

CORRIGENDUM

Corrigendum to “Cost and Complications of Local Therapies for Early-Stage Breast Cancer” by Benjamin D. Smith et al. *JNCI. J Natl Cancer Inst.* Vol. 109, Issue 1, 2017. doi: 10.1093/jnci/djw178.

In the process of working on a subsequent manuscript, an error in the code written to define the MarketScan cohort was identified. Correcting this error has resulted in a lower total number of patients included in the MarketScan cohort, now $n = 40\,174$ compared to $44\,344$ in the original publication. The reduction in cohort size is primarily due to a lower number of patients treated with mastectomy alone, now $n = 6357$, compared to $11\,432$ in the original publication (see [Table 1](#), revised).

To reflect these changes, the analyses in the manuscript for the MarketScan cohort have been revised. [Figure 1A](#) remains qualitatively similar to the original figure included in the published manuscript. The key finding presented in [Table 2](#), specifically an excess risk of complications with mastectomy and reconstruction compared to lumpectomy and whole breast irradiation, remains essentially unchanged (relative risk [RR] = 1.79, 95% confidence interval [CI] = 1.75 to 1.83; $P < .001$). The only meaningful change to [Table 2](#) is that treatment with mastectomy alone is no longer associated with a lower risk of any local treatment complication (RR = 1.03, 95% CI = 1.00 to 1.07; $P = .09$). [Table 3](#) has been updated and key findings remain stable, for example the adjusted mean complication cost is \$9708 (95% CI = 8401 to 11017) with mastectomy and reconstruction and \$1336 (95% CI = 1193 to 1479) with lumpectomy and whole breast irradiation. [Figure 2A](#) has been updated as well, with key findings qualitatively similar.

Table 1 (Revised). Baseline characteristics by local treatment strategy for the MarketScan cohort*

Variable	Lump+WBI (n = 17 550)		Lump + Brachy (n = 2414)		Lump alone (n = 2229)		Mast alone (n = 6357)		Mast+Recon (n = 11 624)	
	No.	(%)	No.	(%)	No.	(%)	No.	(%)	No.	(%)
Age, y										
<40	615	3.5	5	.2	187	8.4	169	2.7	1221	10.5
40–49	4720	26.9	395	16.4	770	34.5	1221	19.2	4396	37.8
50–59	9096	51.8	1413	58.5	1009	45.3	3376	53.1	4870	41.9
60–64	3119	17.8	601	24.9	263	11.8	1591	25.0	1137	9.8
Type of coverage										
non-HMO	14 430	82.2	2075	86.0	1829	82.1	5093	80.1	9419	81.0
HMO	3120	17.8	339	14.0	400	18.0	1264	19.9	2205	19.0
Covered individual										
Employee	10 848	61.8	1524	63.1	1278	57.3	3726	58.6	6779	58.3
Dependent	6702	38.2	890	36.9	951	42.7	2631	41.4	4845	41.7
Comorbidity										
0	15 860	90.4	2143	88.8	1993	89.4	5492	86.4	10 749	92.5
1	1458	8.3	230	9.5	187	8.4	707	11.1	757	6.5
≥2	232	1.3	41	1.7	49	2.2	158	2.5	118	1.0
Year										
2000	271	1.5	4	.2	110	4.9	244	3.8	226	1.9
2001	303	1.7	1	.0	102	4.6	255	4.0	241	2.1
2002	338	1.9	9	.4	140	6.3	397	6.3	328	2.8
2003	644	3.7	50	2.1	202	9.1	525	8.3	533	4.6
2004	847	4.8	65	2.7	207	9.3	459	7.2	602	5.2
2005	1167	6.7	94	3.9	236	10.6	530	8.3	755	6.5
2006	1255	7.2	184	7.6	211	9.5	541	8.5	823	7.1
2007	2005	11.4	332	13.8	216	9.7	696	11.0	1277	11.0
2008	1975	11.3	391	16.2	182	8.2	639	10.1	1327	11.4
2009	2904	16.6	436	18.1	260	11.7	725	11.4	1836	15.8
2010	3095	17.6	448	18.6	205	9.2	739	11.6	1907	16.4
2011	2746	15.7	400	16.6	158	7.1	607	9.6	1769	15.2
Chemotherapy										
No	10 742	61.2	1946	80.6	1902	85.3	3557	56.0	7337	63.1
Yes	6808	38.8	468	19.4	327	14.7	2800	44.1	4287	36.9
Trastuzumab										
No	16 454	93.8	2328	96.4	2199	98.7	5928	93.3	10 861	93.4
Yes	1096	6.3	86	3.6	30	1.4	429	6.8	763	6.6
Axillary surgery										
No	3631	20.7	531	22.0	1503	67.4	684	10.8	1869	16.1
Yes	13 919	79.3	1883	78.0	726	32.6	5673	89.2	9755	83.9
Bilateral mastectomy										
No	17 550	100	2414	100	2229	100	5701	89.7	8128	69.9
Yes	0	0	0	0	0	0	656	10.3	3496	30.1
Node positive										
No	15 261	87.0	2356	97.6	2100	94.2	5185	81.6	10 174	87.5
Yes	2289	13.0	58	2.4	129	5.8	1172	18.4	1450	12.5
Endocrine therapy										
No	7127	40.6	913	37.8	1641	73.6	3018	47.5	6313	54.3
yes	10 423	59.4	1501	62.2	588	26.4	3339	52.5	5311	45.7

