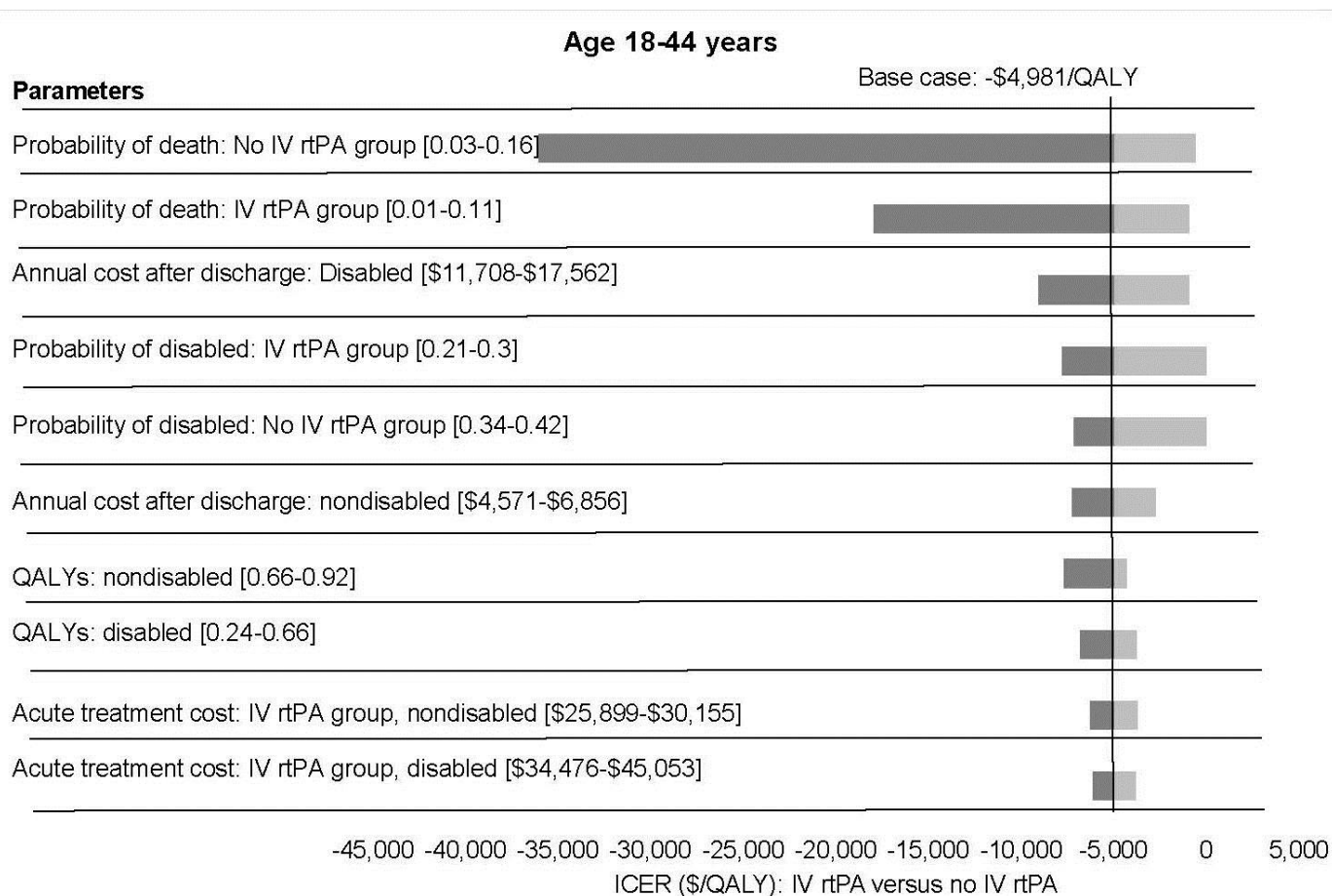## PROBABILISTIC SENSITIVITY ANALYSES

For probabilistic sensitivity analyses, a normal distribution for clinical inputs at 3 months after discharge was assumed. Distribution assumptions for all other inputs were shown in Table 2. For statistical distributions, parameters were estimated using the following formulas: Mean=(Low + 4 × Base + High)/6, SD=(High – Low)/6.[1] High and Low are from the sensitivity range for one-way sensitivity analyses in Tables 1 and 2. For probabilistic sensitivity analyses, all input parameters were jointly varied over Monte Carlo simulations with 10,000 iterations following the derived statistical distributions.

