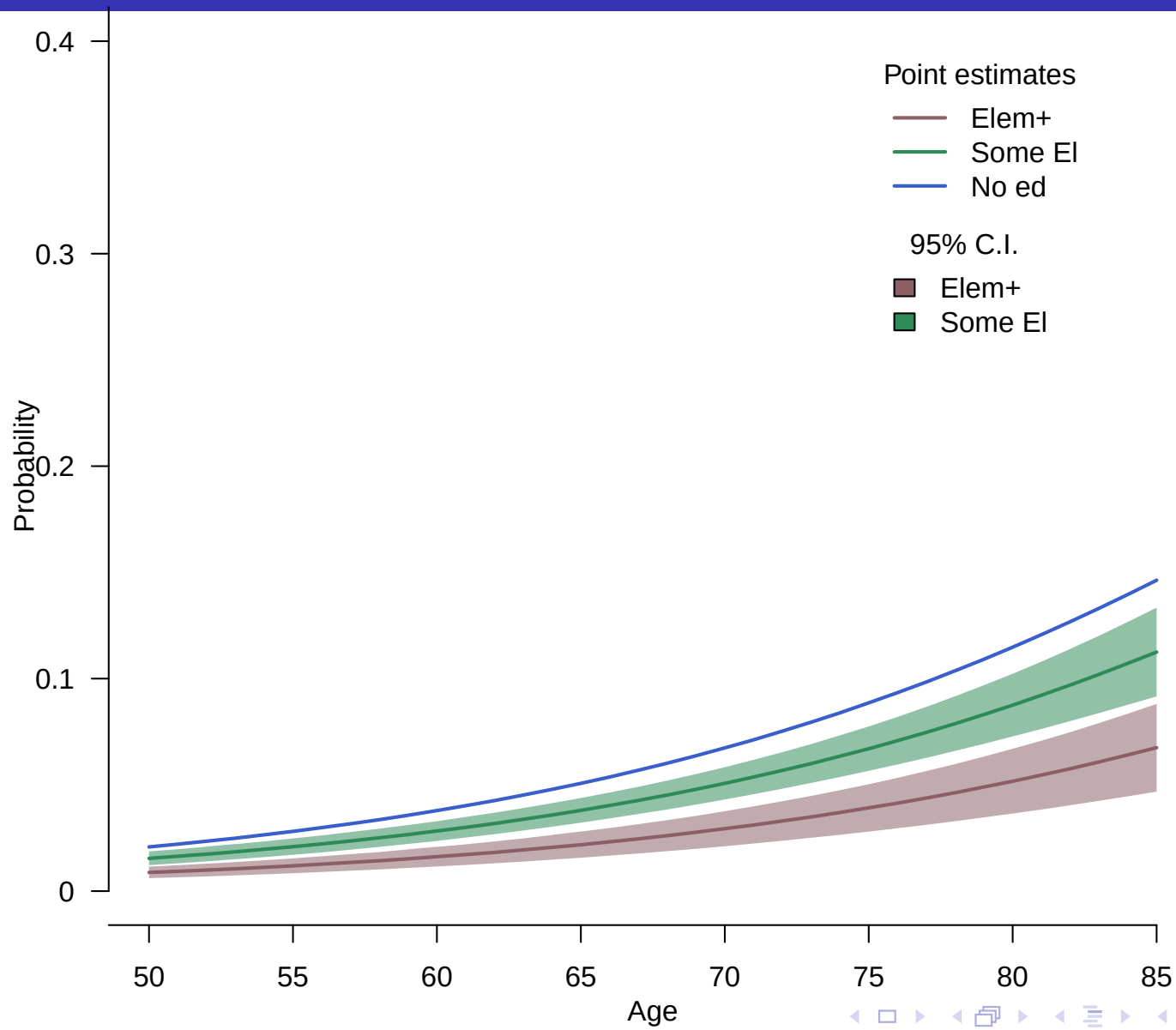

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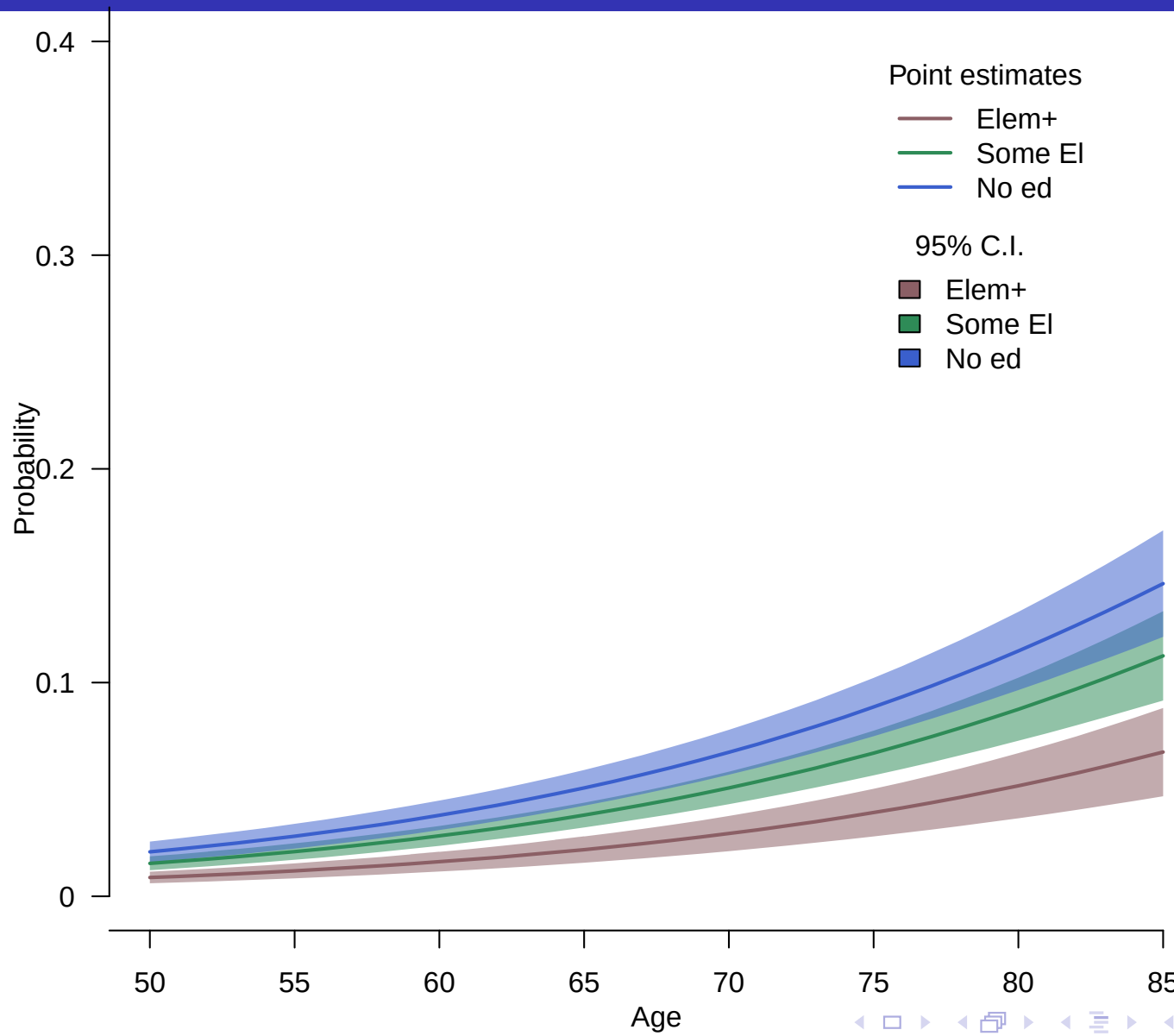

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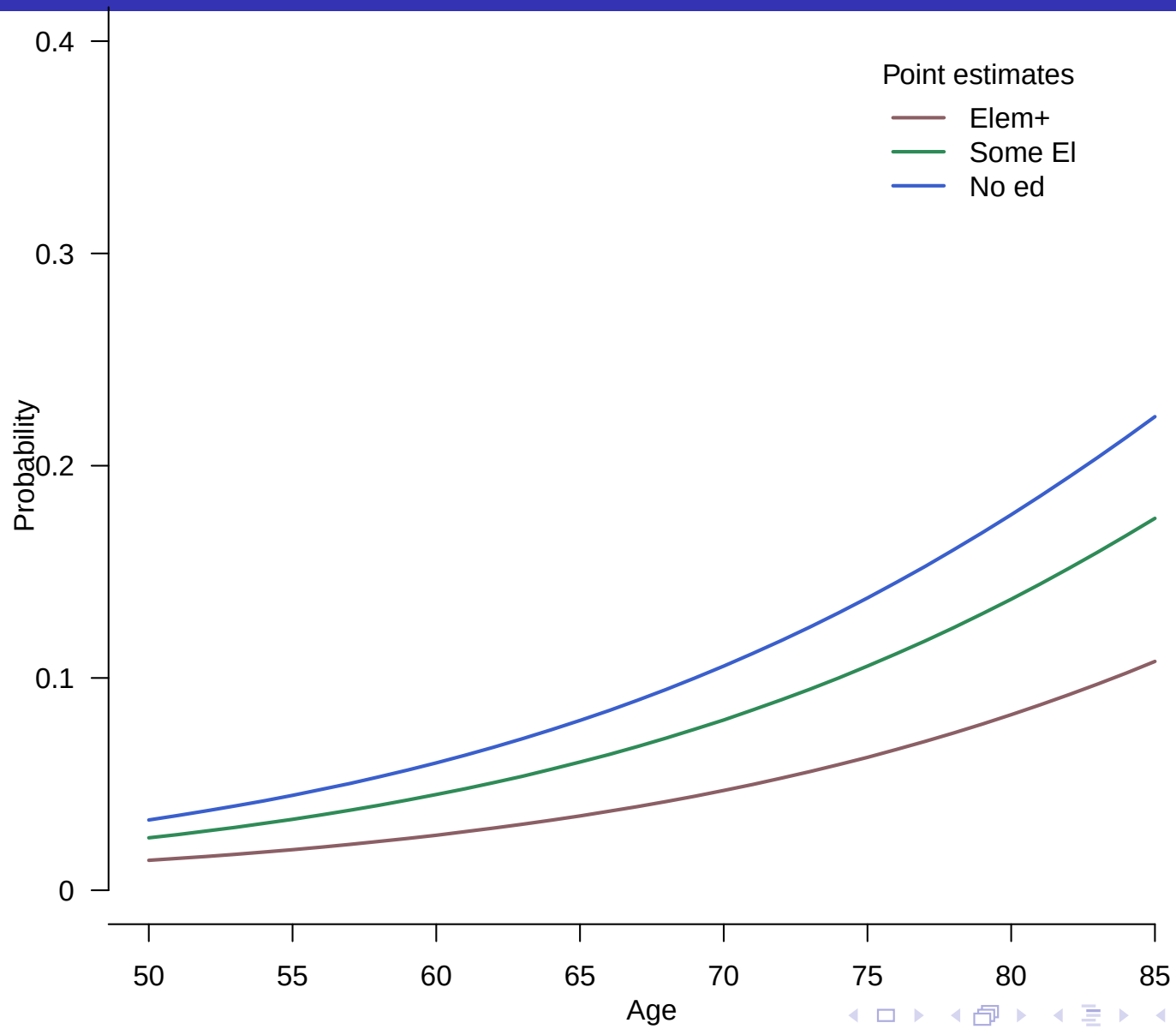

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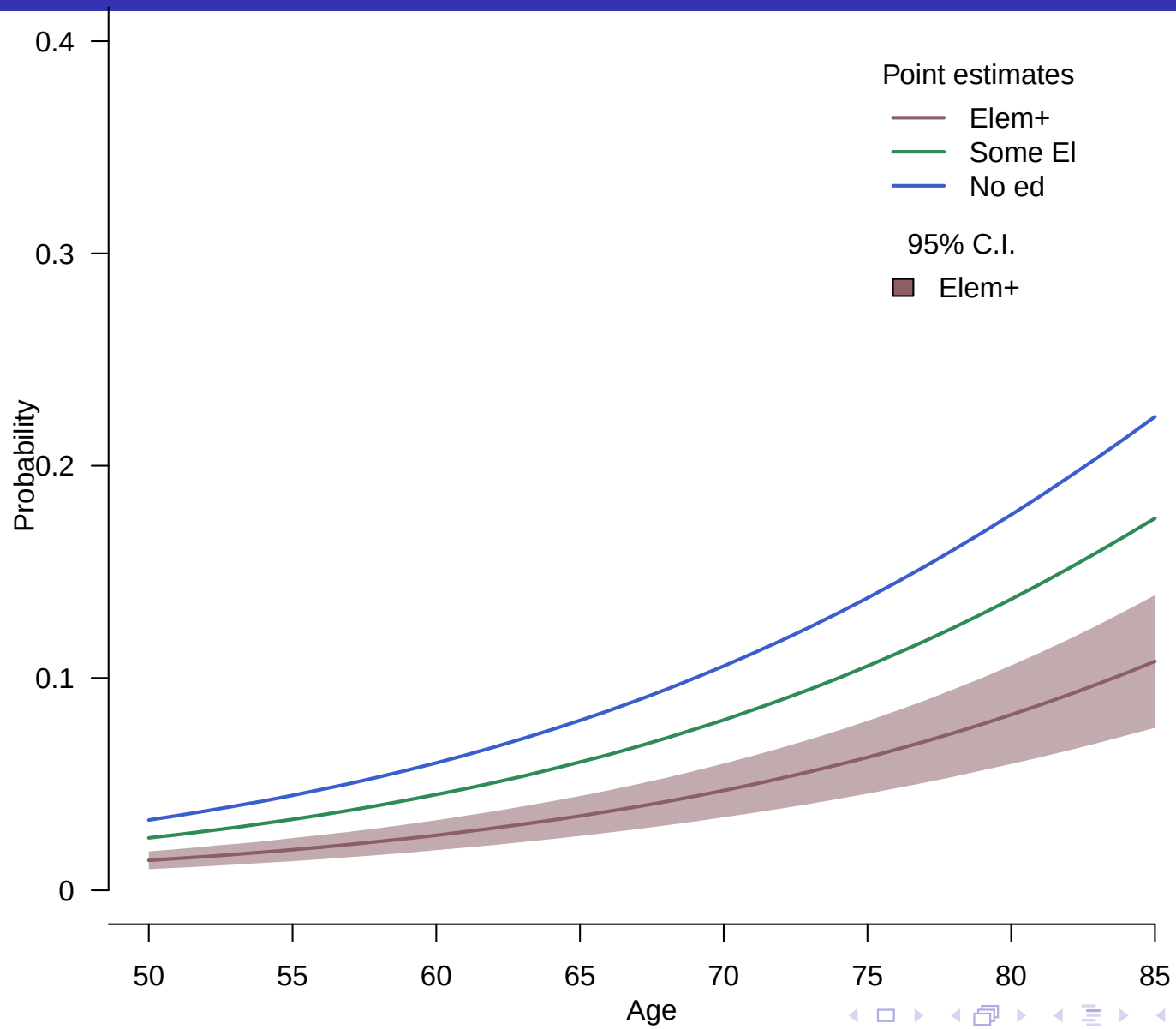

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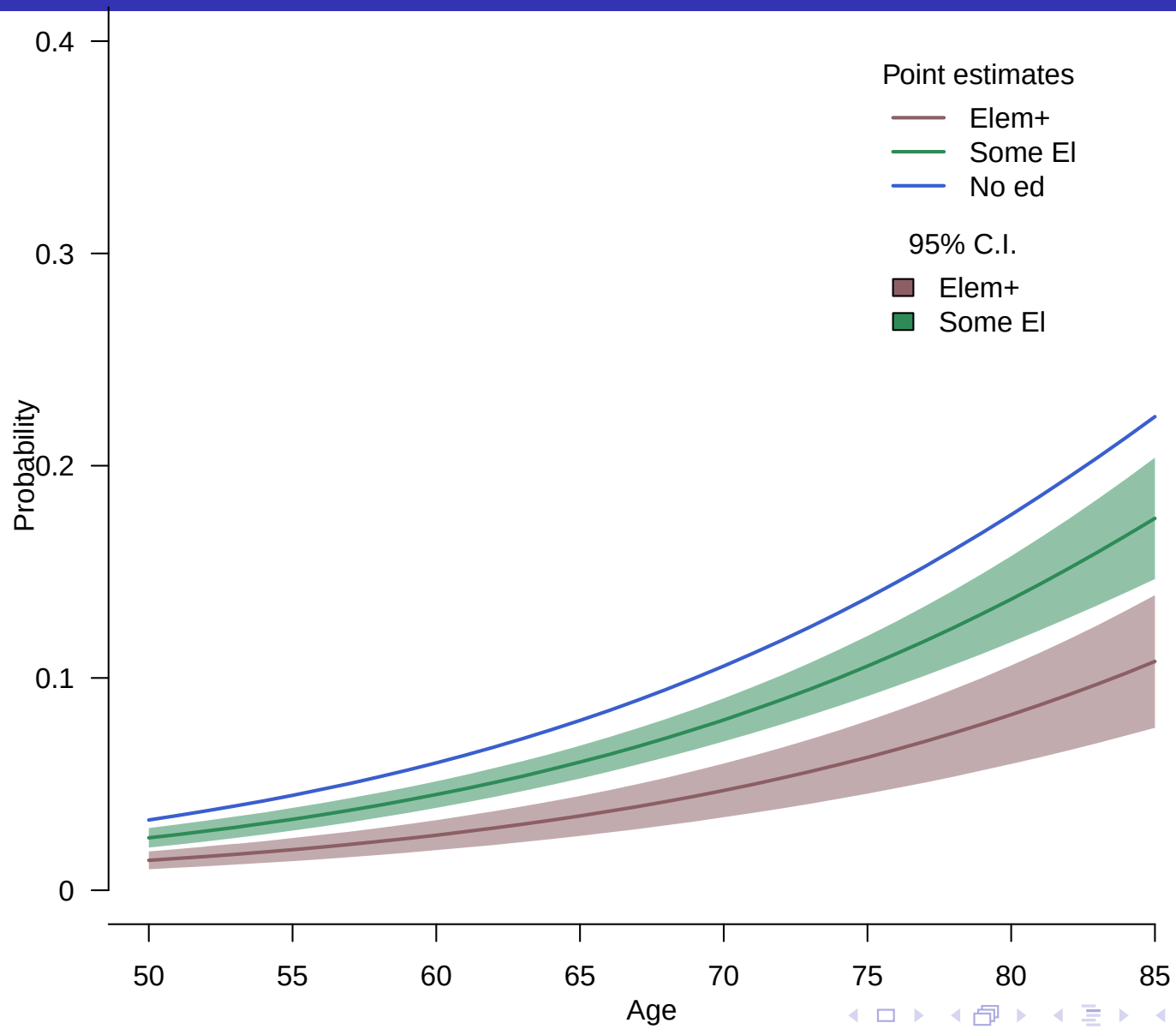

