

APPENDIX 1

The following example demonstrates how the MSWS-12 item scores for an individual patient can be used to estimate their EQ-5D score using the following mapping equation derived and validated in this study:

$$\text{EQ-5D} = +0.002* (\text{Item 1}), -0.009* (\text{Item 2}), -0.01* (\text{Item 3}), -0.029* (\text{Item 4}), -0.019* (\text{Item 5}), -0.0000881* (\text{Item 6}), -0.008* (\text{Item 7}), -0.002* (\text{Item 8}), +0.013* (\text{Item 9}), -0.011* (\text{Item 10}), +0.001* (\text{Item 11}), \text{ and } -0.008* (\text{Item 12}) +0.983 (\text{constant})$$

A North American patient with MS completes the MSWS-12 (total score of 63) and answers each of the 12-items in the following fashion:

MSWS-12 Item	Response
Item 1	4
Item 2	5
Item 3	4
Item 4	3
Item 5	3
Item 6	3
Item 7	2
Item 8	3
Item 9	4
Item 10	3
Item 11	4
Item 12	4

Hence, the predicted EQ-5D value for this patient is:

$$+0.002* (4) -0.009* (5) -0.01* (4) -0.029* (3) -0.019* (3) -0.0000881* (3) -0.008* (2) -0.002* (3) +0.013* (4) -0.011* (3) +0.001* (4) -0.008* (4) +0.983 = \mathbf{0.73}$$