

## Supplementary Online Content

Long EF, Ganz PA. Cost-effectiveness of universal *BRCA1/2* screening [published online August 27, 2015]. *JAMA Oncol*. doi:10.1001/jamaoncol.2015.2340.

**eFigure.** Decision tree model diagram

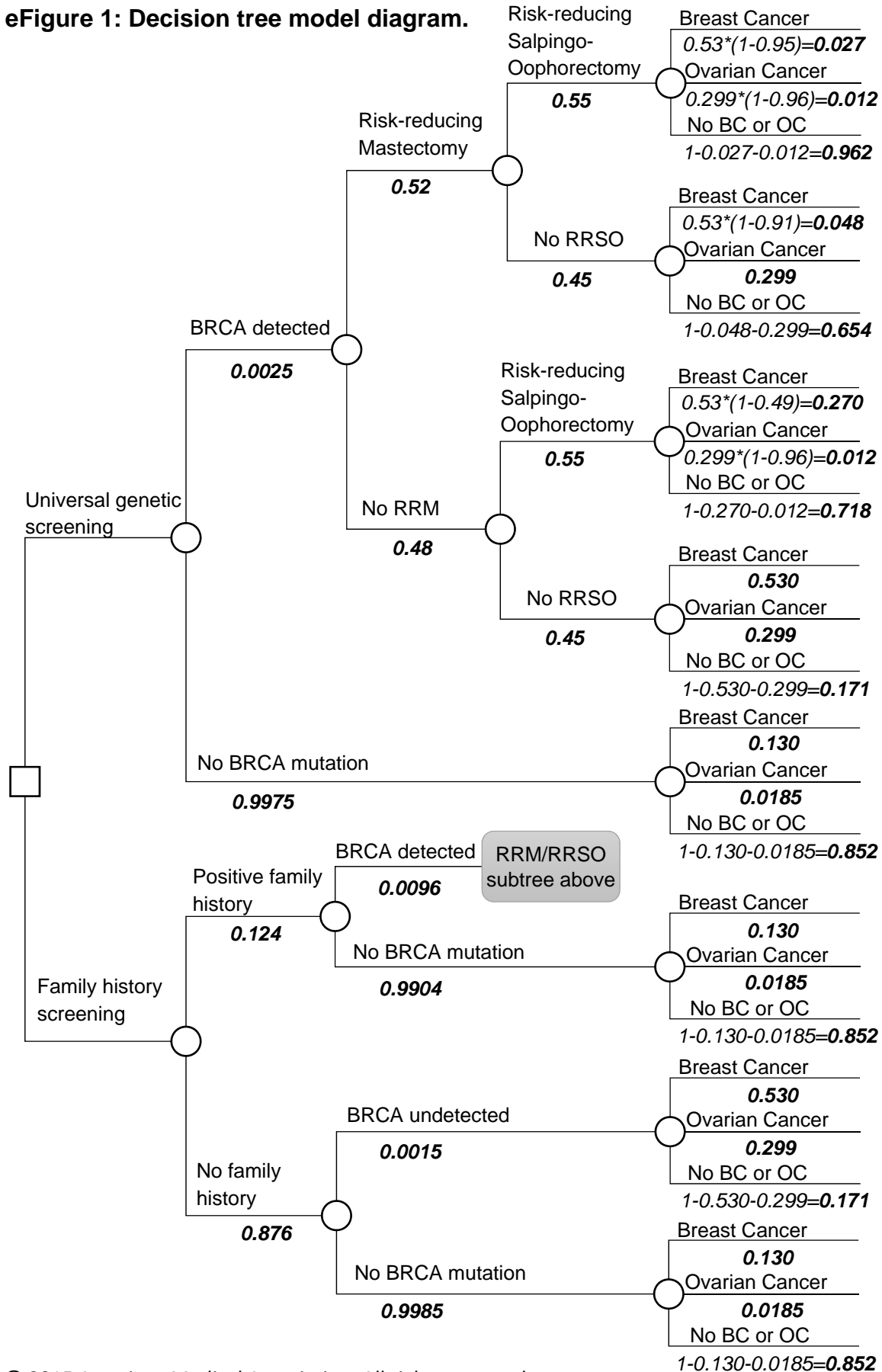
**eTable 1.** Cost assumptions used in model

**eTable 2.** Life expectancy assumptions used in model

**eReferences**

This supplementary material has been provided by the authors to give readers additional information about their work.

**eFigure 1: Decision tree model diagram.**



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All probability values are based on Manchanda et al, 2015.<sup>1</sup>

In this schematic decision tree diagram, square nodes represent decisions, and circle nodes represent chance events.

The conditional probabilities of each event are given below the corresponding branch, and probabilities at each chance node must sum to 1.

The decision tree for screening Ashkenazi Jewish women is similar, except  $P(\text{BRCA detected}) = 0.0245$ .

RRM = risk-reducing mastectomy

RRSO = risk-reducing salpingo-oophorectomy

**eTable 1: Cost assumptions used in model.**

Medical procedure	Total cost (2014 US\$) <sup>a</sup>
BRCA genetic test	
Myriad Genetics (full site analysis)	\$4,040
Myriad Genetics (3 founder mutations)	\$575
Ambry Genetics	\$2,200
Color Genomics	\$249
Newly diagnosed breast cancer (first year)	\$86,013
Ongoing breast cancer (annual)	\$7,547
Terminal care with breast cancer (last year of life)	\$63,790
Newly diagnosed ovarian cancer (first year)	\$124,838
Ongoing ovarian cancer (annual)	\$13,724
Terminal care with ovarian cancer (last year of life)	\$87,218
Mastectomy	\$12,286
Salpingo-oophorectomy	\$7,393
Surveillance (annual)	\$5,192
Terminal care without cancer (last year of life)	\$41,991

<sup>a</sup> All costs except genetic test prices are based on Grann et al, 2011<sup>2</sup> and inflated to 2014 US dollars using the medical component of the consumer price index.

**eTable 2: Life expectancy assumptions used in model.**

Health state <sup>a</sup>	Undiscounted life-years <sup>b</sup>	Discounted QALYs <sup>c</sup>
BRCA mutation carrier, breast cancer	46.9	20.7
BRCA mutation carrier, ovarian cancer	38.2	19.4
BRCA mutation carrier, no breast/ovarian cancer	53.0	23.4
No BRCA mutation, breast cancer	49.2	22.1
No BRCA mutation, ovarian cancer	38.6	19.7
No BRCA mutation, no breast/ovarian cancer	53.0	23.4

<sup>a</sup> All values are based on Manchanda et al, 2015.<sup>1</sup>

<sup>b</sup> Undiscounted life-years refer to the average number of life-years remaining for a woman in the health state.

<sup>c</sup> Discounted quality-adjusted life years (QALYs) are remaining life-years, adjusted for quality-of-life, and discounted to the present at a 3% annual rate.

## eReferences

1. Manchanda R, Legood R, Burnell M, et al. Cost-effectiveness of population screening for BRCA mutations in Ashkenazi Jewish women compared with family history-based testing. *J Natl Cancer Inst.* 2015;107(1):380.
2. Grann VR, Patel PR, Jacobson JS, et al. Comparative effectiveness of screening and prevention strategies among BRCA1/2-affected mutation carriers. *Breast Cancer Res Treat.* 2011;125(3):837-847.