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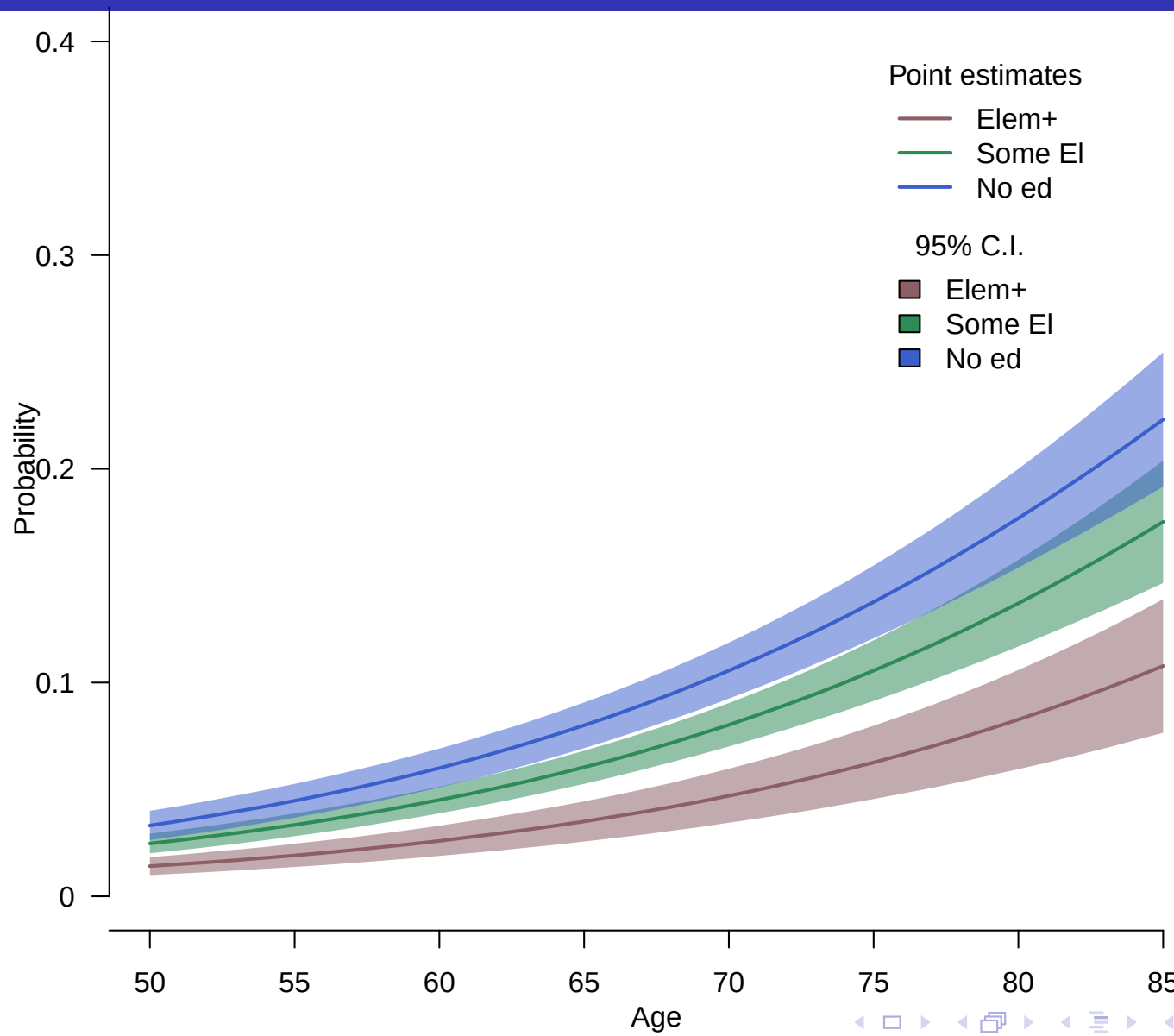
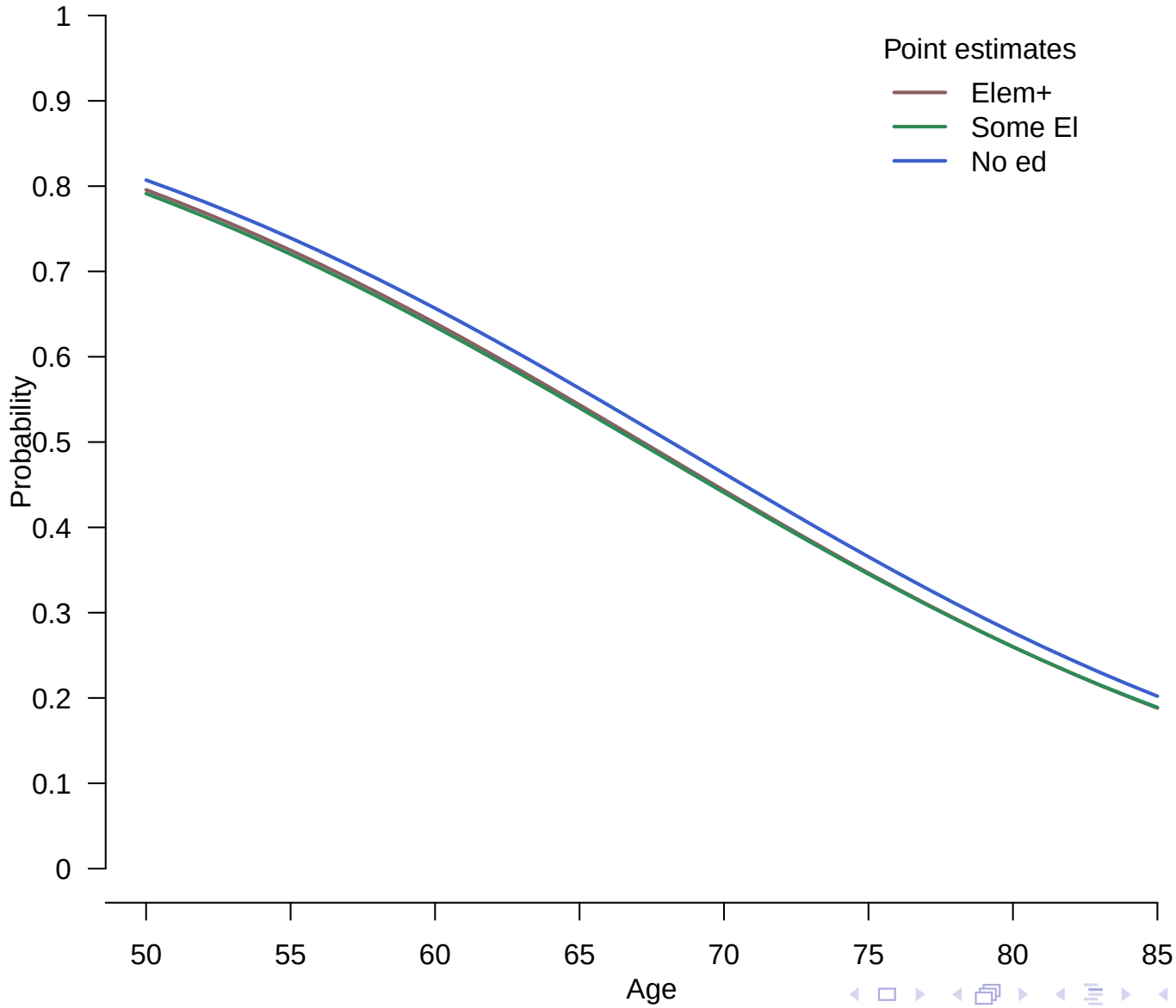


Estimated Probabilities of Recovering from Disability by Level of Education for Men: `IMaCh results`



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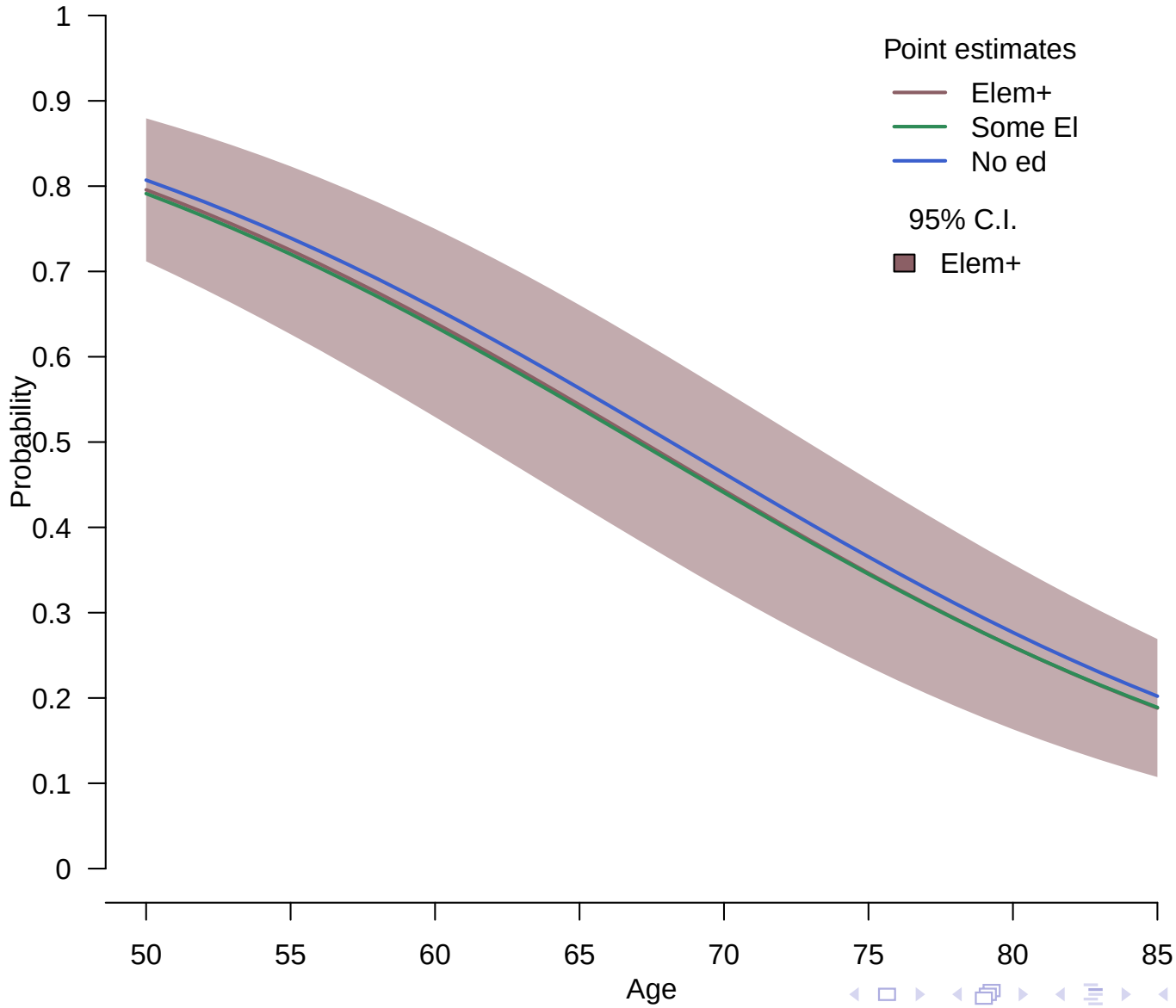

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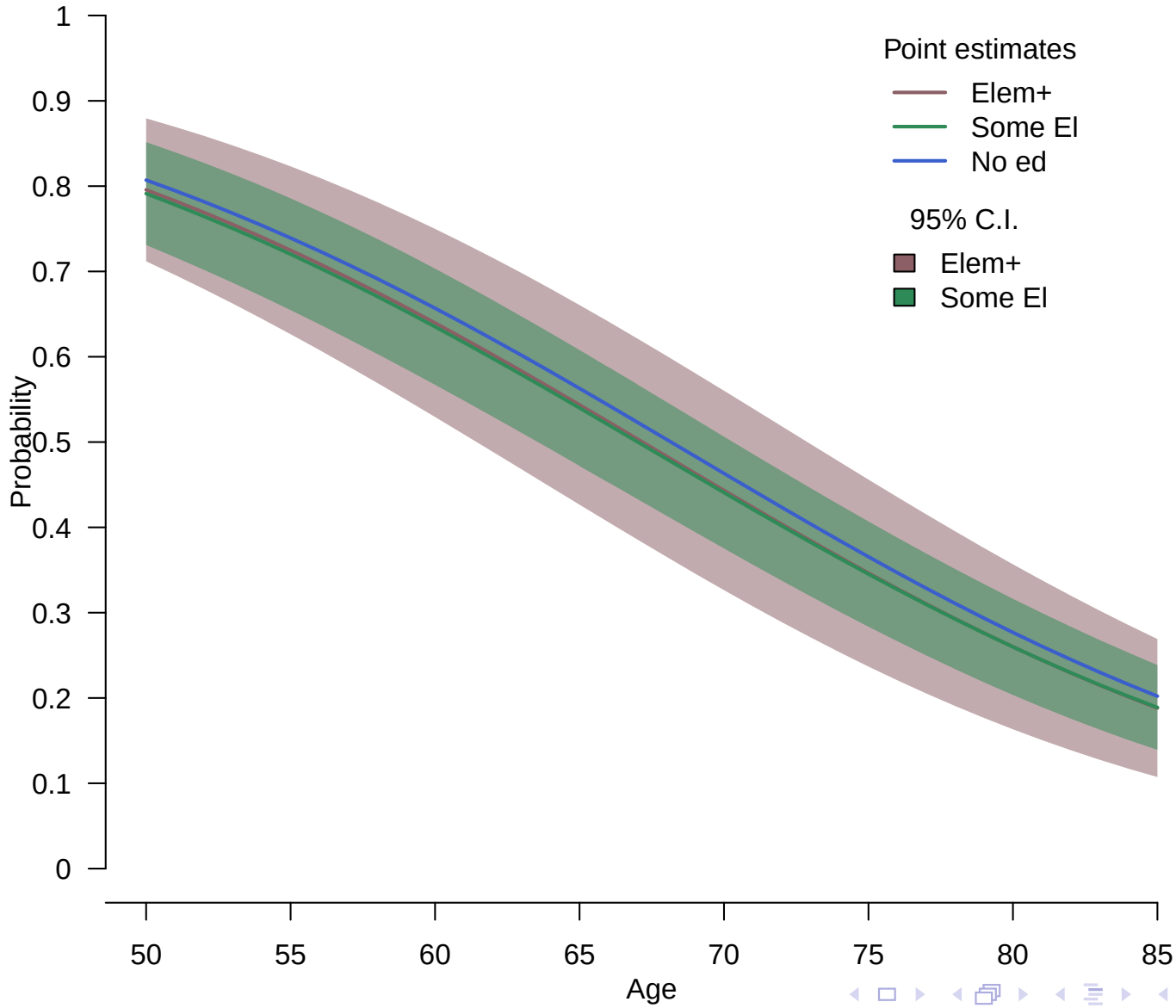

