



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

Values and Preferences for Treatment Outcomes: the MACBETH Approach

EMA Project on Benefit-Risk Methodology: Methodology for
Preference Elicitation

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EMA/UMCG Collaboration

An agency of the European Union





The VALUE Study

Objective:

- to evaluate the use of the MACBETH (Measuring Attractiveness through a Categorical Based Evaluation) software for the elicitation of patient preferences
 - determine value functions for disease attributes
 - assess weights between disease attributes (trade-offs)

Design

- Web-based study among Multiple Sclerosis (MS) patients using several MS treatment outcomes
- Supported by the UK MS Society whose members (patients) were invited to participate



Example of treatment outcomes and levels in MS Study

Treatment Outcomes	Levels
Number of relapses during next 5 years	No relapse
	1 relapse
	3 relapse
	4 relapse
Time (from today) until your disease worsens	8 years
	5 years
	3 years
	1 year
Chance of dying from liver failure within 10 years	None would die
	5 patients out of 1000
	20 patients out of 1000
	50 patients out of 1000
Chance of dying or severe disability from PML within 10 years	None would die
	5 patients out of 1000
	20 patients out of 1000
	50 patients out of 1000
Chance of dying from leukemia within 10 years	None would die
	5 patients out of 1000
	20 patients out of 1000
	50 patients out of 1000

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What is the difference in attractiveness between:

“having no relapses in the next 5 years compared to 1 relapse in the next 5 years?”

- extreme
- very strong
- strong
- moderate
- weak
- Very weak
- no

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What is the difference in attractiveness between:

'having 1relapse in the next 5 years compared to 2 relapses in the next 5 years?

- extreme
- very strong
- strong
- moderate
- weak
- Very weak
- no

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What is the difference in attractiveness between:

'having 2 relapses in the next 5 years compared to 3 relapses in the next 5 years?'

- extreme
- very strong
- strong
- moderate
- weak
- Very weak
- no

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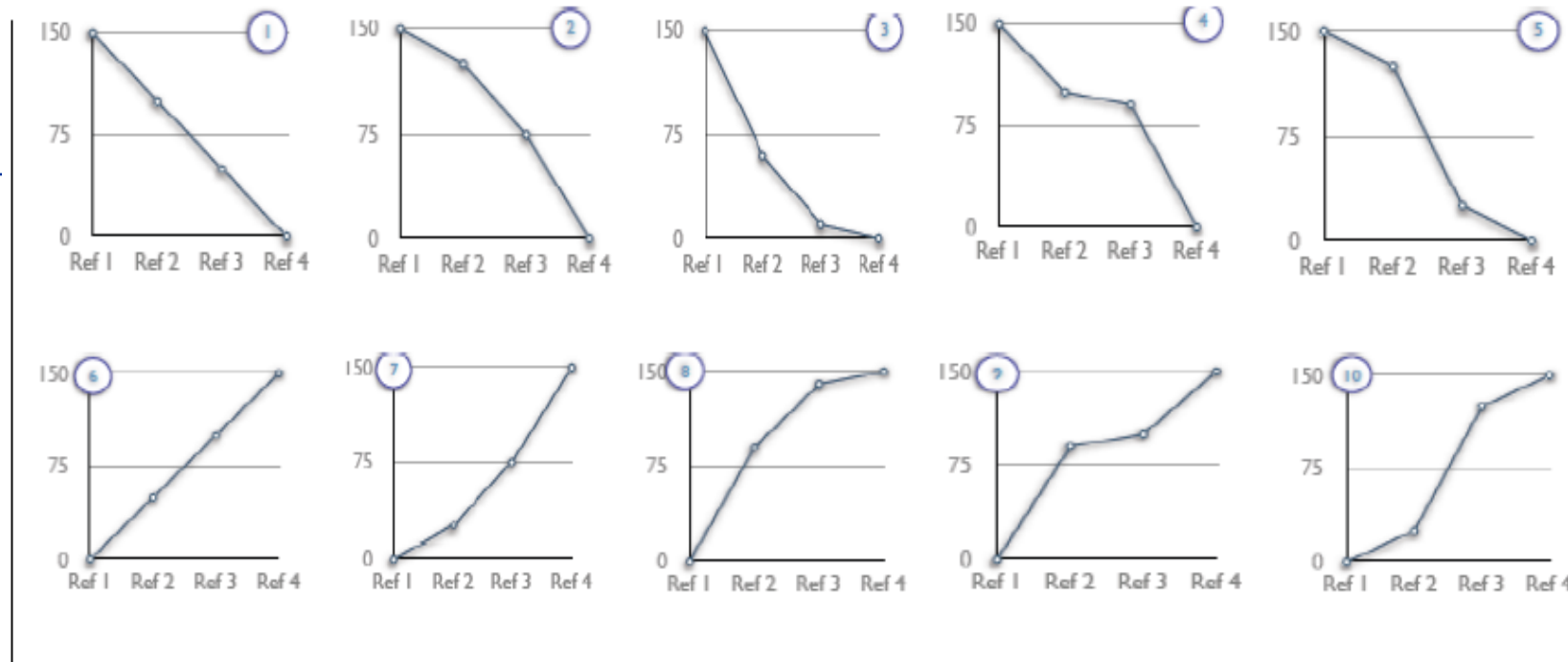
What is the difference in attractiveness between:

'having 3 relapses in the next 5 years compared to 4 relapses in the next 5 years?'

- extreme
- very strong
- strong
- moderate
- weak
- Very weak
- no



Value Function Profiles



Value functions will fit one of these 10 profiles



Regression analysis of factors predictive of differences in preferences (value)

- Disease severity
- Time since diagnosis
- Gender
- Age



Main Results

- Patients found the qualitative elicitation approach easy to follow and respond
- Majority of the patients had non-linear value functions for all treatment outcomes
- Preferences were predicted by severity of disease; ability to walk
 - Patients who could not walk indicated risk seeking profiles compared to other patients
- Data can be used to build decision models for actual treatments



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If you confirm all these judgments, please press next to proceed.