1. Maskery B, Coleman MS, Weinberg M, Zhou W, Rotz L, Klosovsky A, et al. Economic Analysis of the Impact of Overseas and Domestic Treatment and Screening Options for Intestinal Helminth Infection among US-Bound Refugees from Asia. *PLoS Negl Trop Dis*. 2016;10(8):e0004910.
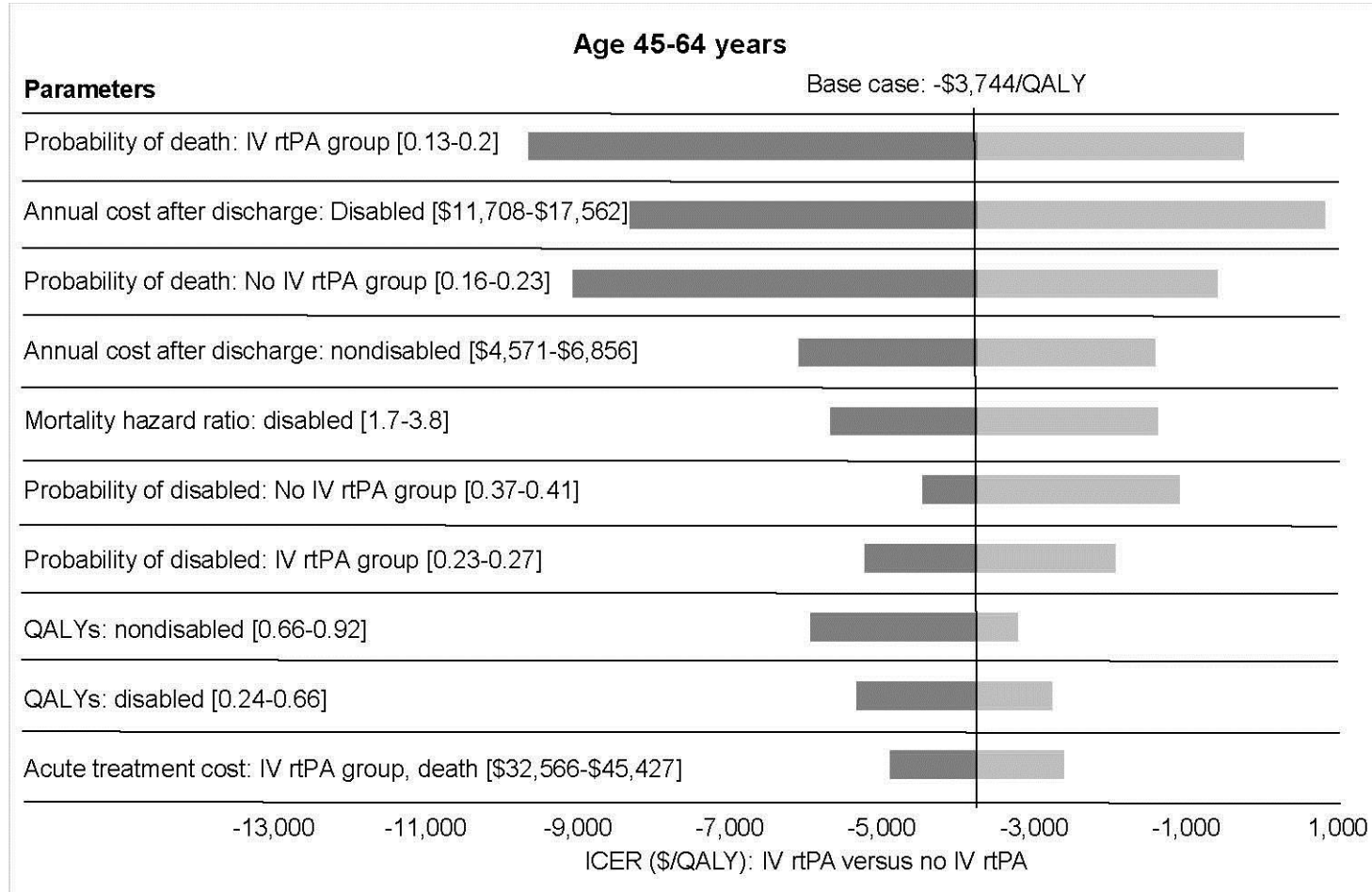
Appendix Figure 1. Tornado diagram of incremental cost-effectiveness ratios (ICERs), with one-way sensitivity analyses, by age group. The width of the horizontal bars show the variation in results when each parameters demonstrated in the left was varied over the ranges shown in the squared brackets. The ranges of changes are also shown in the Table 1 and 2.