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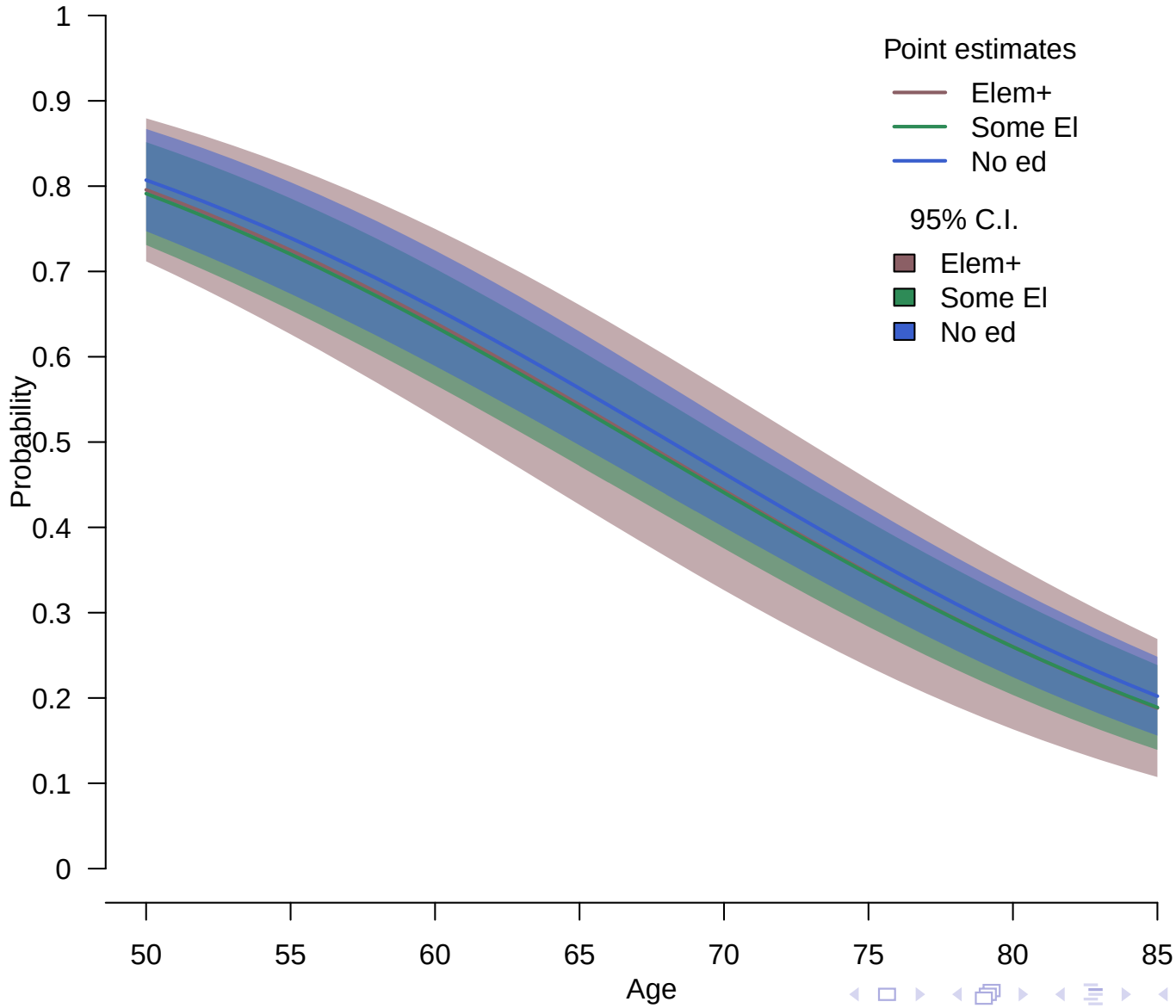

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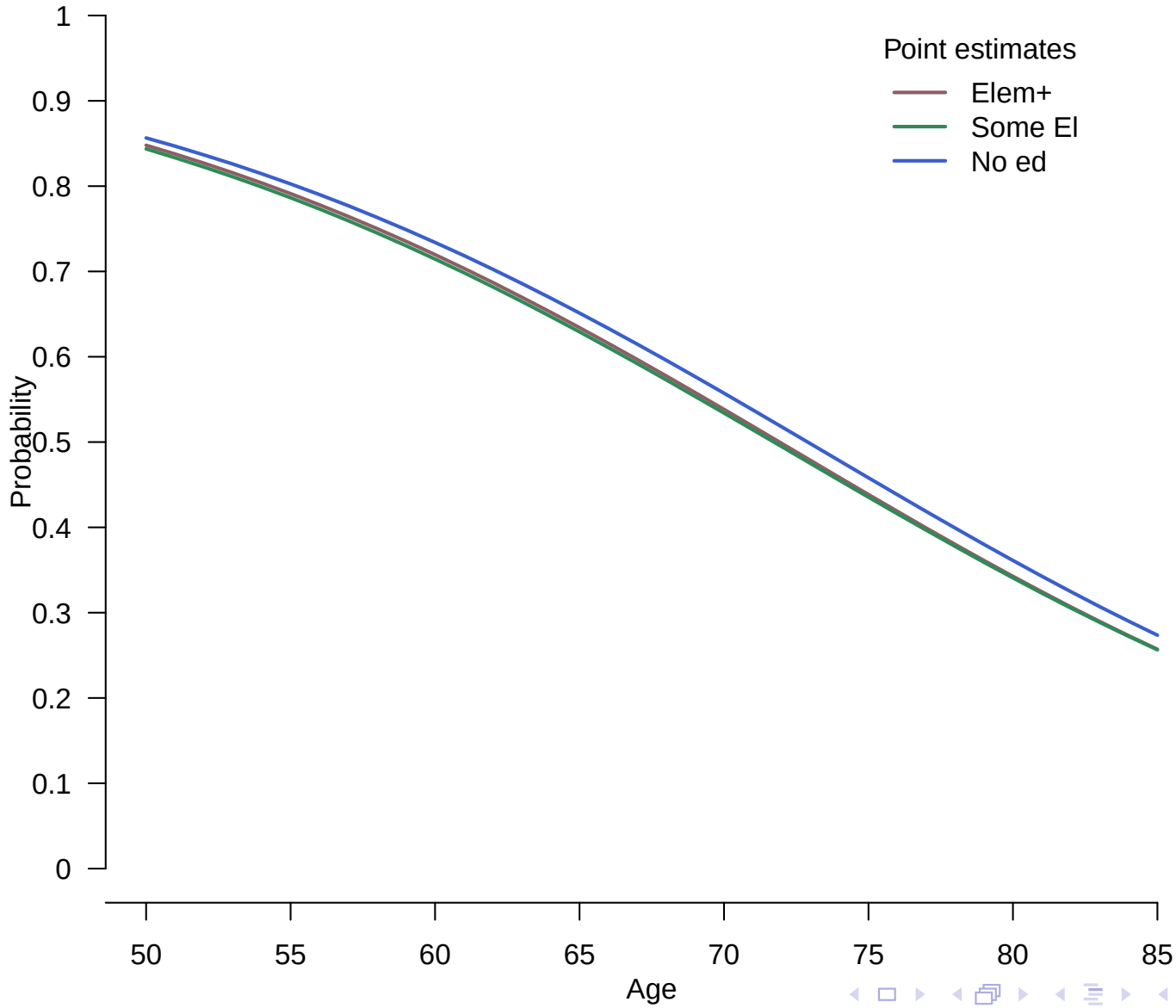

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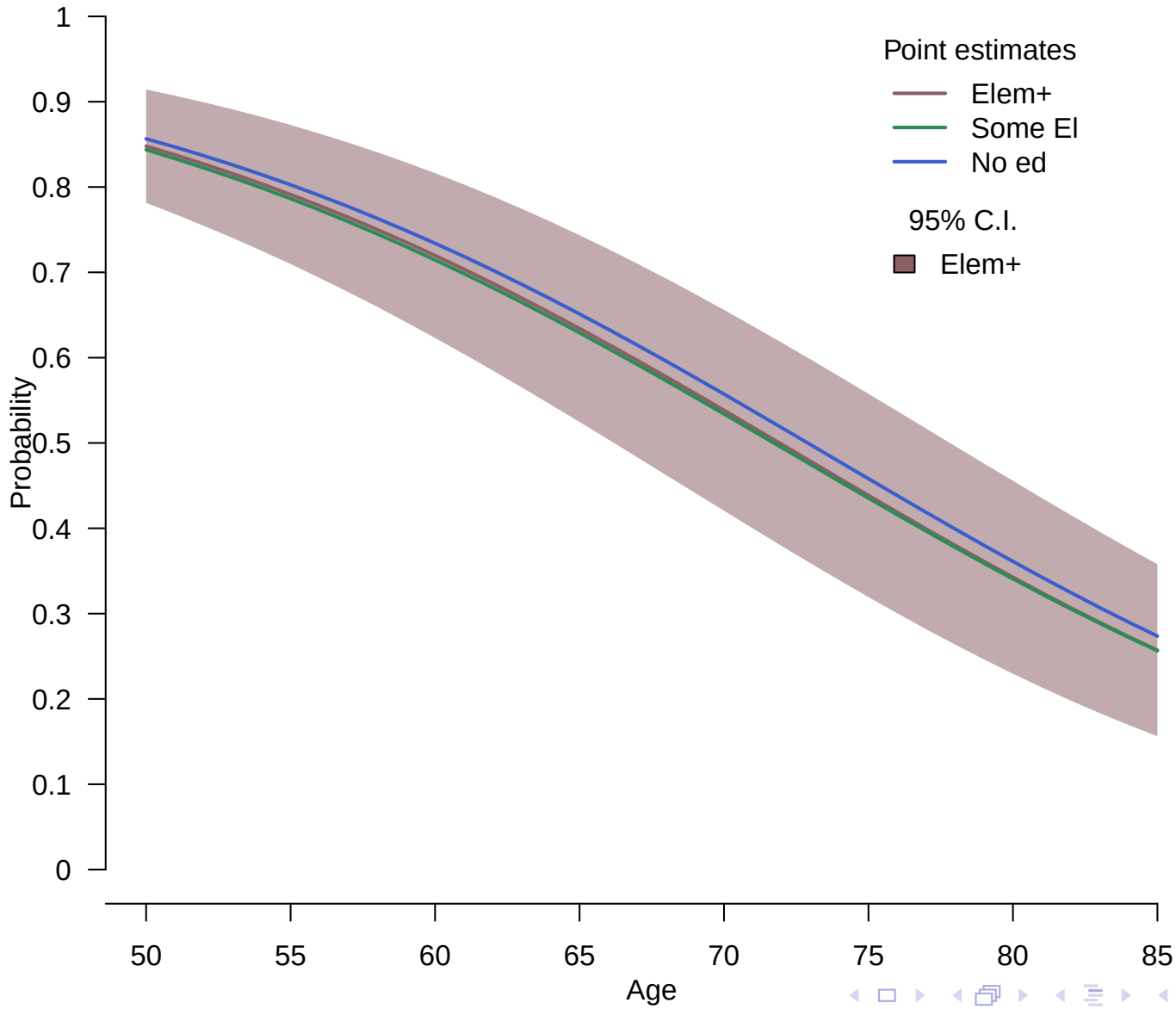

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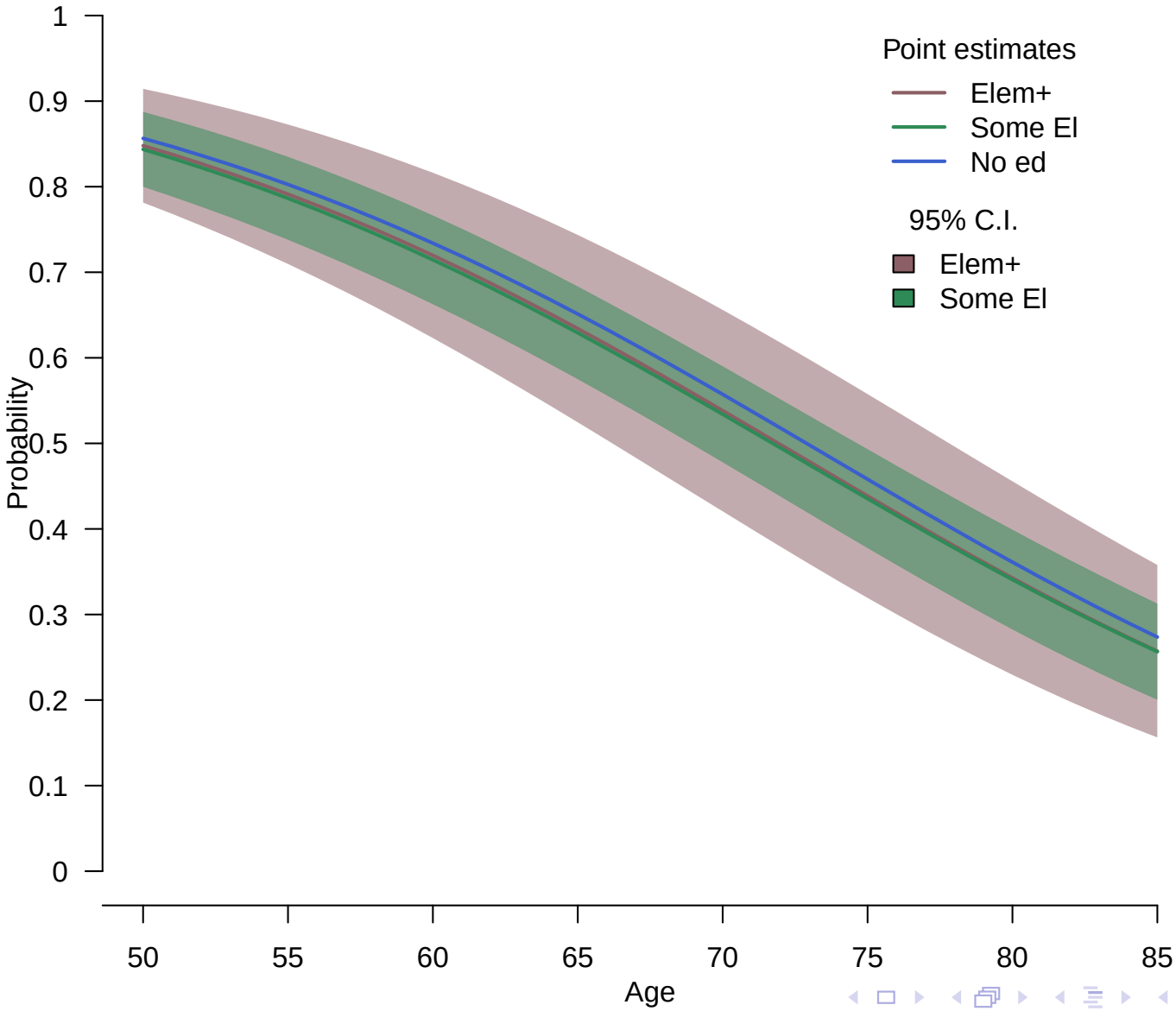

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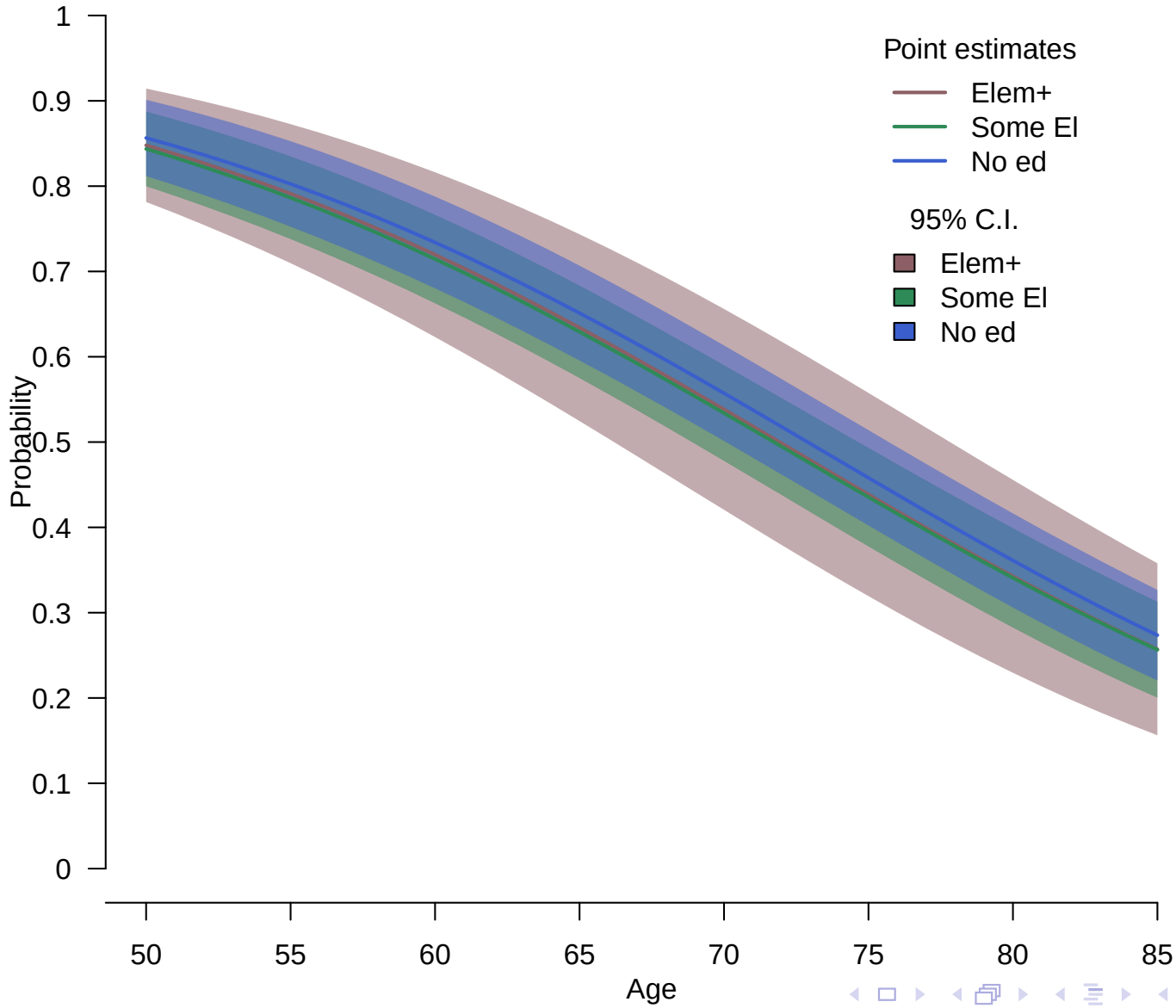
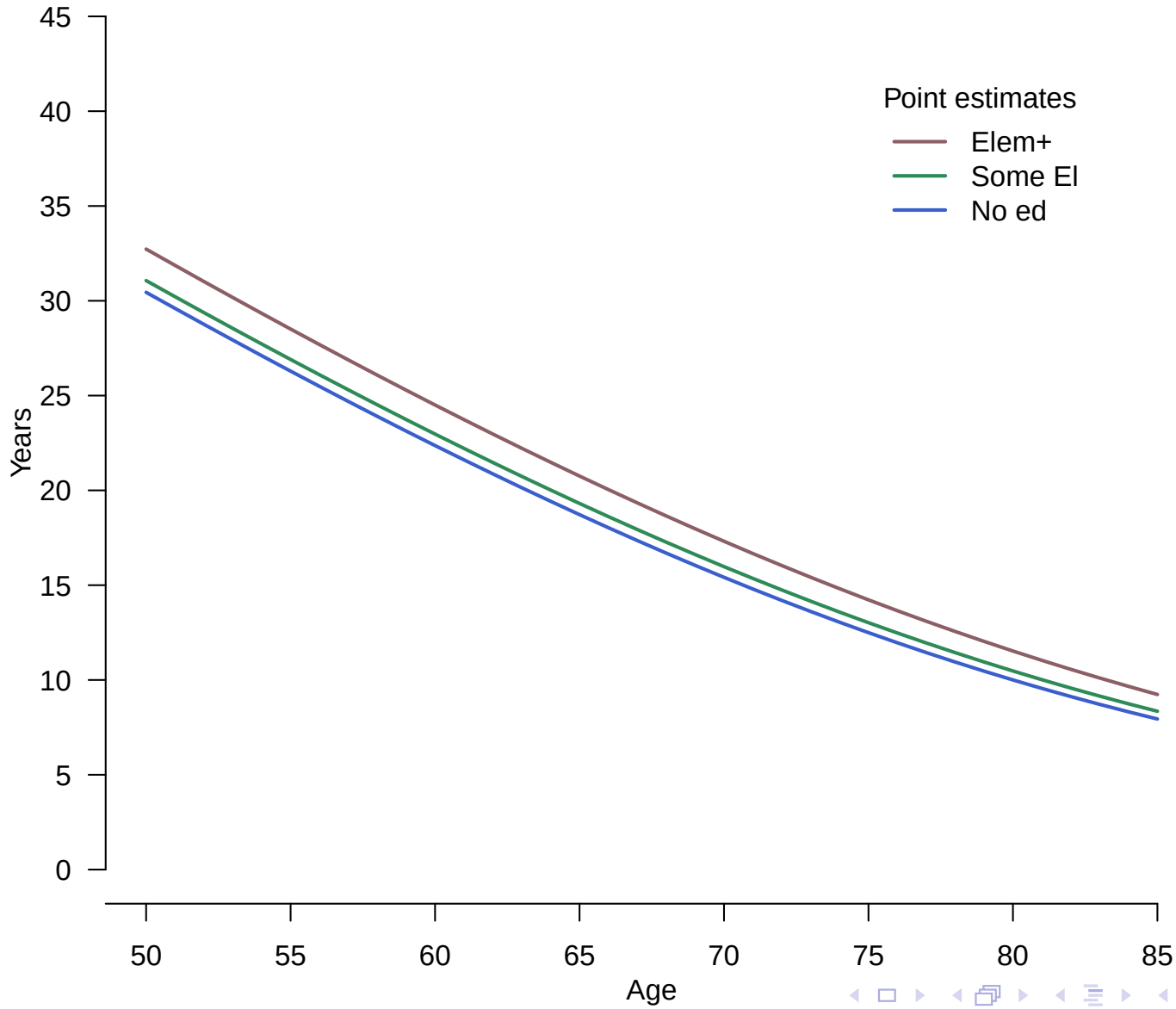


