|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Supplementary Table 1. Sensitivity Analyses of the Effect of Key Input Parameters on ICER | | | | | |
| Scenario | **Total cost ($)** | **Incr. cost($)** | **Total QALYs** | **Incr. QALYs** | **Incr. cost per QALYs gained** |
| Base case | | | | | |
| Ivabradine+SoC  SoC alone | 5,212  3,005 | 2,206 | 3.71  3.30 | 0.41 | 5,437 |
| Sensitivity analyses | | | | | |
| * Price of Ivabradine decreased 20% |  |  |  |  |  |
| Ivabradine+SoC  SoC alone | 4,793  3,005 | 1,788 | 3.71  3.30 | 0.41 | 4,361 |
| * Price of Ivabradine increased 20% |  |  |  |  |  |
| Ivabradine+SoC  SoC alone | 5,631  3,005 | 2,626 | 3.71  3.30 | 0.41 | 6,405 |
| * Reduced time horizon (5 years) |  |  |  |  |  |
| Ivabradine+SoC  SoC alone | 3,560  2,069 | 1,491 | 2.35  2.15 | 0.20 | 7,455\* |
| * Increased time horizon (15 years) |  |  |  |  |  |
| Ivabradine+SoC  SoC alone | 6,017  3,428 | 2,589 | 4.47  3.91 | 0.56 | 4,623 |
| * Increased time horizon (20 years) |  |  |  |  |  |
| Ivabradine+SoC  SoC alone | 6,415  3,617 | 2,798 | 4.91  4.24 | 0.67 | 4,176 |
| * Ivabradine mortality HR Increased 20% |  |  |  |  |  |
| Ivabradine+SoC  SoC alone | 4,951  3,005 | 1,946 | 3.52  3.30 | 0.22 | 8,845\* |
| * Ivabradine mortality HR decreased 20% |  |  |  |  |  |
| Ivabradine+SoC  SoC alone | 5,496  3,005 | 2,491 | 3.92  3.30 | 0.62 | 4,018 |
| * No discounting |  |  |  |  |  |
| Ivabradine+SoC  SoC alone | 6,922  4,013 | 2,909 | 4.56  4.04 | 0.52 | 5,594 |
| * The same initial distribution |  |  |  |  |  |
| Ivabradine+SoC  SoC alone | 5,265  3,085 | 2,180 | 3.71  3.30 | 0.41 | 5,317 |

