Something is Better than Nothing:

The Value of Active Intervention in Stated Preferences for Treatments to Delay Onset of Alzheimer's Disease Symptoms

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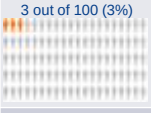
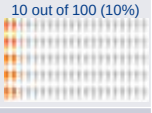
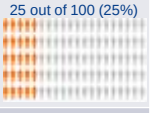
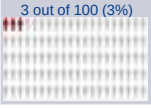
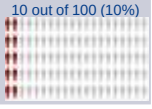
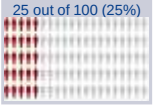
- Drs. DiSantostefano and Levitan are employees of Janssen R&D, LLC. Dr. Streffer was an employee of Janssen R&D, LLC at the time of the study.
- The statements made in this presentation are those of the authors and not necessarily those of the company or institution that employs them.

Background

- Alzheimer's disease (AD) interception treatments may delay symptom onset in asymptomatic patients diagnosed with amyloid plaques.
- Treatments could result in tolerability problems and serious adverse-event risks.
- This study quantified benefit-harm tradeoff preferences for AD symptom delay using a web-based discrete-choice-experiment (DCE) survey.

Treatment Attributes

	Attribute	Levels			
Efficacy	Number of years with ***Worse Memory***	0 years / 1 year / 2 years / 3 years			
Efficacy	Number of years with ***Need Increasing Help***	0 years / 2 years / 4 years / 5 years			
Side Effect	***Daily nausea*** affecting everyday activities	None	2 times a month 	5 times a month 	10 times a month 
SAE Risks	Increased chance of ***disabling stroke*** in the first year of treatment	None	3 out of 100 (3%) 	10 out of 100 (10%) 	25 out of 100 (25%) 
SAE Risks	Increased chance of ***sudden death*** in the first year of treatment	None	3 out of 100 (3%) 	10 out of 100 (10%) 	25 out of 100 (25%) 

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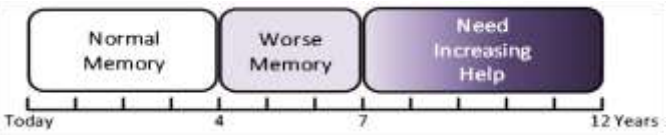
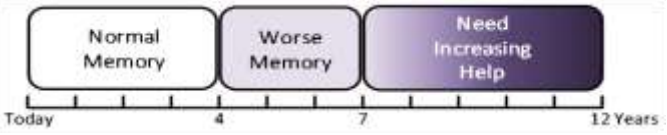
Status Quo

No Treatment

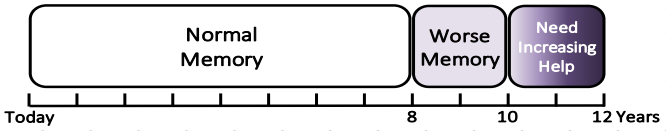


Treatment Efficacy

No Treatment



Some Treatment



Example Choice Question

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Data Collection and Analysis

- Study Sample
  - 669 respondents aged 60-85 with no AD or cognitive symptoms from Ipsos Observer's US consumer panel
- Data Analysis
  - Internal validity tests
    - No variation in chosen alternative across 8 choice questions
    - Dominated-pair failures
  - Random-parameters logit estimation
  - Maximum acceptable risks (MARs) calculated

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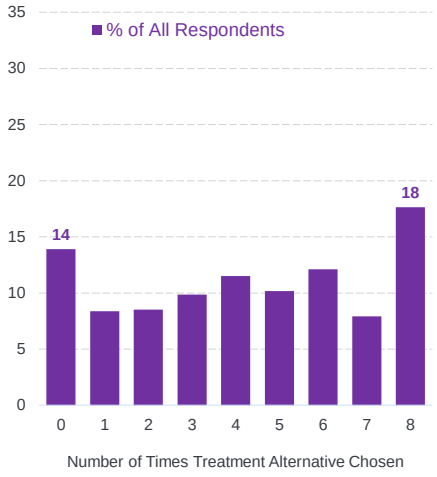
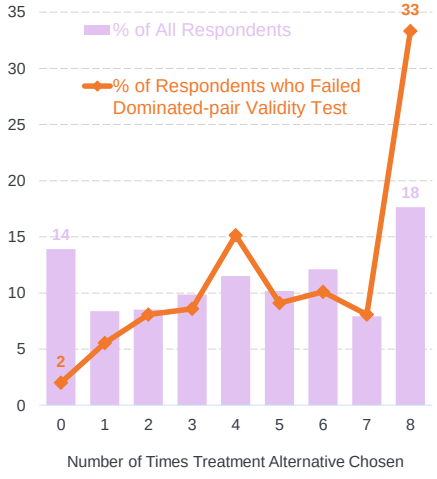
Internal Validity Tests

- 14% always chose no treatment
- 18% always chose treatment



Internal Validity Tests

- 14% always chose no treatment
- 18% always chose treatment
- 30% failed the dominated-pair validity test
- Number of times treatment chosen correlated with failing the dominated-pair validity test (rho=0.89)



Effect of Pro-Treatment Preferences

Excluding Those Who …			Sample Size	Pro-treatment Label Effect	Mortality MAR for 1 More Year of Normal Memory (95% CI)
Dominated Pair Failure	Always Chose No Treatment	Always Chose Treatment			
			669	2.44 **	13% (9%, 17%)

CI = confidence interval; MAR = maximum acceptable risk.
*** significant at 1%; ** significant at 5%; * significant at 10%.

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	√		576	4.29 ***	19% (15%, 23%)
		√	548	1.93 *	9% (6%, 12%)
√	√	√	328	-0.54	7% (2%, 11%)

CI = confidence interval; MAR = maximum acceptable risk.
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Lessons Learned

- Failing internal validity tests affect…
  - Pro-treatment label constant
  - MAR estimates
- Failing internal validity tests doesn't mean data are uninformative about treatment preferences.
  - Comprehension issues
  - "Do something" attitude / value of hope
- For regulatory decision making, researchers ought to examine the implications of validity failures in patient-preference studies.

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