Estimated Total Life Expectancy by Level of Education for Men: IMaCh results



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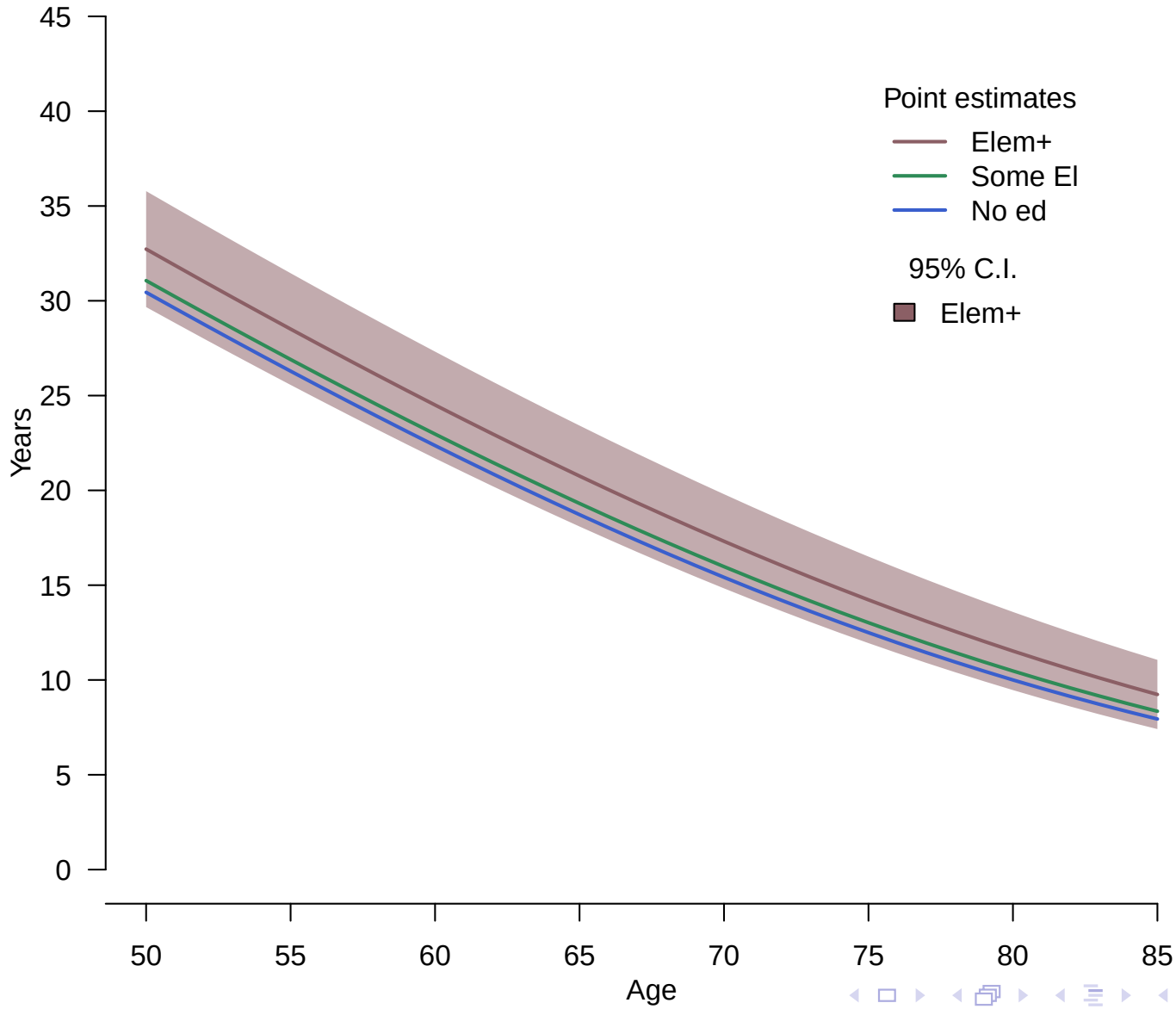

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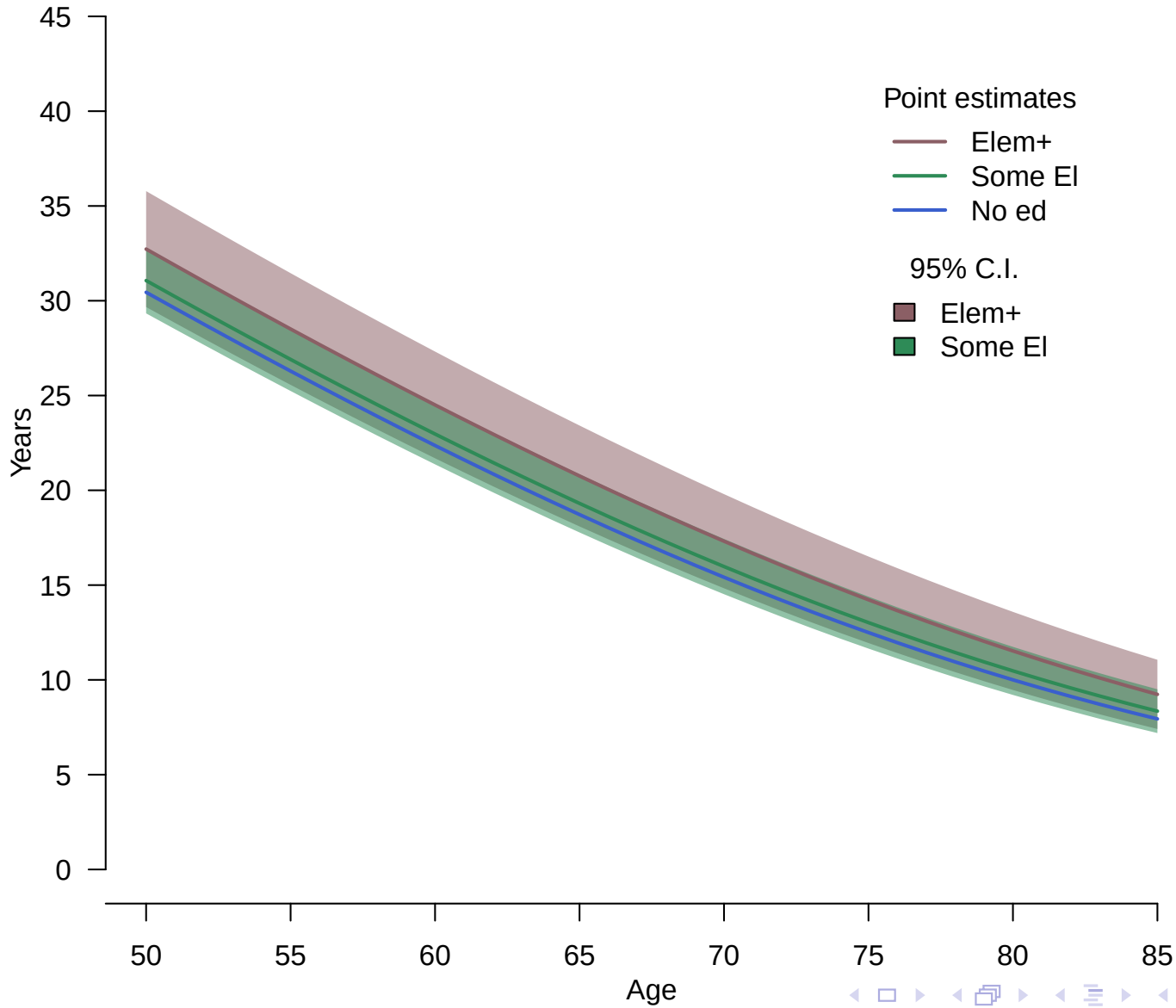

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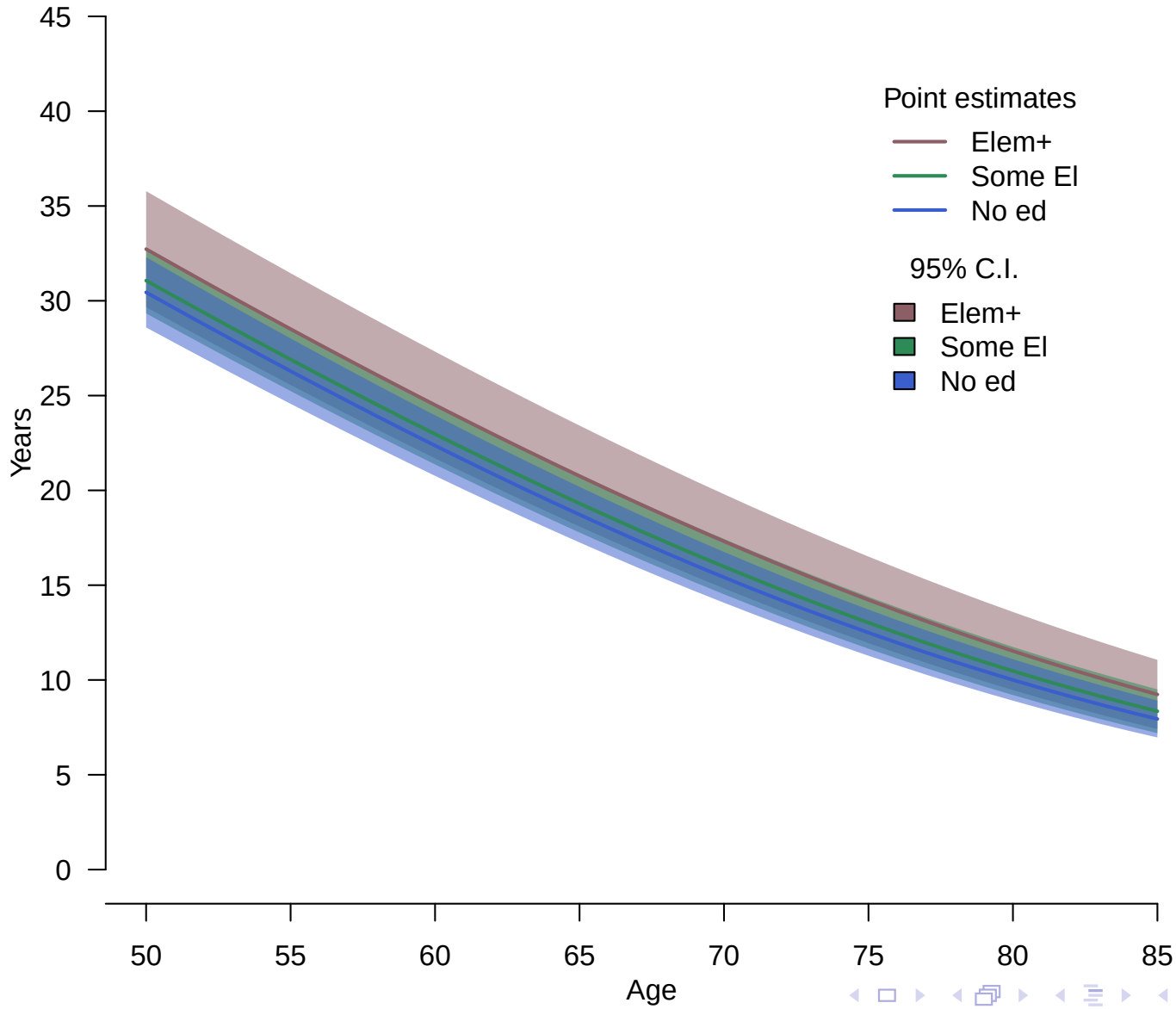

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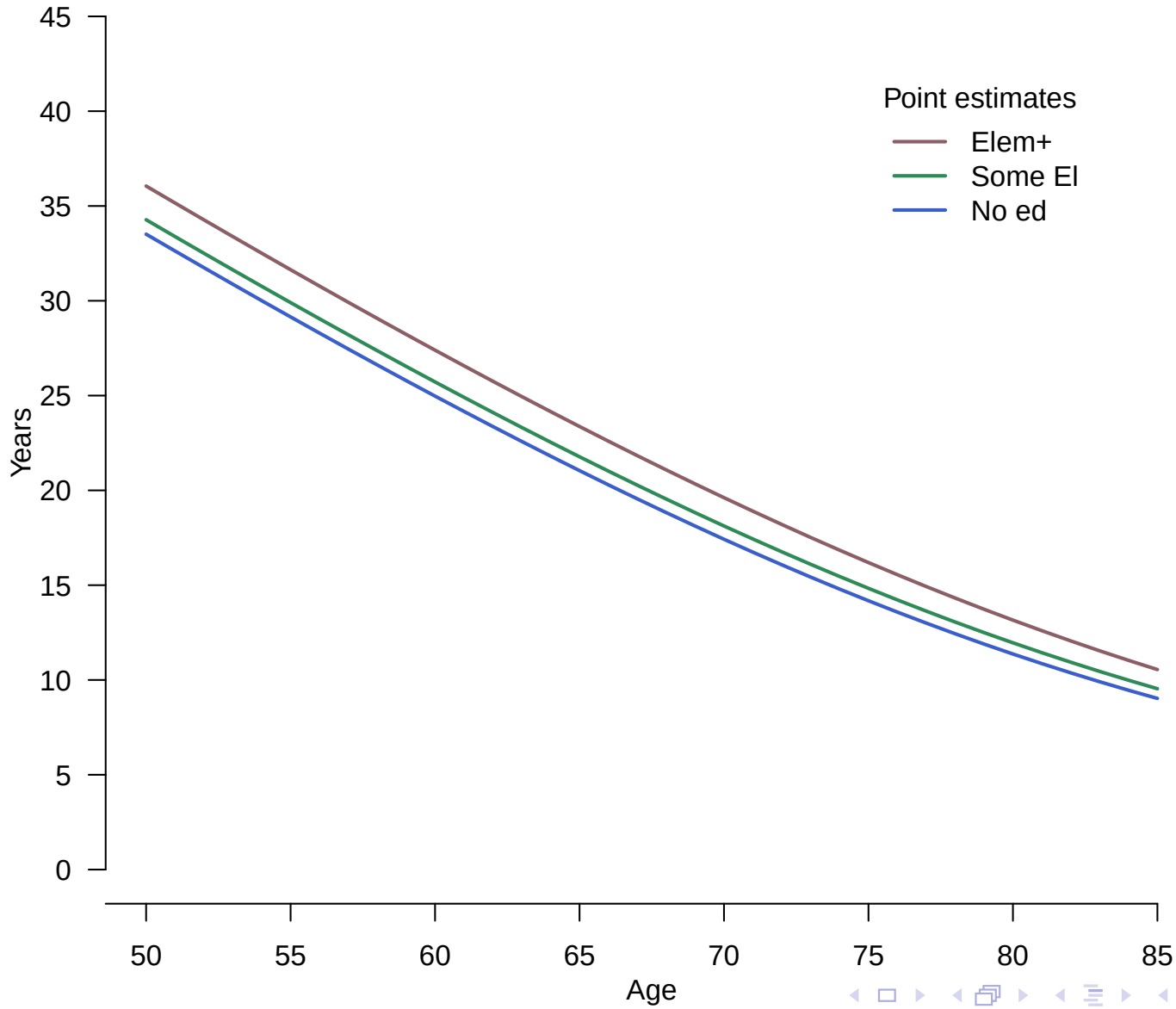