ICER, incremental cost-effectiveness ratio; IV rtPA, intravenous recombinant tissue plasminogen activator; QALY, quality-adjusted life-years.

Age 18-44 years

Base case: -$4,981/QALY

Parameters

Probability of death: No IV rtPA group [0.03-0.16]

Probability of death: IV rtPA group [0.01-0.11]

Annual cost after discharge: Disabled [$11,708-$17,562]

Probability of disabled: IV rtPA group [0.21-0.3]

Probability of disabled: No IV rtPA group [0.34-0.42]

Annual cost after discharge: nondisabled [$4,571-$6,856]

QALYs: nondisabled [0.66-0.92]

QALYs: disabled [0.24-0.66]

Acute treatment cost: IV rtPA group, nondisabled [$25,899-$30,155]

Acute treatment cost: IV rtPA group, disabled [$34,476-$45,053]

-45,000 -40,000 -35,000 -30,000 -25,000 -20,000 -15,000 -10,000 -5,000 0 5,000

ICER ($/QALY): IV rtPA versus no IV rtPA

Age 45-64 years

Parameters — Base case: -$3,744/QALY

ICER ($/QALY): IV rtPA versus no IV rtPA

Parameters (top to bottom):
- Probability of death: IV rtPA group [0.13-0.2]
- Annual cost after discharge: Disabled [$11,708-$17,562]
- Probability of death: No IV rtPA group [0.16-0.23]
- Annual cost after discharge: nondisabled [$4,571-$6,856]
- Mortality hazard ratio: disabled [1.7-3.8]
- Probability of disabled: No IV rtPA group [0.37-0.41]
- Probability of disabled: IV rtPA group [0.23-0.27]
- QALYs: nondisabled [0.66-0.92]
- QALYs: disabled [0.24-0.66]
- Acute treatment cost: IV rtPA group, death [$32,566-$45,427]

X-axis: -13,000   -11,000   -9,000   -7,000   -5,000   -3,000   -1,000   1,000

Age 65-80 years

Parameters	Base case: $11,132/QALY
Probability of death: No IV rtPA group [0.23-0.31]	
Probability of death: IV rtPA group [0.23-0.31]	
Annual cost after discharge: disabled [$11,780-$17,562]	
QALYs: non-disabled [0.66-0.92]	
Probability of disabled: rtPA group [0.33-0.36]	
QALYs: disabled [0.24-0.66]	
Acute treatment cost: rtPA group, death [$26,936-$36,323]	
Probability of disabled: No IV rtPA group [0.43-0.46]	
Mortality hazard ratio: disabled [1.7-3.8]	
Annual cost after discharge: non-disabled [$4,571-$6,856]	

