**Table S1**

Summary of the Benchmark dose (BMD) models used in this study

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| --- | --- | --- | --- |
| Model | Risk function, *R*(*d*) |  | Constraints |
| Dichotomous Hill  |  | (T1) | 0 ≤ *g* < 1, 0 < *v* ≤ 1, *β* ≥ 0 |
| Gamma |  | (T2) | *α* ≥ 0, *β* > 0, 0 ≤ *γ* < 1 |
| Logistic |  | (T3) | *β* > 0 |
| Loglogistic |  | (T4) | 0 ≤ *γ* < 1, *β* > 0 |
| Logprobit |  | (T5) | 0 ≤ *γ* < 1, *β* > 0 |
| Multistage |  | (T6) | 0 ≤ *γ* < 1, *β*j ≥ 0 |
| Probit |  | (T7) | *β* > 0 |
| Quantal-linear |  | (T8) | *β* ≥ 0 |
| Weibull |  | (T9) | *α* ≥ 0, *β* > 0 |

Parameter meanings: *d* is the dose; *α* is the power; *β*0 is the intercept; *β*1 is the slope; γ is the background; *v* is the maximum probability of response predicted by the dichotomous Hill model; *g* multiplied by *v* is the background probability of response.