



## Publisher Correction to: Estimates of the effects of centralization policy for surgery in Japan: does centralization affect the quality of healthcare for esophagectomies?

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In the original publication, under Introduction section, the sentence starting with: “In addition,...” should read as:

In addition, the revised Medical Care Act of September 2015 established the "Regional Medical Cooperation Promotion Agency" system [5–6], making it possible for multiple hospitals and nursing care facilities with different management bases to share functions and improve the quality of services as if they were one hospital.

Under the heading Definition of ultra-low-volume hospitals and centralization of Method section, the sentence starting with: “In this study....” should read as:

In this study, based on previous studies and discussions with clinical experts, we defined an "ultra-low-volume hospital" as a hospital with fewer than two esophagectomy cases per year [11, 26].

In Table 3, the value “0.856 (95% CI 0.639–1.147) \**p* = 0.298” should be listed under the year “2014”. The updated Table 3 is given in this correction.

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The original article can be found online at <https://doi.org/10.1007/s00595-021-02245-1>.

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**Table 3** Changes in the number of hospitals performing esophagectomy, cases and crude operative mortality from 2011 to 2016 and their impact on centralization before 2013 and after 2014

		2011	2012	2013	2014	2015	2016
Centralized prefectures※	Number of hospitals performing esophagectomy	232	249	250	225	212	208
	Number of cases of esophagectomy	1672	1925	1855	2108	1997	1982
	Number of cases per hospitals	7.2	7.7	7.4	9.4	9.4	9.5
	Operative mortality	57 (3.4%)	56 (2.9%)	58 (3.1%)	50 (2.4%)	53 (2.7%)	35(1.8%)
	Expected mortality (median and IQR 25–75)	1.83% (1.11–3.71)	1.53% (1.01–2.66)	1.79% (1.01–2.75)	1.66% (1.01–2.68)	1.79% (1.01–2.81)	1.64% (1.01–2.78)
	Number of hospitals with an OE ratio of $\geq 2$	27 (11.6%)	28 (11.2%)	36 (14.4%)	25 (11.1%)	26 (12.3%)	15 (7.2%)
Other prefectures	Number of hospitals performing esophagectomy	451	492	481	498	483	467
	Number of cases of esophagectomy	3245	4023	3839	3984	4061	4059
	Number of cases per hospitals	7.2	8.2	8.0	8.0	8.4	8.7
	Operative mortality	74 (2.3%)	101 (2.5%)	88 (2.3%)	76 (1.9%)	99 (2.4%)	74 (1.8%)
	Expected mortality (median and IQR 25–75)	1.83% (1.08–3.57)	1.79% (1.01–2.77)	1.81% (1.01–2.81)	1.83% (1.01–2.97)	1.83% (1.01–2.97)	1.83% (1.01–2.97)
	Number of hospitals with an OE ratio of $\geq 2$	36 (8.0%)	51 (10.4%)	54 (11.2%)	42 (8.4%)	54 (11.2%)	40 (8.6%)
Difference-in-difference estimator	Ref				0.856 (95% CI 0.639–1.147) * $p=0.298$		

※ Prefectures where the treatment rate at low-volume hospitals decreased by  $\geq 25\%$  between 2011–2012 and 2014–2016

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