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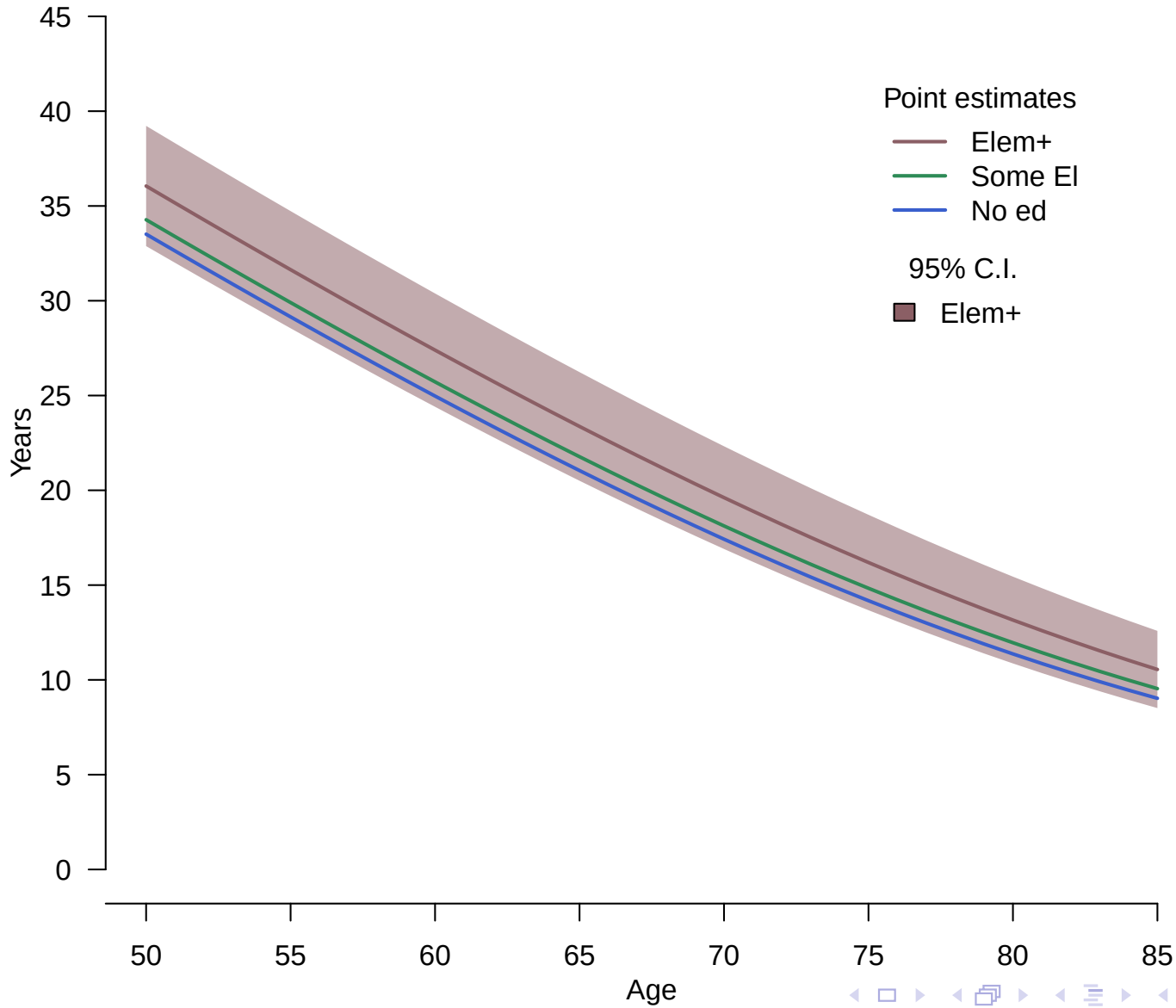

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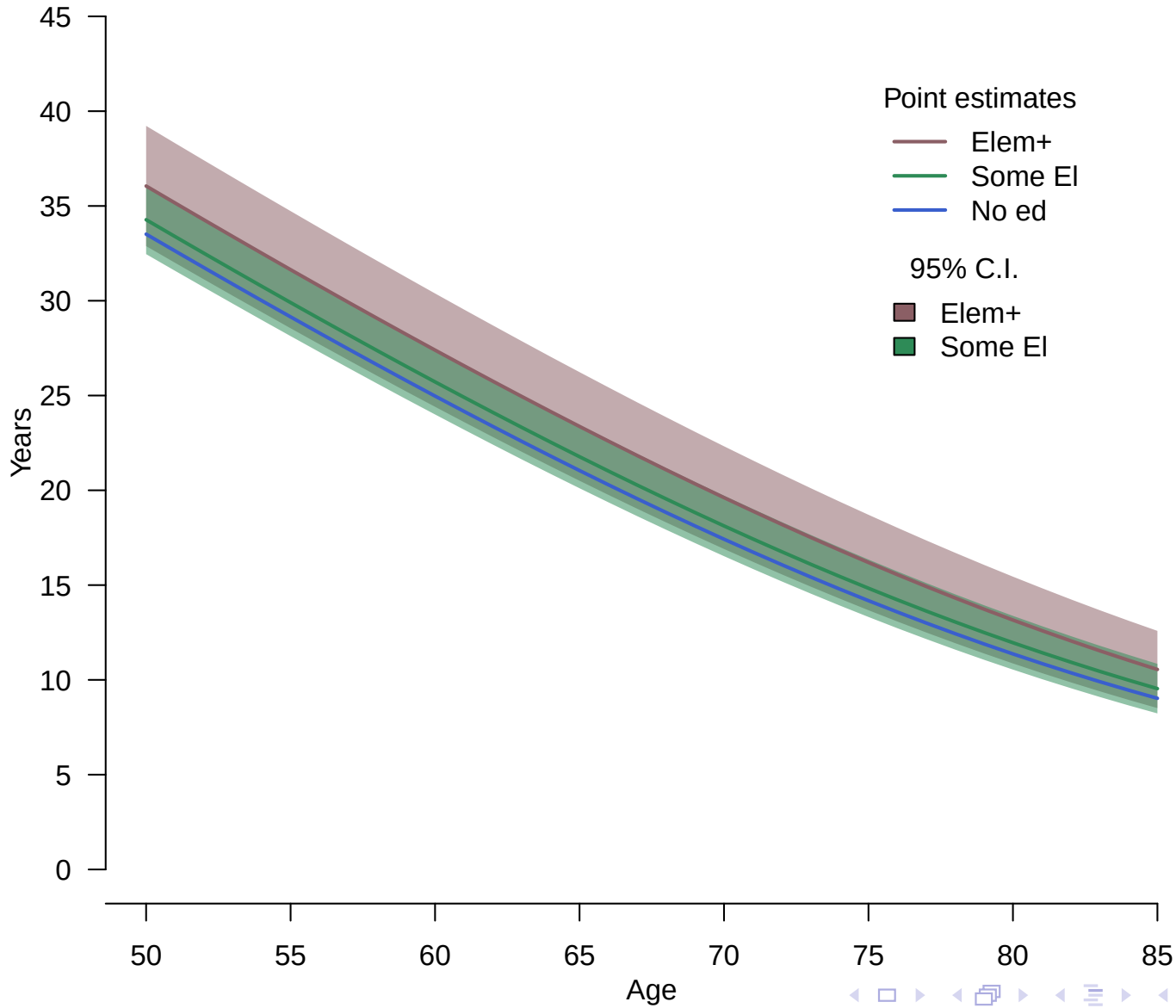

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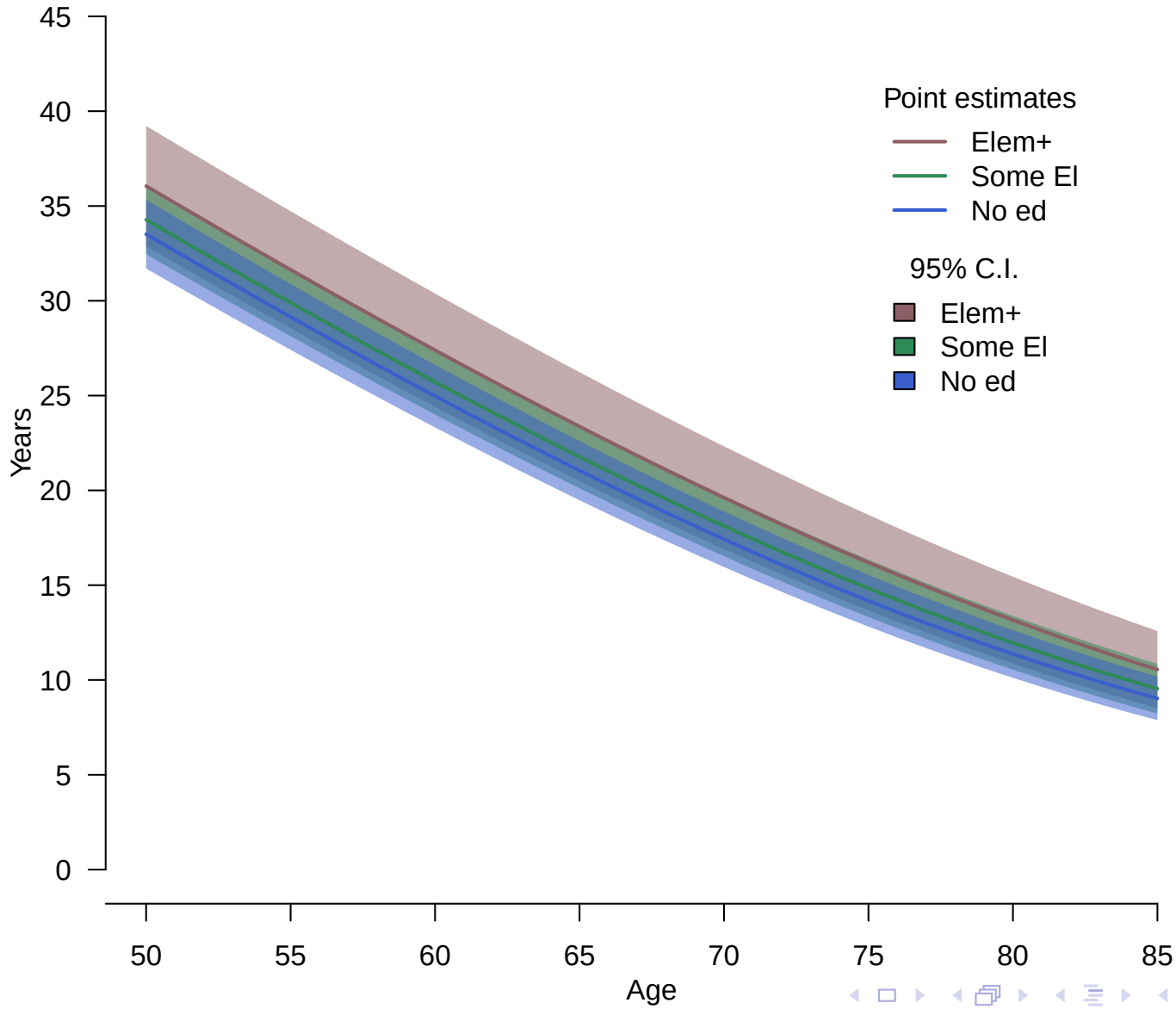

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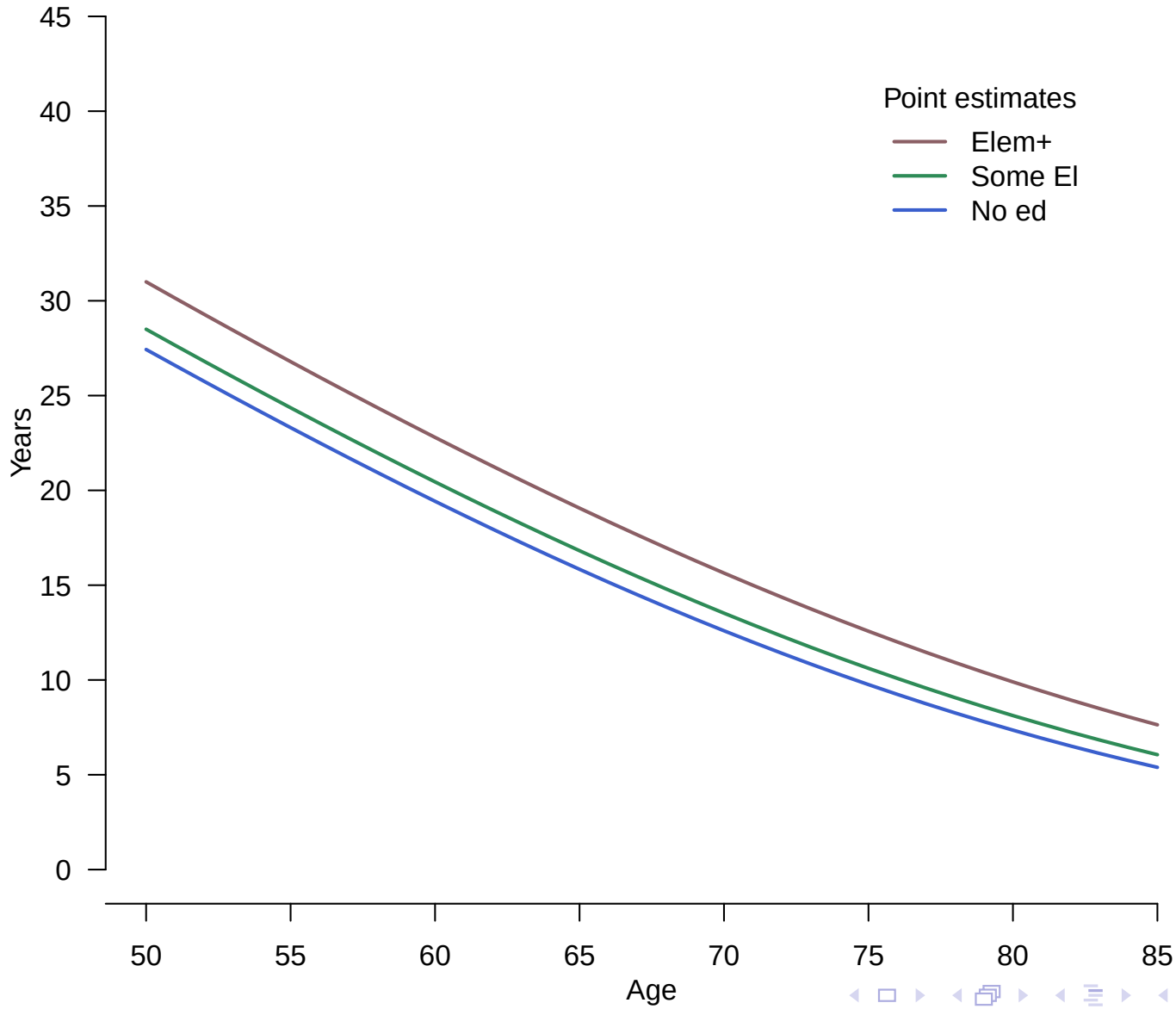

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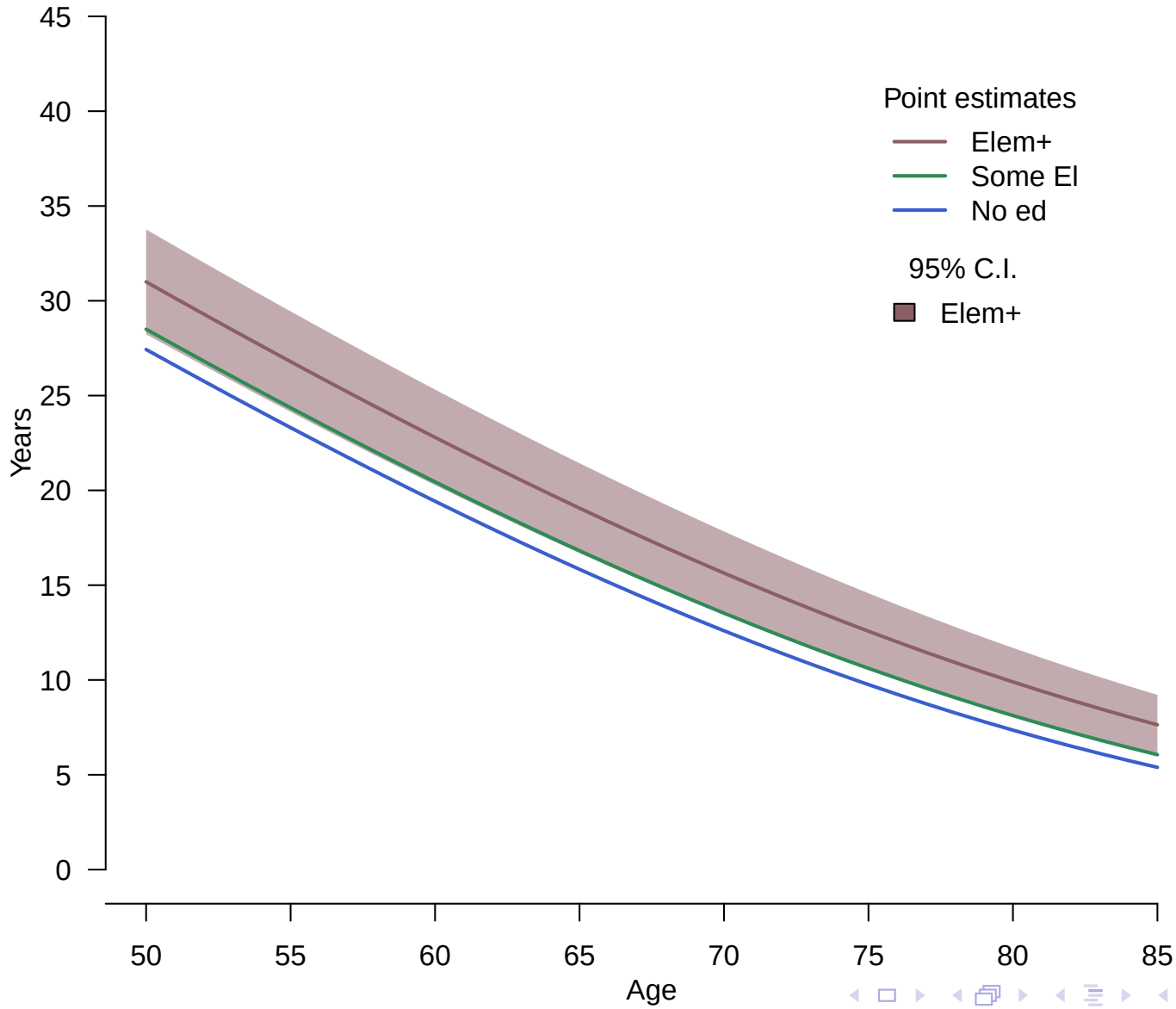