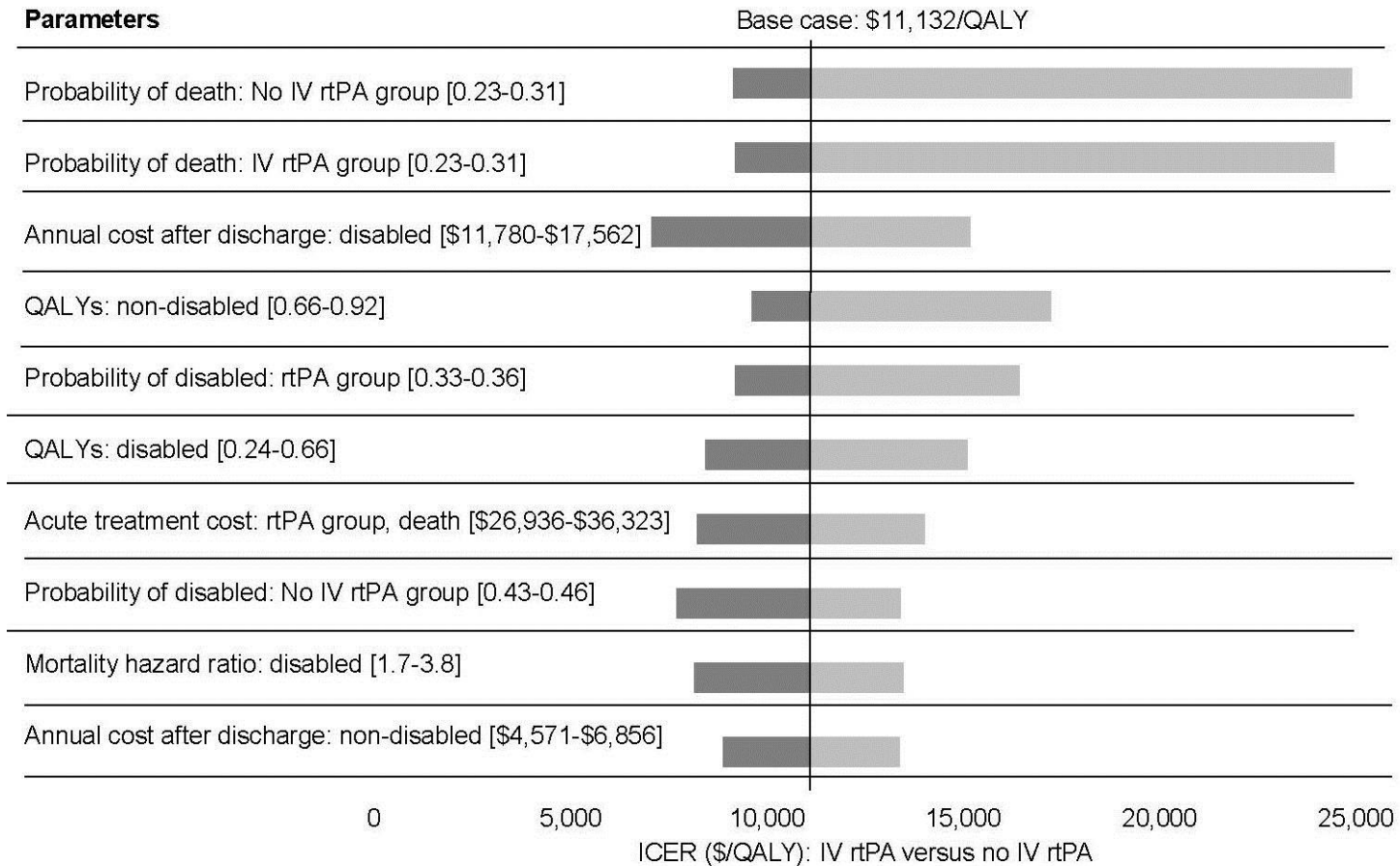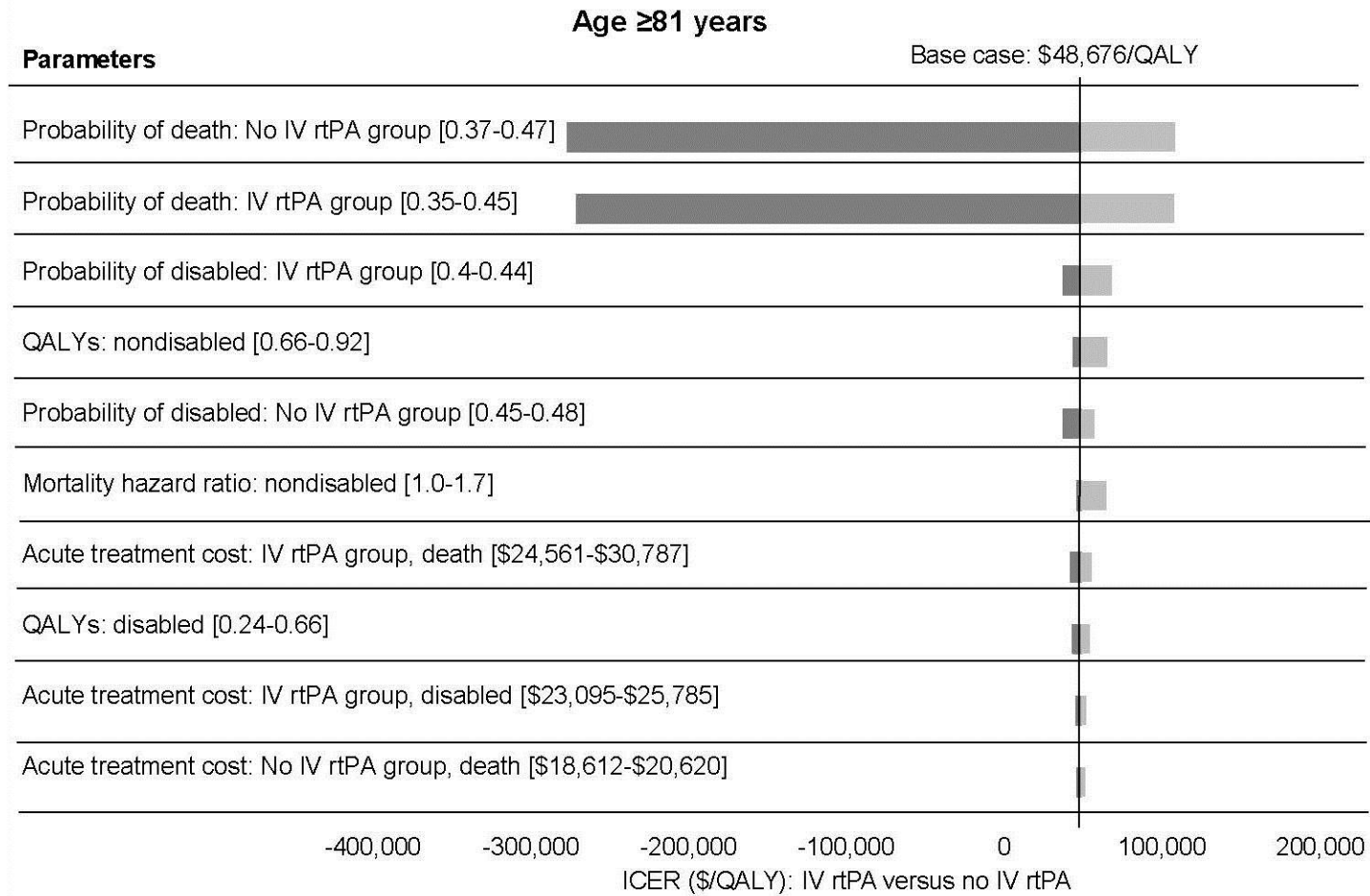ICER ($/QALY): IV rtPA versus no IV rtPA

