# TSD 26: EXPERT ELICITATION FOR LONG-TERM SURVIVAL OUTCOMES



## HOW

**Bespoke protocol** integrating survival and hazard judgements

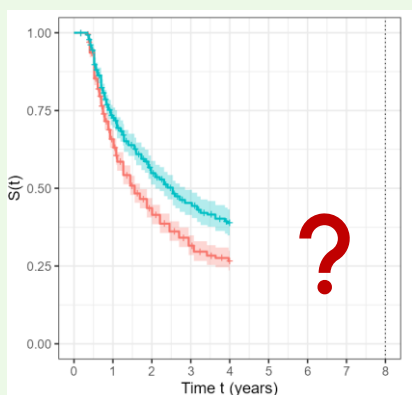**Evidence dossier** summarising relevant information to support the experts when making judgements

**Training** of experts in making probability judgements; survivor and hazard functions; practice elicitation exercise
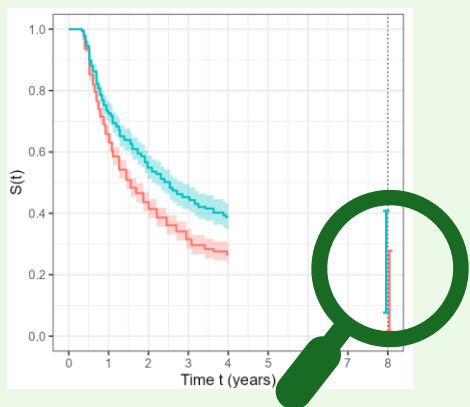
**Panel** of experts, individual elicitation; qualitative and quantitative assessments; scenario testing; aggregation

**Reporting** for full transparency, including the expert recruitment process; hazard discussion; individual and aggregated judgements

## Structured Expert Elicitation



## OUTPUTS

- **Probability distribution** quantifying expert uncertainty
- **Qualitative opinion** about how the hazard may change

## Example protocol adapted from Sheffield Elicitation Framework (SHELF)



**Pre-workshop**
- Recruit experts
- Define quantities of interest
- Prepare evidence dossier

**Elicitation workshop**
- Background and workshop deliverables
- Training and practice exercise
- Re-cap evidence dossier
- Elicitation exercise

**For each quantity of interest**
- Individual judgements
  - Quartile method $(L, Q_1, M, Q_3, U)$
  - SHELF R Package elicitsurvivalExtrapolation()
- Facilitated group discussion
  - Hazard trends
  - Sharing/adjusting individual judgements
  - Discussing expert disagreements
- Agreement on a single set of probability judgements
  - Rational Impartial Observer (RIO) or linear pool
- Distribution fitting and feedback
  - **Fitting:** elicitSurvivalExtrapolation()
  - **Feedback:** 0.01, 0.1, 0.9, 0.99 quantiles

**Post-workshop**
- Experts review of elicitation report
- Dissemination

◆ No interaction between experts/facilitator

▲ Scenario testing Hazard checklist Peer assessment

*For further information, TSD 26 is available from https://www.sheffield.ac.uk/nice-dsu.*