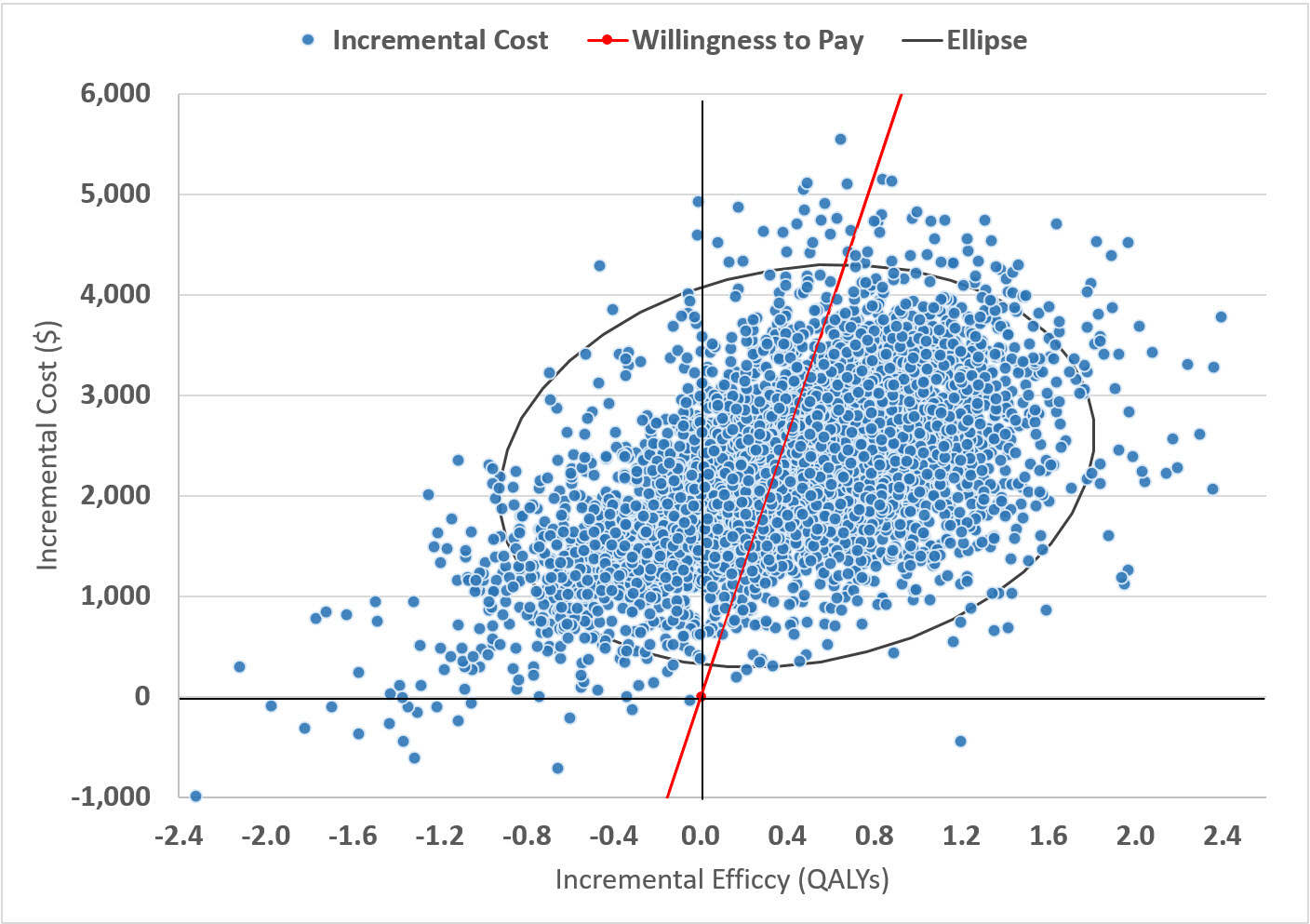
ICER: incremental cost-effectiveness ratio; Incr. cost($): incremental cost; QALYs: quality-adjusted life years; SoC: standard of care; Ivabradine mortality HR: Ivabradine mortality hazard ratio

|  |  |  |  |
| --- | --- | --- | --- |
| Supplementary Table 2. Deterministic cost - effectiveness results of Base Case Analysis | | | |
|  | **Ivabradine+SoC** | **SoC alone** | **incremental** |
| Costs (2017 USD) |  |  |  |
| Total costs | 5,212 | 3,005 | 2,207 |
| Drug acquisition cost | 2800 | 672 | 2,128 |
| Medical care cost | 1104 | 583 | 521 |
| hospitalization cost | 701 | 947 | -246 |
| HF management cost | 529 | 714 | -185 |
| QALYs | 3.71 | 3.30 | 0.41 |
| ICER |  |  | 5,437 |
| HF: heart failure; ICER: incremental cost-effectiveness ratio; LY: life year; QALYs: quality-adjusted life years | | | |