*P value < .001 (chi-square) for all comparisons of treatment strategy by patient and treatment characteristics. Brachy = brachytherapy; HMO = Health Maintenance Organization; Lump = lumpectomy; Mast = mastectomy; WBI = whole breast irradiation.

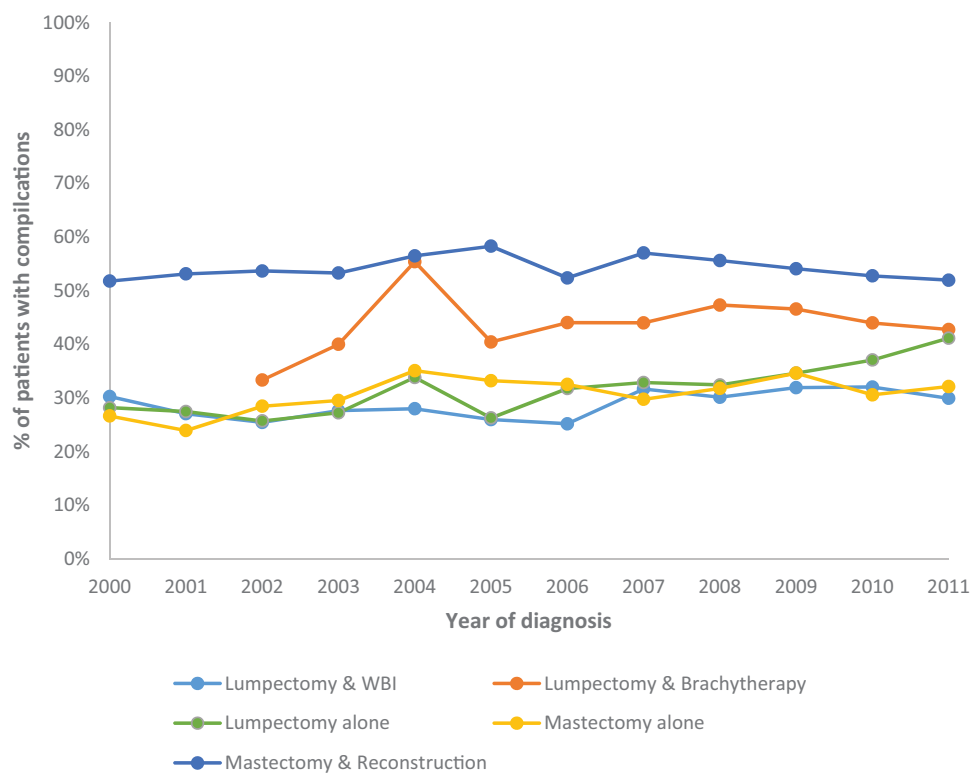


Figure 1A. Complications by year of diagnosis and local therapy (unadjusted) for the Marketscan cohort. Unadjusted time trends in risk of any complication by type of local therapy. Data for lumpectomy plus brachytherapy in 2000 and 2001 are not shown because of small numbers ($n=5$). WBI = whole breast irradiation.

Table 2. Logistic regression model for any local treatment complication*

Variable	RR (95% CI)	P
Local therapy		
Lump+WBI	1 (Ref)	
Lump+Brachy	1.43 (1.38 to 1.49)	<.001
Lump alone	1.07 (1.01 to 1.14)	.01
Mast alone	1.03 (1.00 to 1.07)	.09
Mast+Recon	1.79 (1.75 to 1.83)	<.001
Age, y		
<40	1 (Ref)	
40–49	1.02 (.96 to 1.09)	.42
50–59	1.03 (.97 to 1.08)	.37
60–64	1.04 (.98 to 1.10)	.24
Comorbidity		
0	1 (Ref)	
1	1.25 (1.20 to 1.30)	<.001
2 or higher	1.37 (1.26 to 1.48)	<.001
Chemotherapy		
None	1 (Ref)	
Without trastuzumab	1.09 (1.06 to 1.12)	<.001
With trastuzumab	1.15 (1.09 to 1.21)	<.001

*No patients were excluded. RR = relative risk; CI = confidence interval; Brachy = brachytherapy; Lump = lumpectomy; Mast = mastectomy; Recon = reconstruction; WBI = whole breast irradiation. All P values were two-sided and calculated in the logistic regression models.

