## Table S1: Quality Assessment of Modeling Studies

**Relevance and Credibility of Modeling Studies for Informing Health Care Decision Making**

| Study | Relevance | | | Credibility | | | | | | | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | | Validation | | | | Design | Data | Analysis | | Reporting | Interpretation | Conflict of interest | |
| | Is the population relevant? | Are any critical interventions missing? | Are any relevant outcomes missing? | Is the context (settings and circumstances) applicable? | Is external validation of the model sufficient to make its results credible for your decision? | Is internal verification of the model sufficient to make its results credible for your decision? | Does the model have sufficient face validity to make its results credible for your decision? | Is the design of the model adequate for your decision problem? | Are the data used in populating the model suitable for your decision problem? | Were the analysis performed using the model adequate to inform your decision problem? | Was there an adequate assessment of the effects of uncertainty? | Was the reporting of the model adequate to inform your decision problem? | Was the interpretation of the results fair and balanced? | Were there any potential conflicts of interest? | If there were potential conflicts of interest, were steps taken to address these? |
| **Effectiveness** | | | | | | | | | | | | | | | |
| Emery et al [44] | No | No | No | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No | N/A |
| Grassly et al [45] | Yes | No | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No | N/A |

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| Tsou et al [46] | No | No | No | No | Yes | No | Yes | Yes | No | No | Yes | Yes | Yes | Can't answer | Not reported |
| Mizumoto et al [47] | No | Yes | No | No | Yes | No | Yes | Yes | Yes | Yes | No | Yes | Yes | No | N/A |
| Sasmita et al [48] | No | No | No | No | Yes | No | Yes | Yes | No | No | Yes | Insufficient infor | Yes | No | N/A |

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| Moghadas et al [49] | No | No | No | No | No | No | Yes | Yes | No | Yes | Yes | Yes | Yes | No | N/A |
| Bracis et al [50] | No | No | No | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No | N/A |

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| Pollmann et al [51] | Yes | No | No | Yes | No | No | Yes | Yes | Not enough information | Yes | Yes | Yes | Yes | Can't answer | Not reported |
| Hill et al [52] | Yes | No | No | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | No | N/A |
| Gorji et al [53] | No | No | No | No | No | Yes | Yes | Yes | No | Yes | Yes | Yes | Yes | Can't | Not reported |

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| | | | | | | | | | | | | | | | answer |
| Alsing et al [54] | Yes | No | No | Yes | Yes | Not enough information | Yes | Yes | No | Yes | Yes | Yes | Yes | Can't answer | Not reported |
| **Cost-Effectiveness** | | | | | | | | | | | | | | | |

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Paltiel et al [56] | No | No | No | No | No | No | Yes | Yes | No | Yes | Yes | Yes | Yes | No | N/A |