Supplementary Table 2 Approach to the economic evaluation

| **Source (country), year** | **Base case Perspective** | **Source of efficacy data** | **CE model structure** | **Measure of VN benefit and extrapolation** | **BSC extrapolation** | **Discounting** | **Mortality** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| I.C.E.R. (US), 201816 | Healthcare system | Study 301 2-year data available | 2 state Markov model | Treatment effect is maintained for 10 years followed by a 10-year waning period. During the waning period, visual outcomes changed at a progressively increasing proportion of the BSC rate of change, according to how much of the waning period had passed. For example, in year 1 of the waning period, the change in visual outcome was 1/10 the SoC rate, and in year 2 it was 2/10 and so on. After the waning period ends vision change is at the same rate as BSC. | A function for VA was created by age based on the natural history of disease assuming an exponential functional form. An equivalent method was used to create a function for VF using a linear functional form | 3% costs and benefits | No mortality risk attributed due to vision loss. |
| Uhrmann (Germany), 202024 | Societal | Study 301 4-year data available | 2 state Markov model  | Treatment effect is maintained over a lifetime. | A function for VA was created by age based on the natural history of disease assuming an exponential functional form. An equivalent method was used to create a function for VF using a linear functional form | 3% costs and benefits | No mortality risk attributed due to vision loss. |
| Johnson (US) 201925 | Societal | Study 301 3-year data available | 6 state Markov followed by parametric MSM | Markov transitions from VN arm of study 301 in first 3 years. Parametric multistate model (MSM) based on natural history data after year 3 (Weibull). VN full treatment effect maintained over a lifetime | Parametric MSM based on natural history data after year 3 (Weibull). | 3% costs and benefits | Excess mortality risk associated with visual impairment 33 |
| CADTH (Canada) 202026 | Healthcare system | Study 301 3-year data available | 6 state Markov followed by parametric MSM | Markov transitions from VN arm of study 301 in first year. Parametric MSM based on natural history data after year 1 (Weibull). VN full treatment effect maintenance for 40 years (100% RRR) followed by a linear waning of effect (down to 25% RRR) over a 10-year period and a residual treatment effect (25% RRR) | Parametric MSM based on natural history data after year 1 (Weibull). | 1.5% costs and benefits | Excess mortality risk associated with visual impairment33. |
| NICE(England/Wales), 201919, 20 | Healthcare system | Study 301 3-year data available | 6 state Markov followed by parametric MSM | Markov transitions from VN arm of study 301 in first year. Parametric MSM based on natural history data after year 1 (Weibull). VN full treatment effect maintenance for 40 years (100% RRR) followed by a linear waning of effect (down to 25% RRR) over a 10-year period and a residual treatment effect (25% RRR) | Parametric MSM based on natural history data after year 1 (Weibull). | 3.5% costs and benefits | Excess mortality risk associated with visual impairment33. |
| SMC (Scotland), 202022 | Healthcare system | Study 301 3-year data available | 6 state Markov followed by parametric MSM | Markov transitions from VN arm of study 301 in first year. Parametric MSM based on natural history data after year 1 (Weibull). VN full treatment effect maintenance for 40 years (100% RRR) followed by a linear waning of effect (down to 25% RRR) over a 10-year period and a residual treatment effect (25% RRR) | Parametric MSM based on natural history data after year 1 (Weibull). | NR | Excess mortality risk associated with visual impairment 33 |
| MSAC (Australia), 202021 | Healthcare system | Study 301 3-year data available | 6 state Markov followed by parametric MSM | Markov transitions from VN arm of Study 301 in first 3 years. Parametric MSM based on natural history data after year 1 (Weibull). VN full treatment effect maintenance for 40 years (100% RRR) followed by a linear waning of effect (down to 25% RRR) over a 10-year period and a residual treatment effect (25% RRR) | Parametric MSM based on natural history data after year 1 (Weibull). | 5% costs and benefits | Excess mortality risk associated with visual impairment 33 |
| NCPE (Ireland), 202023 | Healthcare system | Study 301 3-year data available | 6 state Markov followed by parametric MSM | NR | NR | 4% costs and benefits | Excess mortality risk associated with visual impairment 33 |

Abbreviations: BSC, best supportive care; CADTH , Canadian Agency for Drugs and Technologies in Health; I.C.E.R., Institute for Clinical and Economic Review; MSAC, Medical Services Advisory Committee; MSM, multistate model; NCPE, National Centre for Pharmacoeconomics Ireland; NICE, National Institute for Health and Care Excellence; NR, not reported; RRR, relative risk reduction; SMC, Scottish Medicines Consortium; SOC, standard of care; VA, visual acuity; VF, visual field; VN, voretigene neparvovec.