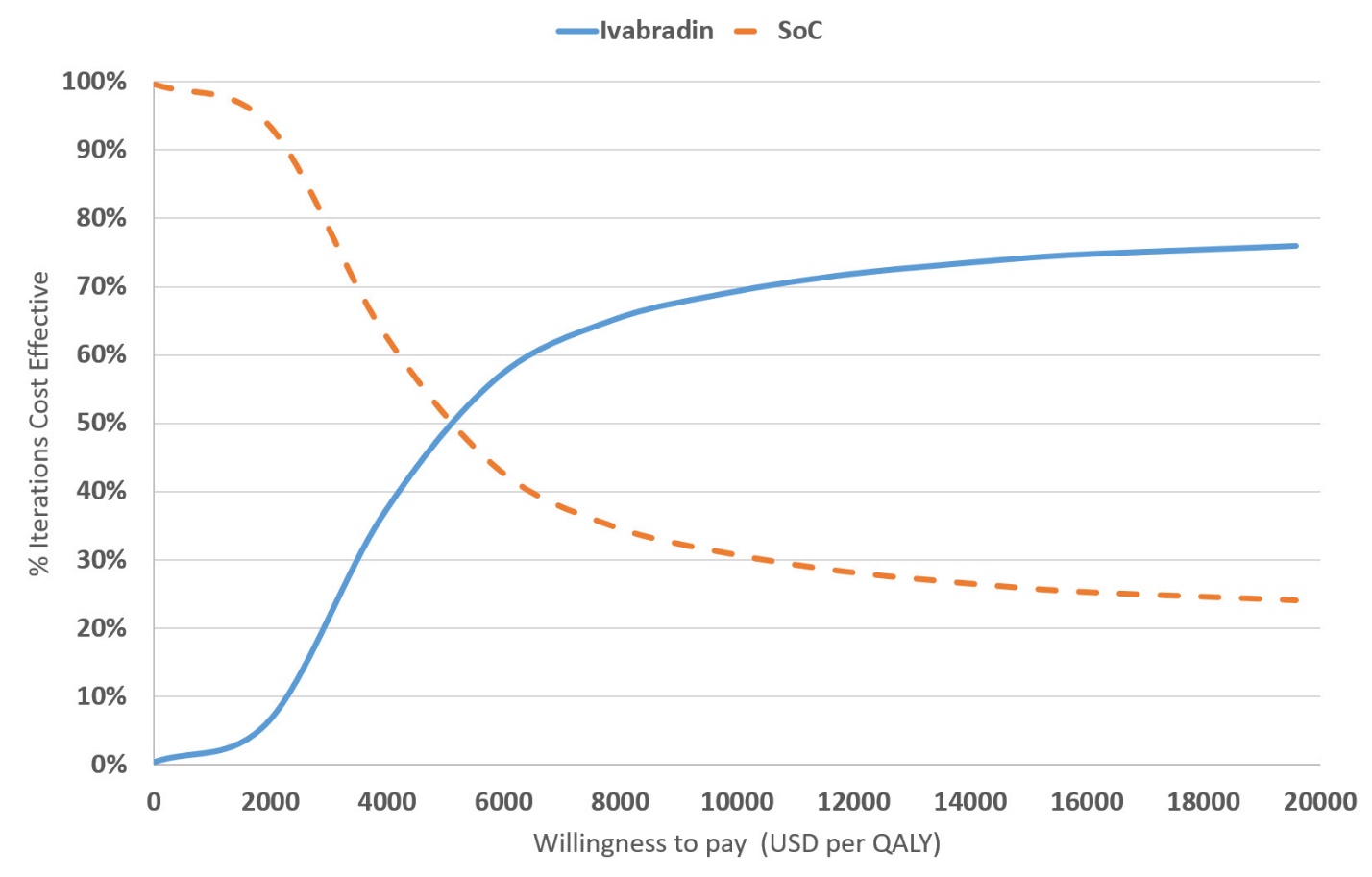
J:\New folder\mehdi varmaghani\Figure2.tif

**Supplementary Figure 1.** Results for one-way sensitivity analysis, effect of parameter variation on the incremental cost (USD) per QALYs