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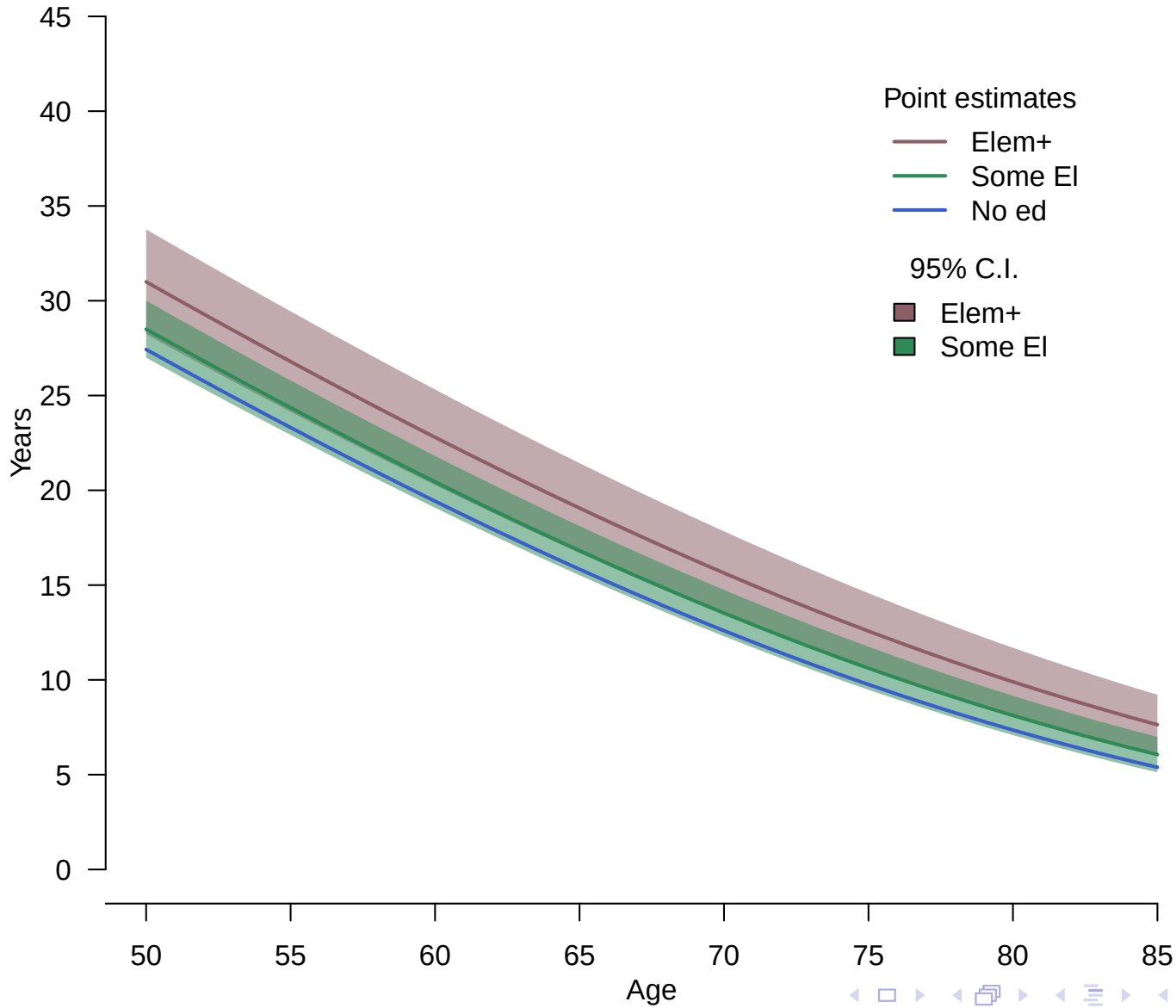

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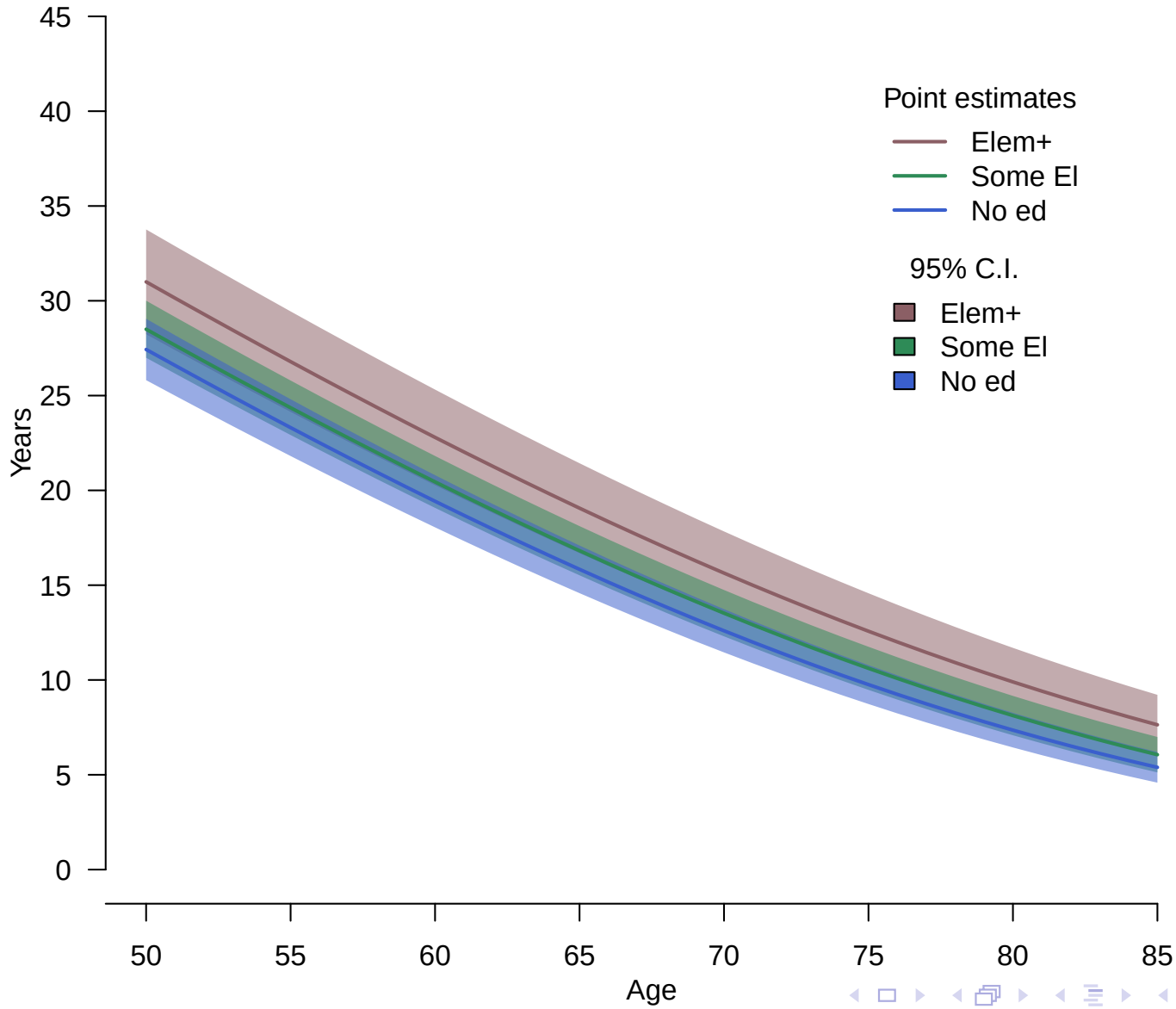

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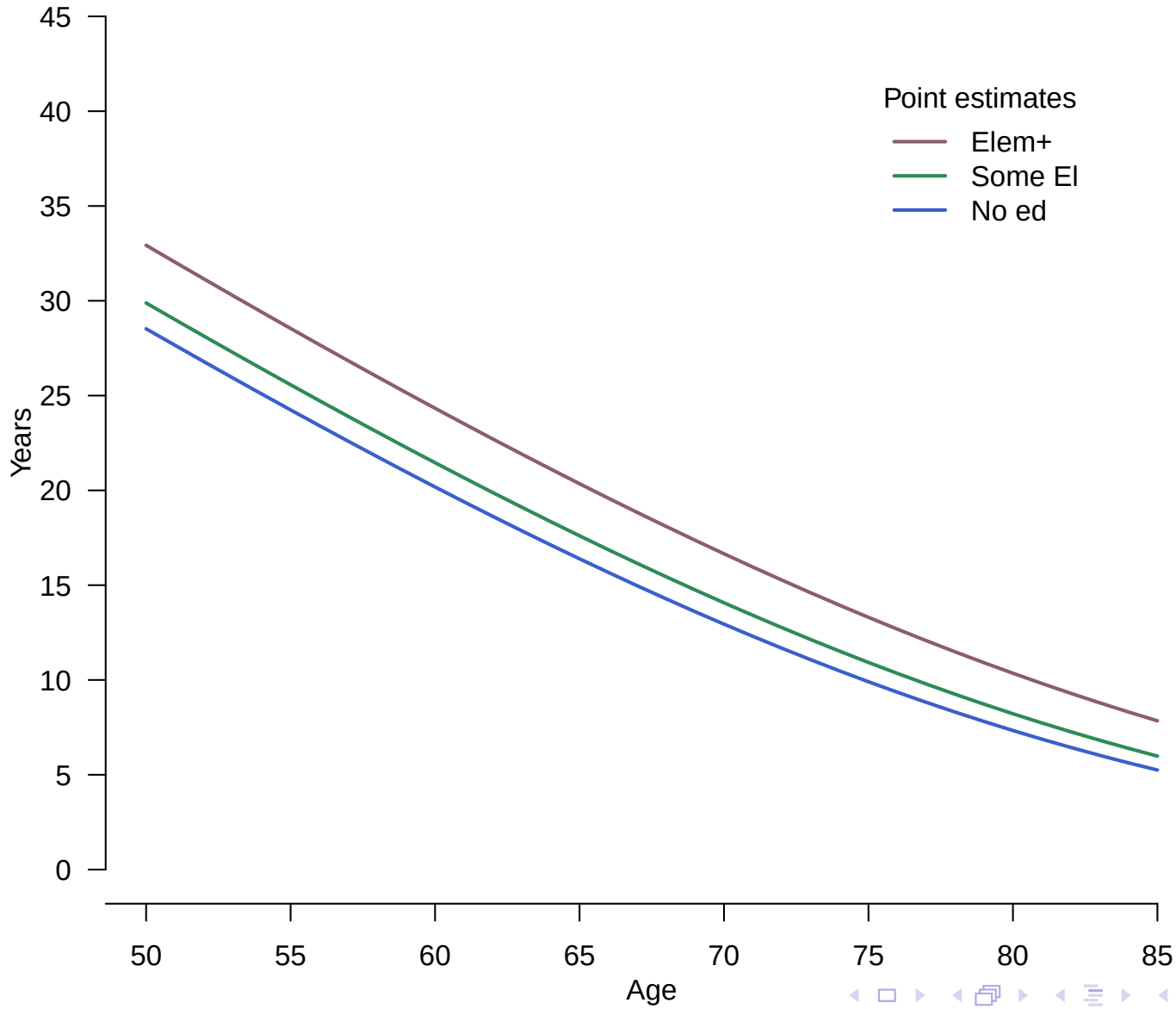

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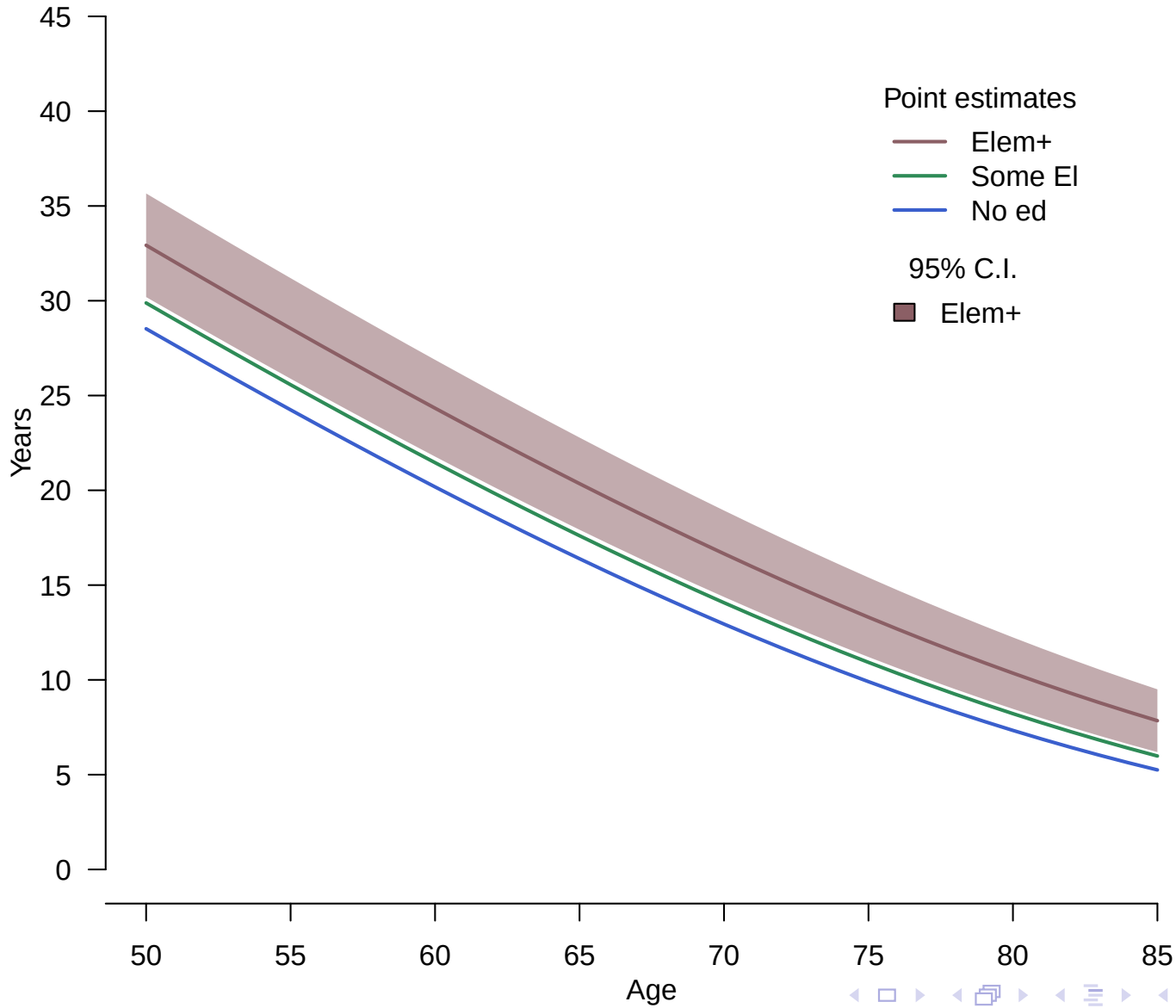

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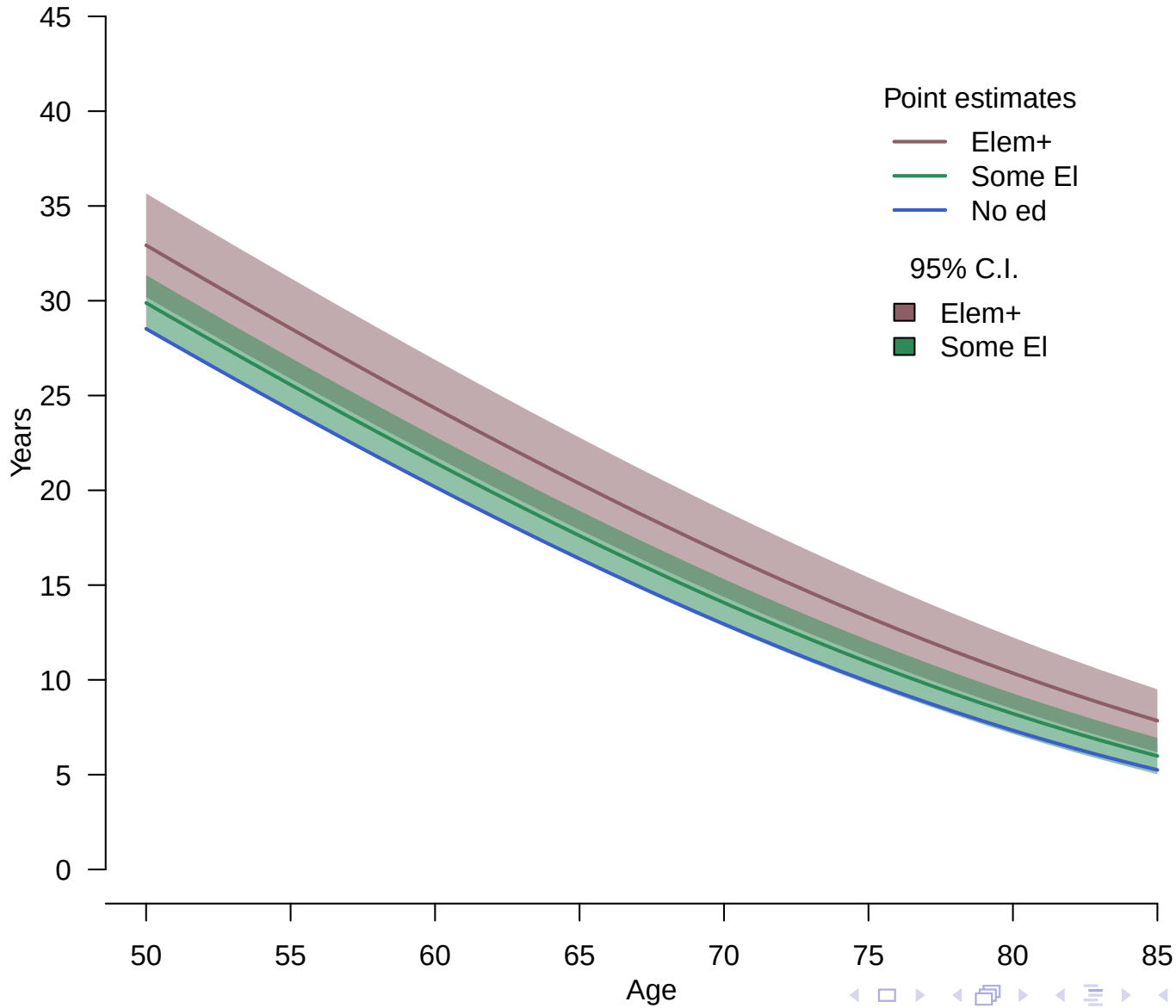