Appendix
Age-specific Cost Effectiveness of Using Intravenous Recombinant Tissue Plasminogen
Activator for Treating Acute Ischemic Stroke
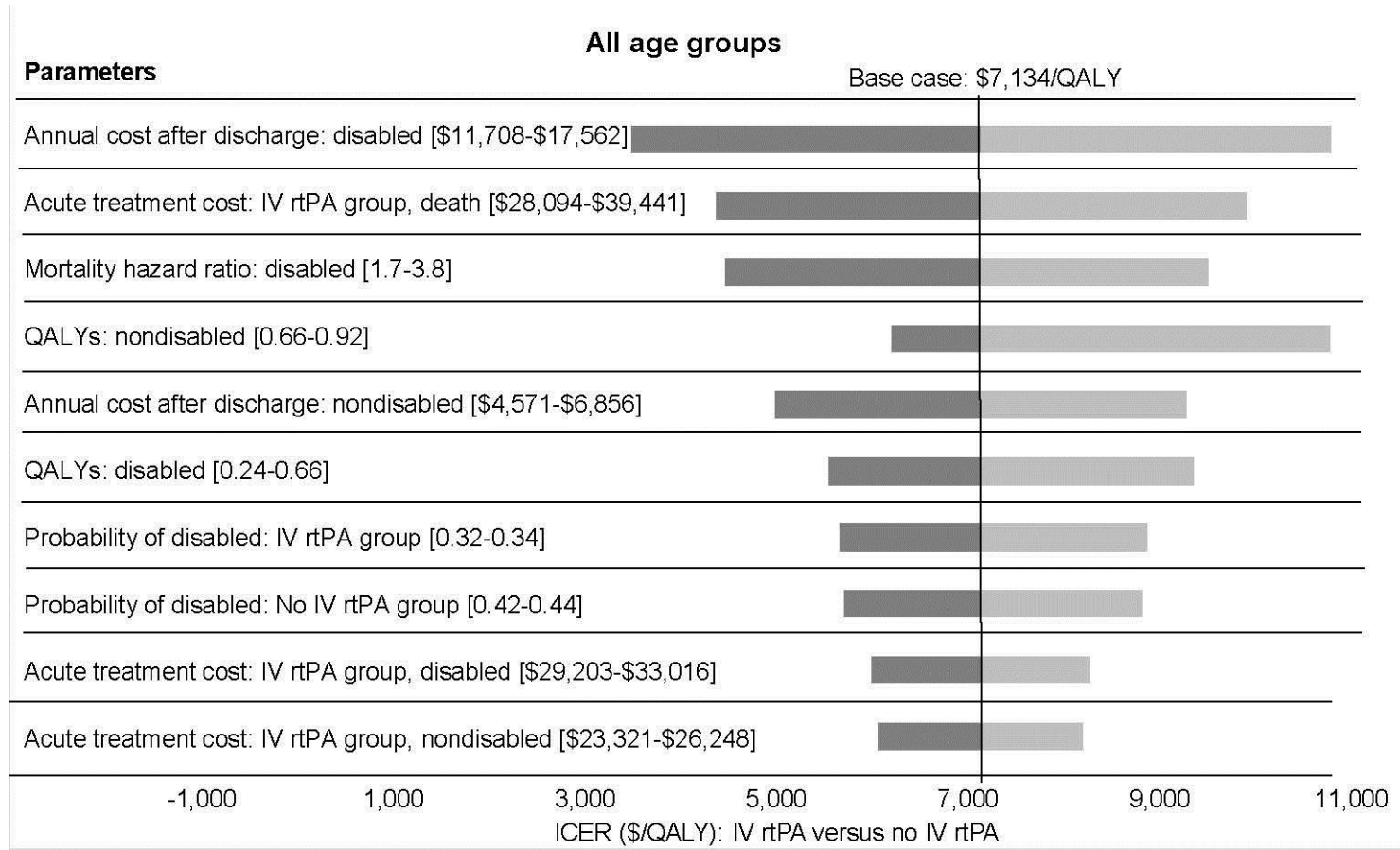**Joo, Wang, and George**

