Online appendix to:

Do celebrity endorsements matter? Observational study of BRCA gene testing and mastectomy rates after Angelina Jolie's New York Times editorial

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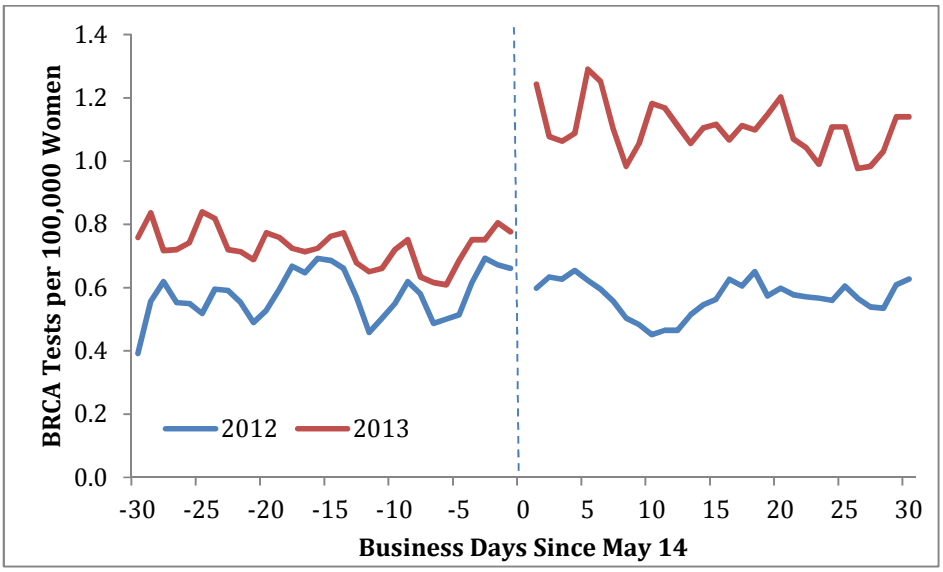
Appendix 1. Characteristics of women who had BRCA test before and after May 14, 2013

	Women who received BRCA testing before the editorial *(n=17,827)*		**Women who received BRCA testing after the editorial** *(n=15,233)*	
Age Categories, years	No.	% of total	No.	% of total
18-25	429	2%	422	3%
26-35	1884	11%	1803	12%
36-45	5129	29%	4415	29%
46-55	6492	36%	5302	35%
56-64	3893	22%	3291	22%
U.S. Census Region				
Northeast	4309	24%	3291	22%
North Central	3464	19%	3206	21%
South	5401	30%	5089	33%
West	4194	24%	3640	24%
Unknown	459	3%	7	0%
Insurance Plan Type				
Preferred Provider Organization	11457	64%	10673	70%
Health Maintenance Organization	2303	13%	1868	12%
Consumer Directed Health Plan	886	5%	986	6%
Other	2478	14%	1021	7%

Appendix 2.

As a sensitivity test, we re-estimated the difference-in-differences analysis using a 30-day before-after window. Rates rose from 0.73 tests per 100,000 women in the 30 business days before May 14 to 1.10 tests in the 30 business days after in 2013. In comparison, daily BRCA test rates were relatively similar in the same period in 2012 (0.58 per 100,000 women in the 30 business days before May 14 versus 0.57 tests per 100,000 in the 30 business days after). This corresponds to an adjusted difference-in-difference absolute *daily* increase of 0.38 tests per 100,000 women, or a 52% relative increase ($p<0.001$). **eFigure1** illustrates daily BRCA rates during this time period.

eFigure1. Daily BRCA Test Rates in 30 Days Before and After May 14, 2013 Jolie Editorial versus control period in 2012



Notes: BRCA tests were identified with CPT codes 81211-81217. In Panel A, a three-day moving average of the testing rate is shown. Daily rates are for the 30 *business* days before and after May 14. Year 2012 rates are shown to serve as a control to account for seasonal trends.

Appendix 3.

We computed national estimates of incremental BRCA tests and expenditures associated with the editorial in the 15 business days following publication by multiplying the difference-in-difference change in BRCA testing by the average dollar reimbursed amount for the test in 2013 (calculated from reimbursements paid by the commercial insurer in our data) and then multiplying these expenditures by the number of commercially-insured women aged 18-64 in the country, as reported in 2013 U.S. Census estimates.[15]

The average cost (the sum of insurer payment and patient out-of-pocket copayments, coinsurance, and deductible amounts paid to the provider) for a BRCA gene test was $3,027 USD in 2013 (approximately £1,952 in 2013). Multiplying this amount by the incremental difference-in-difference increase in the probability of BRCA testing in the 15 business days after Jolie's editorial and a 2013 Census estimate of 67,493,000 commercially-insured women aged 18-64 years suggests that the editorial was associated with approximately 4,500 additional tests nationally and over $13.5 million in incremental expenditures on BRCA tests in the 15 business days following the editorial.