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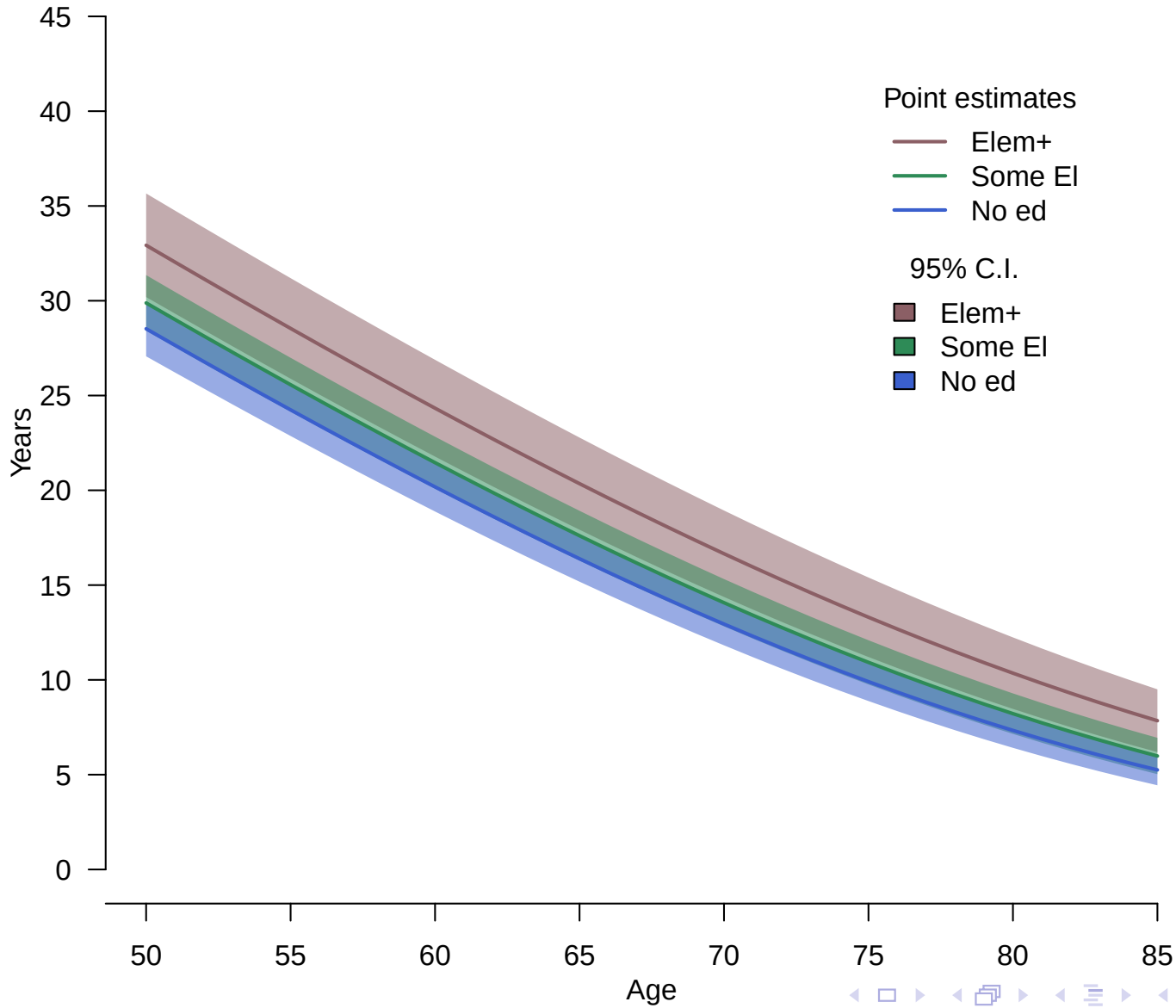

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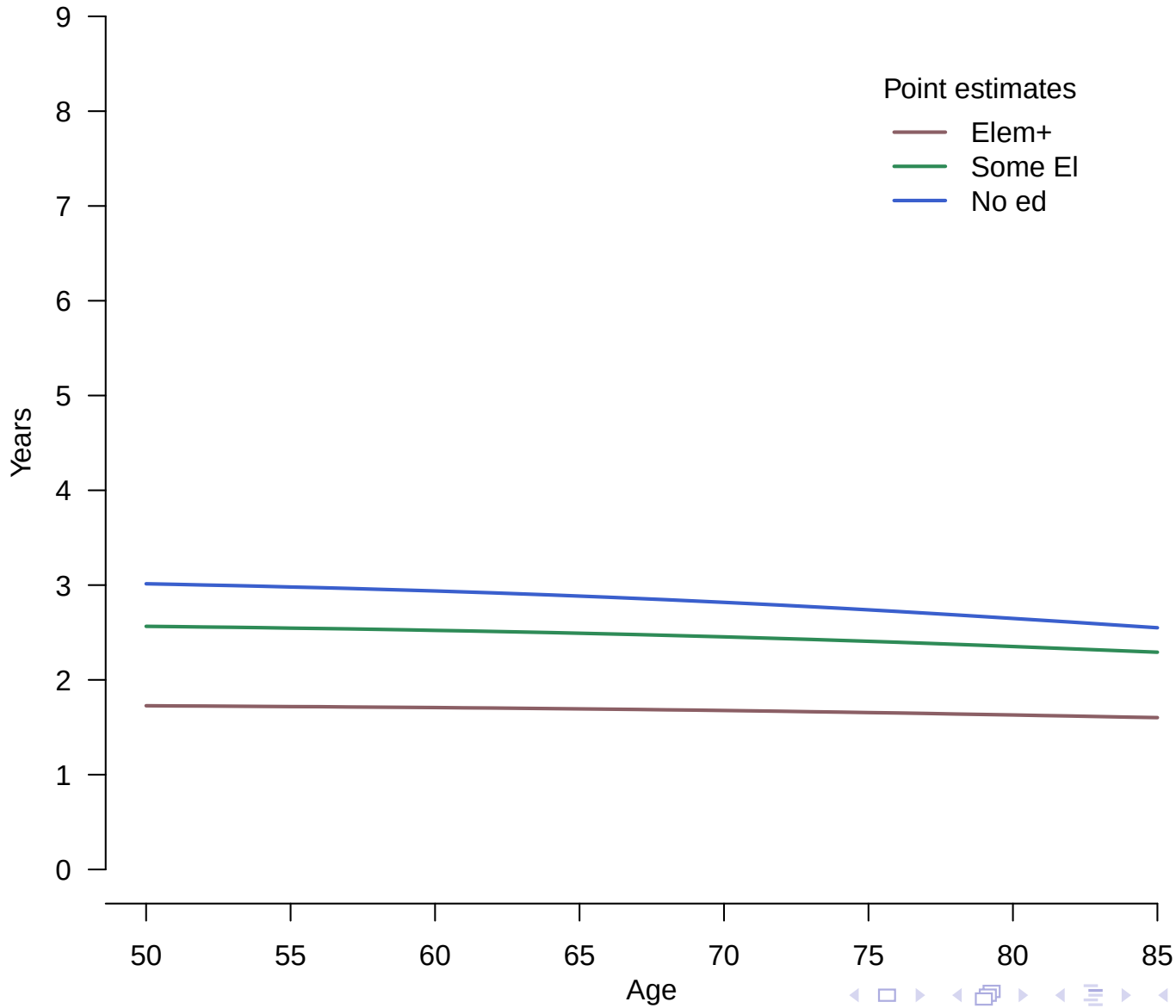

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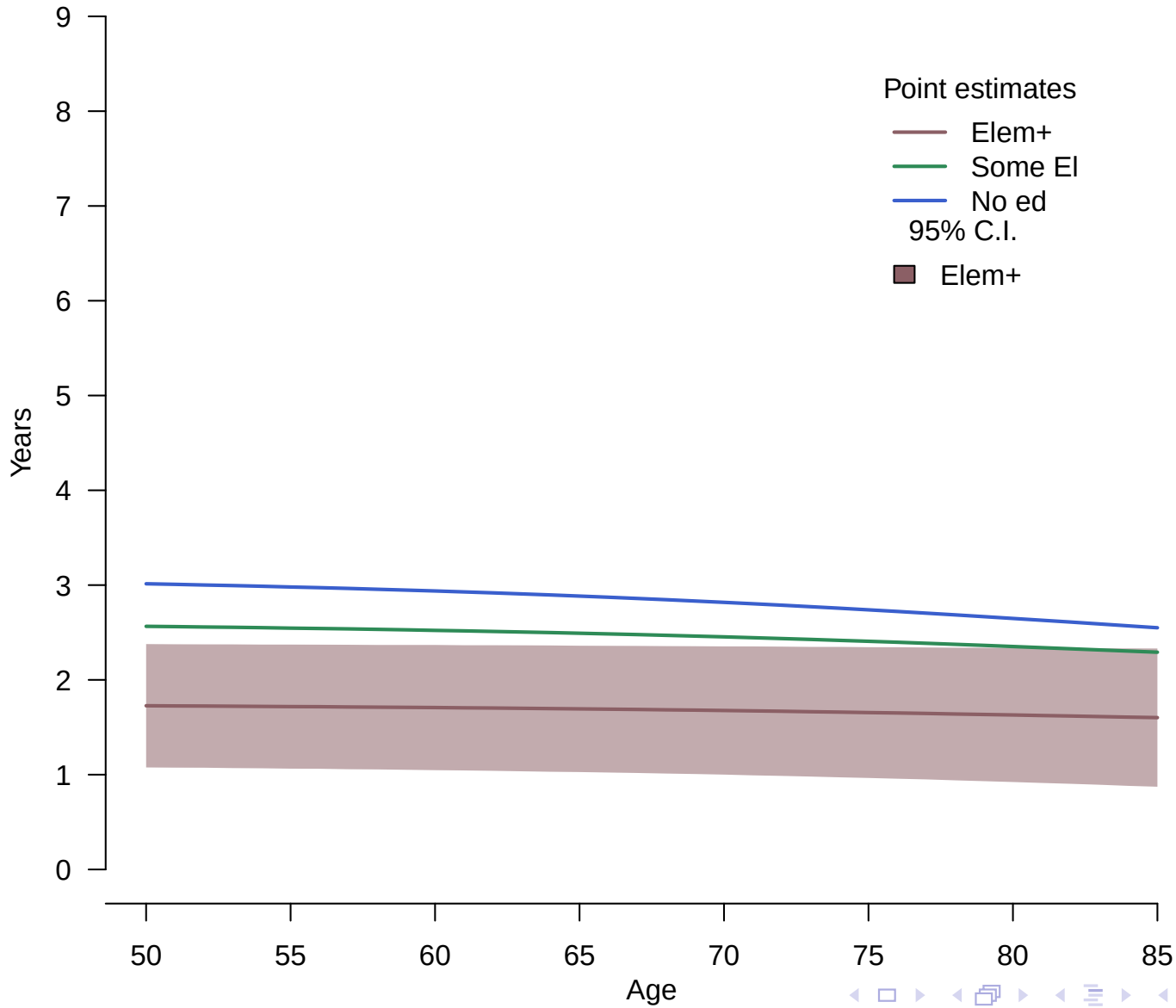

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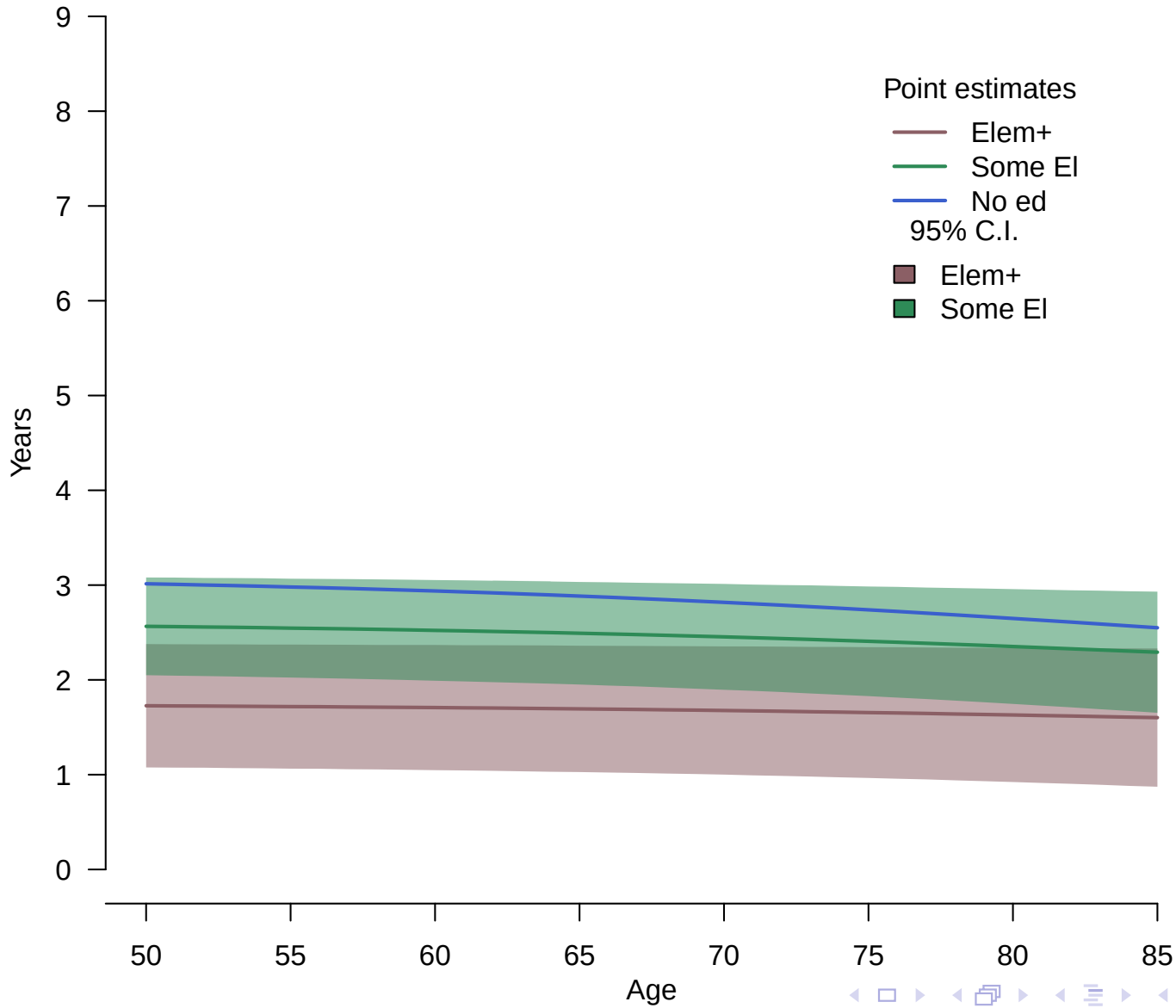