Table 3. Unadjusted and Adjusted 2-year Costs by Local Therapy Strategy, Diagnosis years 2010-2011*

Treatment	Unadjusted costs, \$				Adjusted costs, \$			
	Total		Noncomplication		Total		Noncomplication	
	Mean (95% CI)	Median (IQR)	Complication Mean (95% CI)	Noncomplication Mean (95% CI)	Mean (95% CI)	Median (IQR)	Complication Mean (95% CI)	Noncomplication Mean (95% CI)
Lump+WBI	77 314 (75 772 to 78 856)	60 266 (41 228 to 93 905)	1358 (1205 to 1511)	75 883 (74 367 to 77 401)	59 210 (40 374 to 91 950)	68 841 (67 622 to 70 061)	1336 (1193 to 1479)	67 225 (66 043 to 68 407)
Lump+Brachy	72 184 (68 637 to 75 732)	60 339 (39 424 to 89 279)	1631 (1241 to 2021)	70 467 (66 970 to 73 963)	58 805 (38 340 to 87 453)	80 299 (76 554 to 84 045)	1672 (1201 to 2142)	78 621 (74 983 to 82 259)
Lump alone	63 860 (56 672 to 71 048)	53 996 (23 984 to 86 311)	2493 (1676 to 3310)	60 183 (53 012 to 67 354)	46 983 (20 166 to 81 777)	76 313 (69 803 to 82 823)	2604 (1476 to 3732)	73 595 (67 368 to 79 823)
Mast alone	62 229 (58 855 to 65 602)	40 203 (21 332 to 81 796)	2630 (1826 to 3434)	59 481 (56 294 to 62 668)	38 278 (20 193 to 78 658)	52 586 (50 749 to 54 423)	2489 (1960 to 3018)	50 081 (48 351 to 51 812)
Mast+Recon	96 010 (93 569 to 98 451)	75 725 (49 456 to 117 680)	9552 (8759 to 10 345)	85 956 (83 687 to 88 225)	66 404 (43 117 to 105 221)	90 986 (88 925 to 93 046)	9708 (8401 to 11 017)	80 187 (78 379 to 81 995)

*Adjusted costs are adjusted for the variables listed in Table 1. Each cost model was iteratively refined to remove covariables that did not statistically significantly contribute to the model. No patients were excluded from any calculation. All figures are reported in 2014 dollars. Brachy = brachytherapy; CI = confidence interval; Lump = lumpectomy; Mast = mastectomy; Recon = reconstruction; WBI = whole breast irradiation.

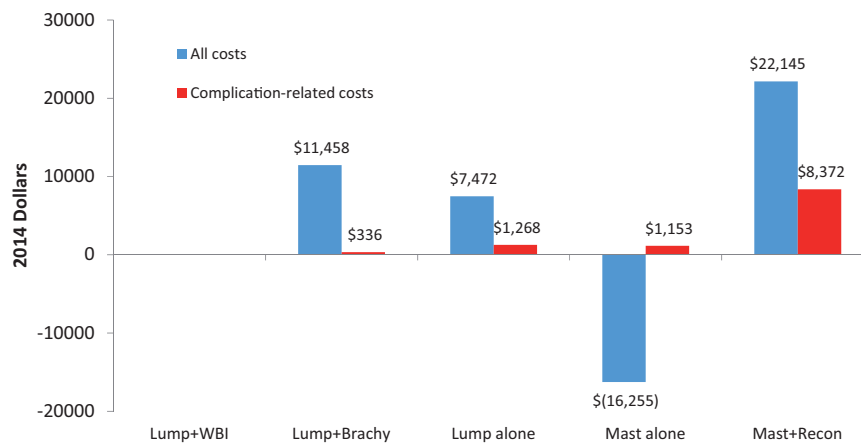


Figure 2A. Adjusted total and complication-related cost relative to lumpectomy and whole breast irradiation for patients diagnosed in 2010 and 2011. Adjusted difference in total cost and complication-related cost of local therapy options, relative to lumpectomy plus whole breast irradiation, for patients diagnosed in 2010 and 2011. Brachy = brachytherapy; Lump = lumpectomy; Mast = mastectomy; Recon = reconstruction; SEER = Surveillance, Epidemiology, and End Results; WBI = whole breast irradiation.