Age ≥81 years

Parameters   Base case: $48,676/QALY

Probability of death: No IV rtPA group [0.37-0.47]

Probability of death: IV rtPA group [0.35-0.45]

Probability of disabled: IV rtPA group [0.4-0.44]

QALYs: nondisabled [0.66-0.92]

Probability of disabled: No IV rtPA group [0.45-0.48]

Mortality hazard ratio: nondisabled [1.0-1.7]

Acute treatment cost: IV rtPA group, death [$24,561-$30,787]

QALYs: disabled [0.24-0.66]

Acute treatment cost: IV rtPA group, disabled [$23,095-$25,785]

Acute treatment cost: No IV rtPA group, death [$18,612-$20,620]

-400,000   -300,000   -200,000   -100,000   0   100,000   200,000

ICER ($/QALY): IV rtPA versus no IV rtPA

All age groups

Parameters

Base case: $7,134/QALY

Annual cost after discharge: disabled [$11,708-$17,562]

Acute treatment cost: IV rtPA group, death [$28,094-$39,441]

Mortality hazard ratio: disabled [1.7-3.8]

QALYs: nondisabled [0.66-0.92]

Annual cost after discharge: nondisabled [$4,571-$6,856]

QALYs: disabled [0.24-0.66]

Probability of disabled: IV rtPA group [0.32-0.34]

Probability of disabled: No IV rtPA group [0.42-0.44]

Acute treatment cost: IV rtPA group, disabled [$29,203-$33,016]

Acute treatment cost: IV rtPA group, nondisabled [$23,321-$26,248]

-1,000   1,000   3,000   5,000   7,000   9,000   11,000

ICER ($/QALY): IV rtPA versus no IV rtPA

Appendix Figure 2. Cost-effectiveness acceptability curves with probabilistic sensitivity analyses of the ICER of IV rtPA versus no IV rtPA for acute ischemic stroke, by age group.

IV rtPA, intravenous recombinant tissue plasminogen activator; QALY, quality-adjusted life-years