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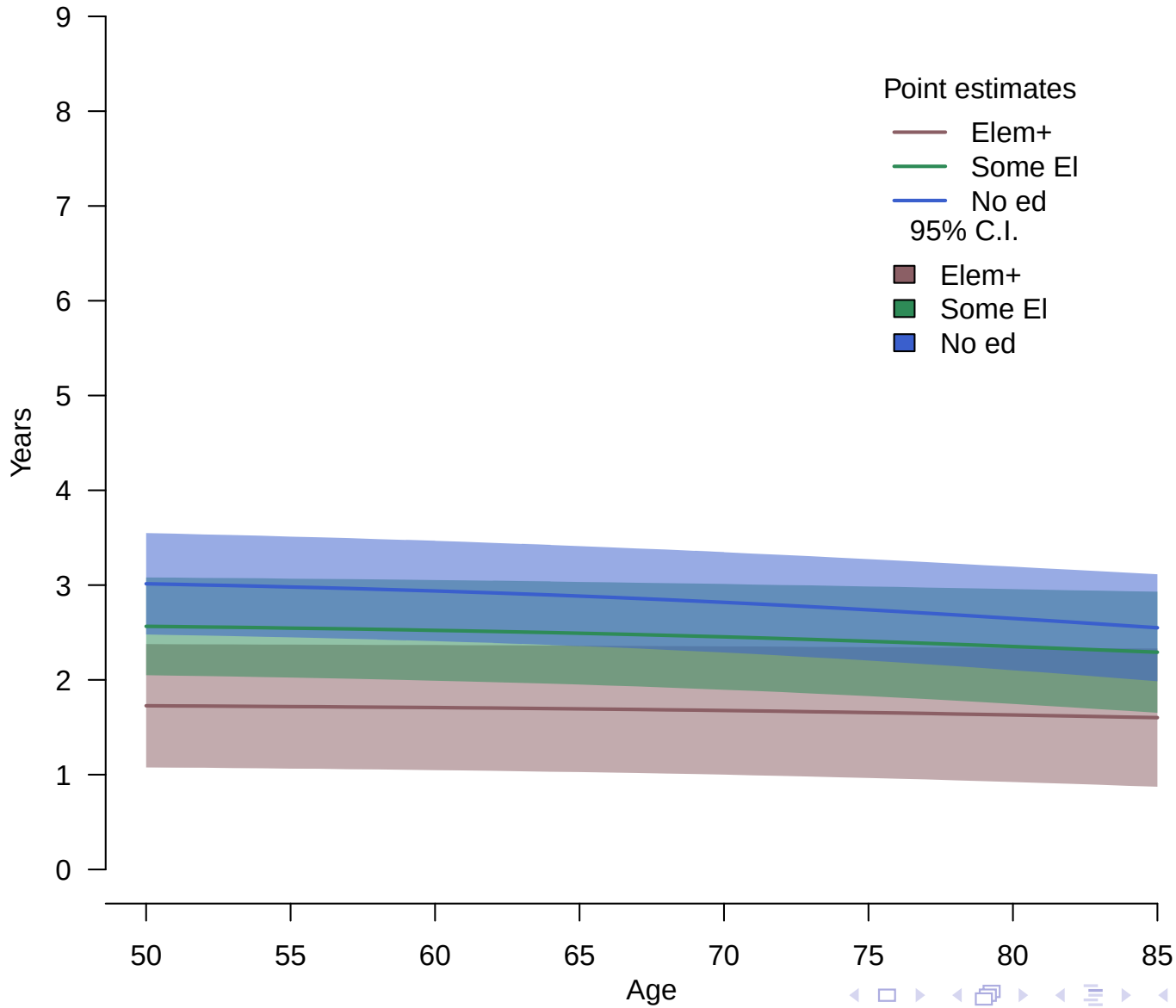

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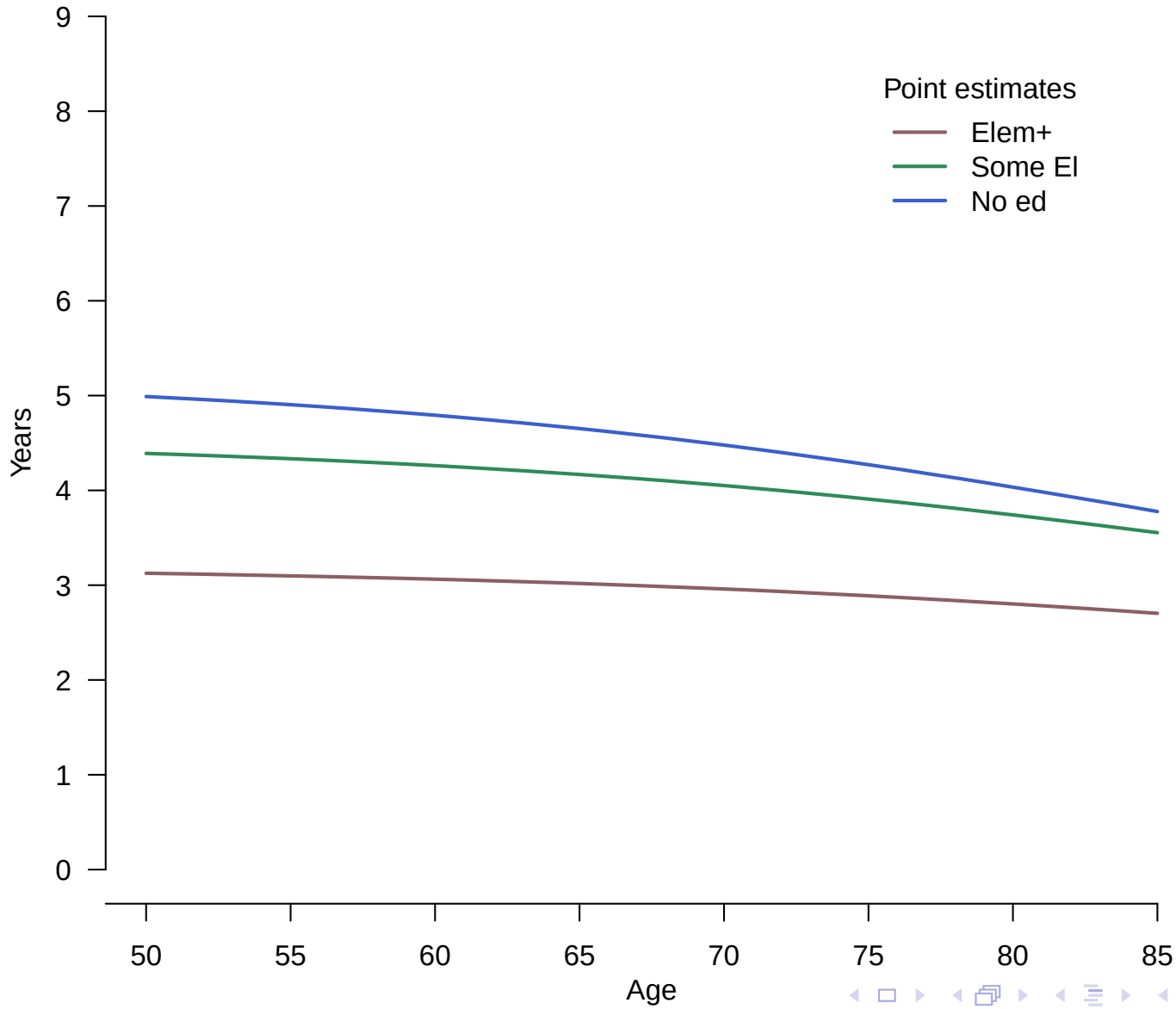

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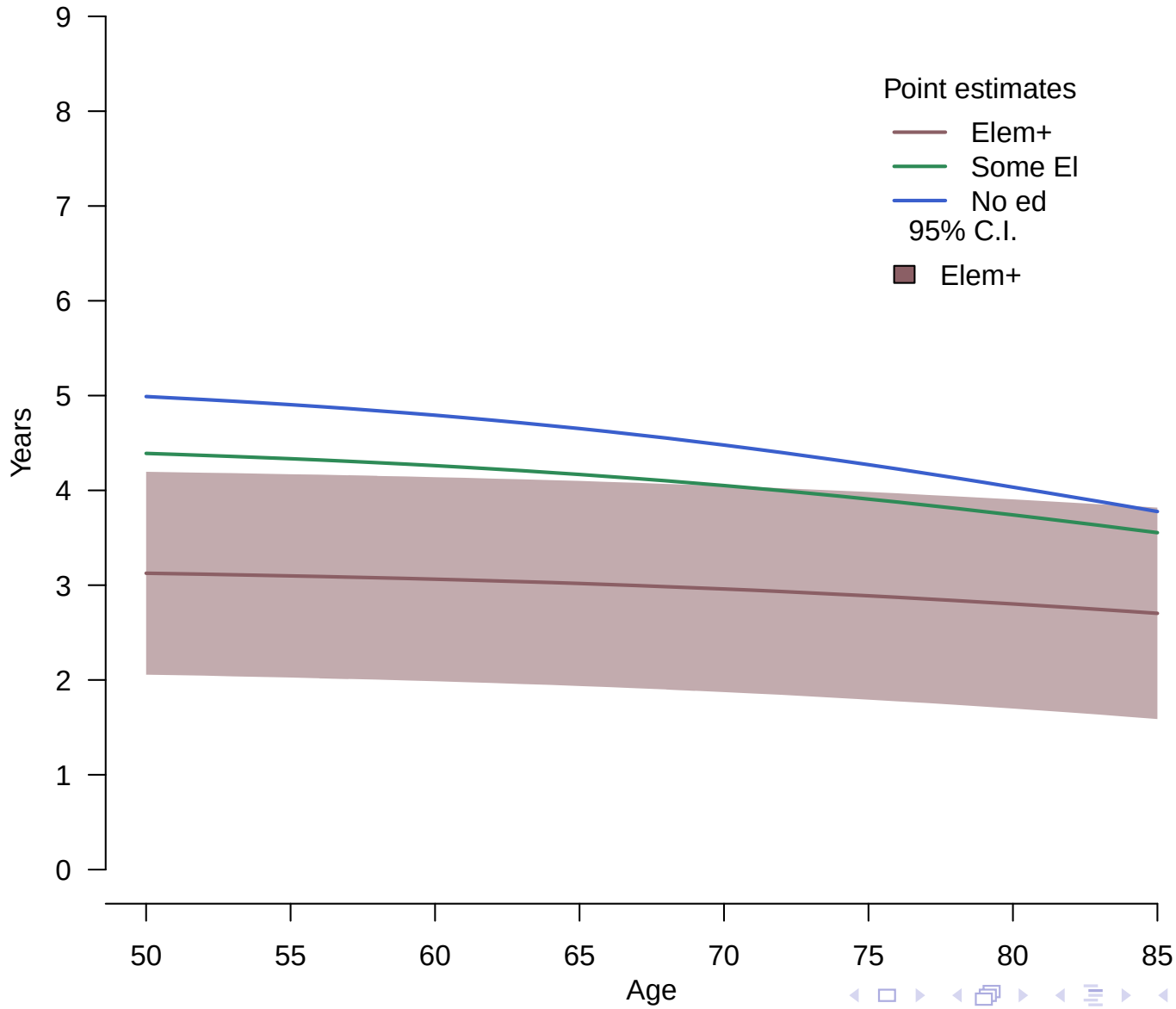

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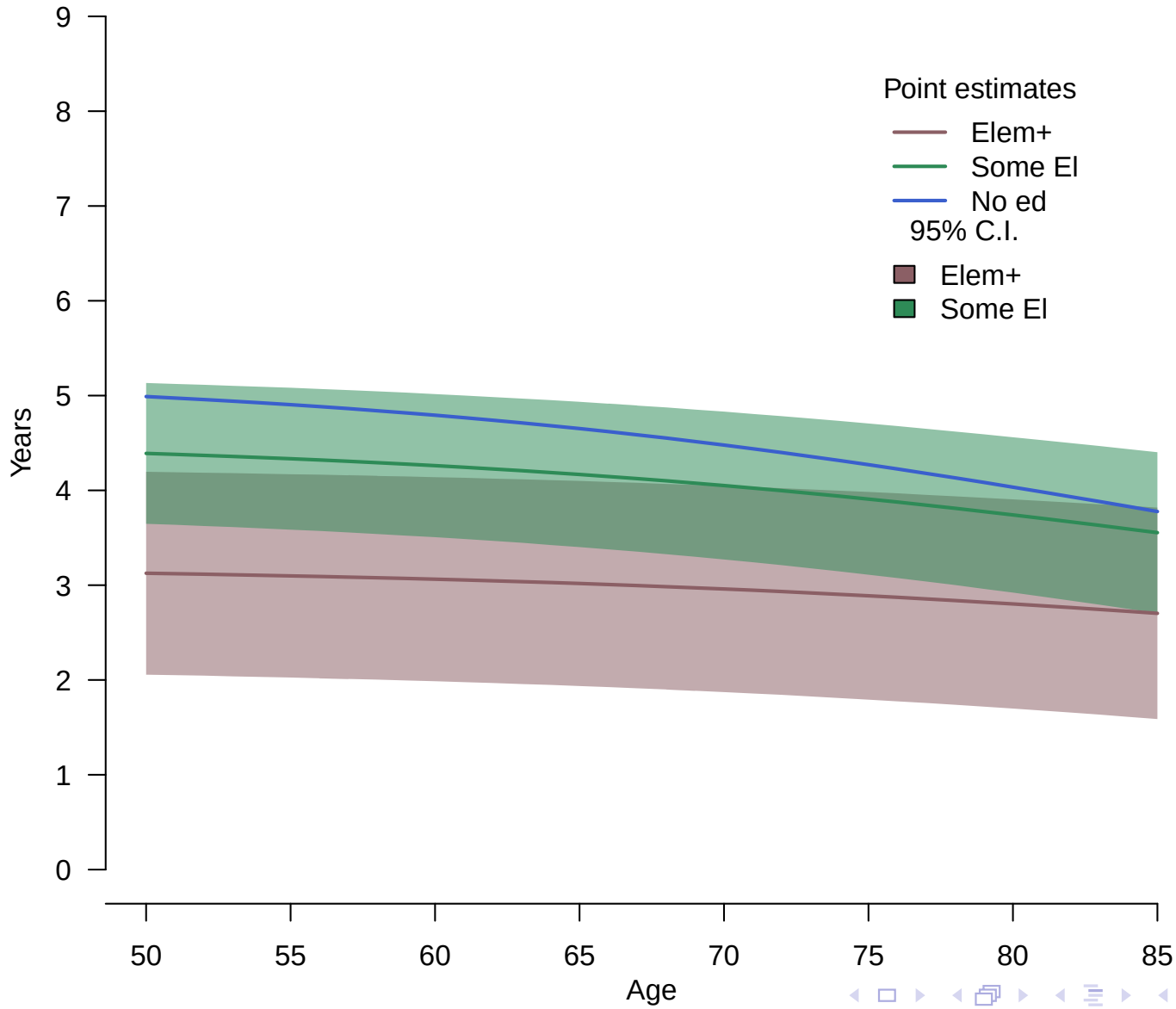

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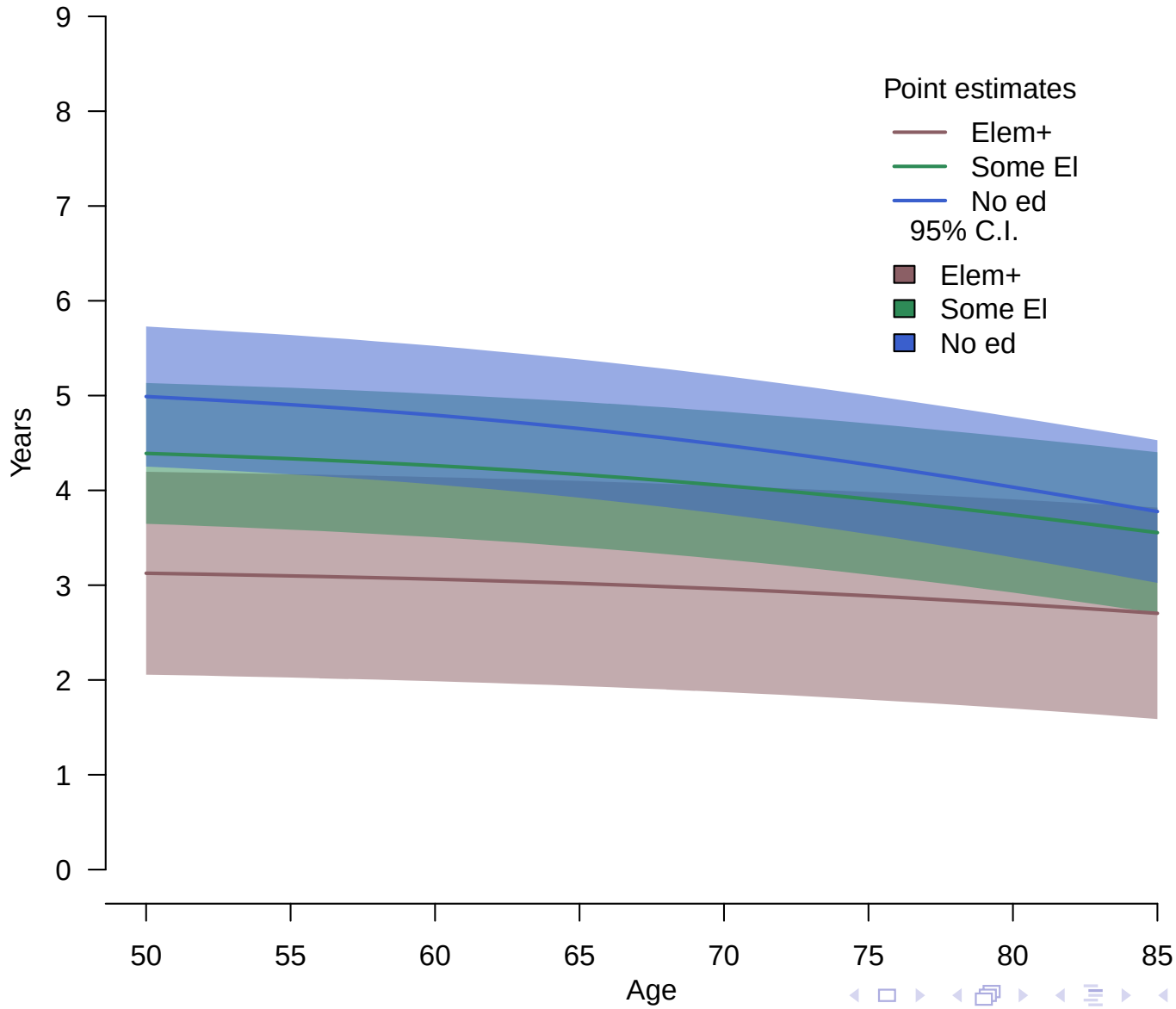

Conclusion

- People with low level of education are more likely to become disabled.
- There are no differences in the probability of recovering from disability by level of education.
- People with more education have longer total and active life expectancy, and reduced length of time in the disabled state.

Discussion

- Try alternative measures of disability, e.g., including IADLs.
- Create measure of severity of disability.
- Disaggregate the results by rural/urban regions.