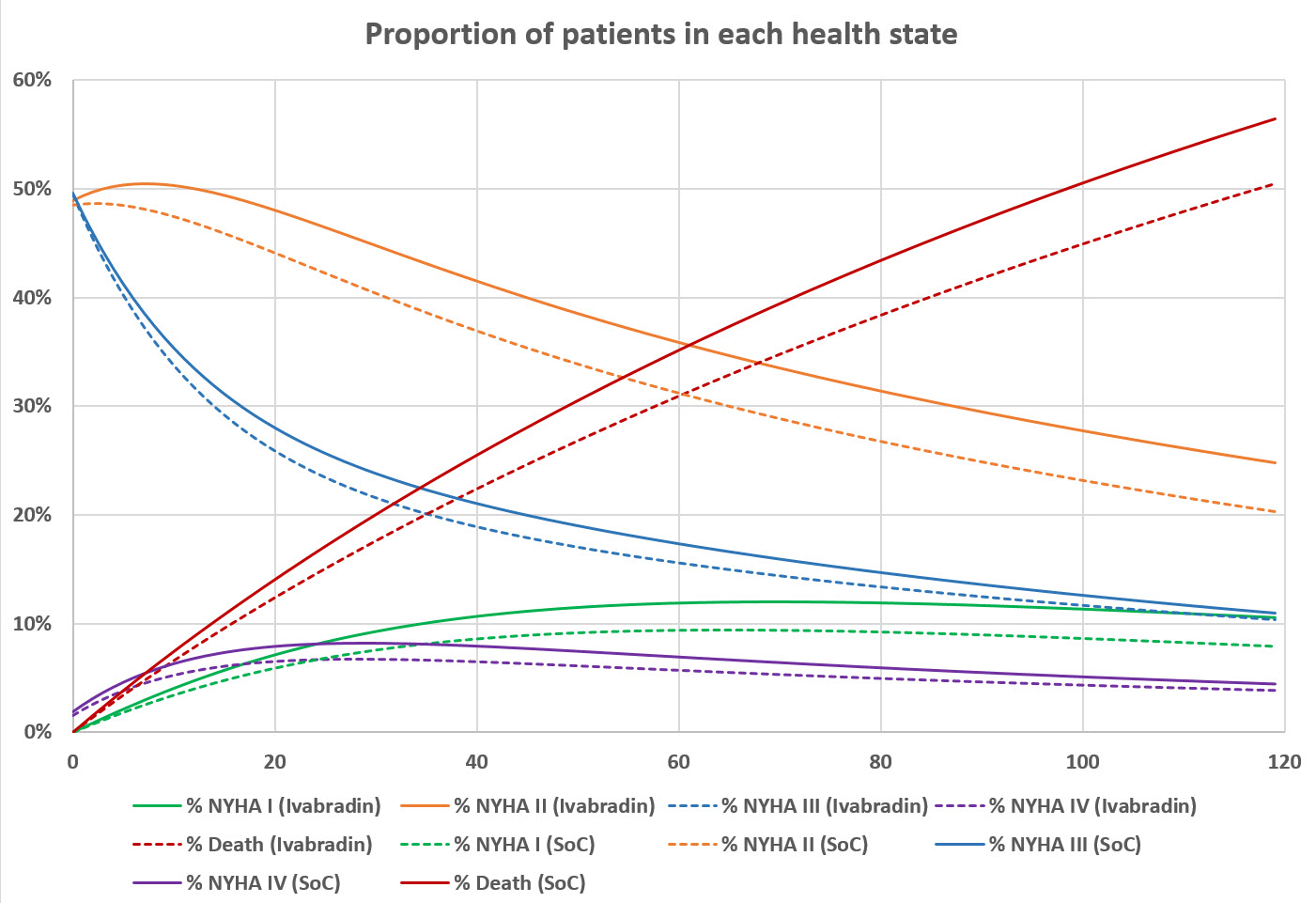
HR\_IVB\_mort: Ivabradine mortality hazard ratio, IVB\_Price: the price for ivabridine, IVB\_i\_Coeff: Ivabradine improvement coefficient, d\_r\_util: utility discount rate, d\_r\_cost: cost discount rate, u\_NYHA\_II: utility applied for NYHA II, RR\_IVB\_hosp: releative risk of hospitalization with ivabradine, u\_NYHA\_I: utility applied for NYHA I, IVB\_w\_Coeff: Ivabradine worsening coefficient, c\_HF\_Management: cost of hart failure management, c\_CCU: cost of a day in cardiac care unit, u\_NYHA\_III: utility applied for NYHA III, u\_NYHA\_IV: utility applied for NYHA IV, c\_ICU: cost of a day in intensive care unit, c\_postCCU: cost of post CCU management, c\_death: associated cost of death, SoC\_Price: associated cost of standard of care, c\_Specialist: cost of specialist visit, LoS: length of stay in hospital



**Supplementary Figure 2.** Incremental cost-effectiveness scatter plot for Ivabradine vs. SoC with a willingness-to-pay line at 1 GDP per capita per QALY



**Supplementary Figure 3.** Cost-effectiveness acceptability curve



**Supplementary Figure 4.** Cumulative proportion of patients in each health state over 120 month (10-year) time horizon.