

Table 1: Probabilities used in model

| Probability | Description   | Probability | Range assumed |
|-------------|---|-------------|---------------|
| P1          | Probability of male newborn   | 0.5         |               |
| P2          | Probability newborn is BRCA carrier   | 0.5         |               |
| P3          | Probability that a non-carrier will experience ovarian cancer <sup>13</sup>               | 0.0128      | 0.0005-0.0989 |
| P4          | Probability that a non-carrier will experience breast cancer <sup>14</sup>                | 0.13        | 0.11-0.14     |
| P5          | Probability that carrier will undergo RRSO <sup>20,21</sup>                               | 0.65        | 0.3-0.75      |
| P6          | Probability that BRCA carrier will undergo RRM <sup>25</sup>                              | 0.16        | 0.13-0.3      |
| P7          | Reduction in risk of ovarian cancer from RRSO <sup>26,27</sup>                            | 0.8         | 0.8-0.96      |
| P8          | Probability that BRCA carrier without RRSO will get OC <sup>28</sup>                      | 0.2987      | 0.24-0.35     |
| P9          | Reduction in risk of breast cancer from RRM and RRSO <sup>27</sup>                        | 0.91        | 0.78-0.99     |
| P10         | Probability that a BRCA carrier without RRM will experience breast cancer <sup>28</sup>   | 0.53        | 0.44-0.62     |
| P11         | Reduction in risk of breast cancer from RRSO <sup>22,24,29</sup>                          | 0.0         | 0.37-0.65     |
| P12         | Reduction in breast cancer risk from RRM without RRSO <sup>30</sup>                       | 0.91        | 0.62-0.98     |
| P13         | Probability of live newborn with IVF/PGD (1 cycles of fresh ET and 2 cycles of thawed ET) | 0.84        | 0.7-0.9       |

RRSO: risk reduction salpingo-oophorectomy, RRM: risk reduction mastectomy, IVF: in-vitro fertilization, PGD: pre-gestational diagnosis, ET: embryo transfer

