

Appendix 1 – Mortality rates according to patient and hospital characteristics

	Patients (N=4,498)	Deaths 320 (7.1%)	P value
Patient characteristics			
Female	988	73 (7.4%)	0.698
Age 65-69	1,627	81 (5.0%)	<0.001
Age 70-79	2,386	173 (7.3%)	
Age \geq 80	485	66 (13.6%)	
Non-white	260	23 (8.8%)	0.267
Non-elective admission	472	75 (15.9%)	<0.001
Charlson score \geq 3	2,484	171 (6.9%)	0.500
Number of hospital beds			
\leq 200 hospital beds	458	43 (9.4%)	0.003
201-400 hospital beds	1,125	102 (9.1%)	
401-600 hospital beds	1,208	87 (7.2%)	
> 600 hospital beds	1,694	86 (5.1%)	
Systems characteristics			
Cardiac ICU	3,378	243 (7.2%)	0.976
Lung transplantation	1,546	68 (4.4%)	<0.001
Kidney transplantation	2,364	121 (5.1%)	<0.001
Bariatric surgery	2,897	189 (6.5%)	0.060
Complex medical oncology services [±]	2,411	112 (4.6%)	<0.001
Cardiac catheterization	3,743	272 (7.3%)	0.417
PET scanner	2,904	169 (5.8%)	<0.001
High nurse ratio	2,087	97 (4.6%)	<0.001
Teaching hospital	2,808	140 (5.0%)	<0.001

[±] indicated by the presence of a bone marrow transplant unit

ICU = intensive care unit; PET = positron emission tomography;

Appendix 2a – Frequency of esophageal lesion location and disease type*

	Upper esophagus	Mid esophagus	Lower esophagus	Other	Unspecified	Cardia	Carcinoma in situ	Barrett's
Low-volume hospital, < 3 characteristics	1.3	6.0	28.6	5.8	5.3	38.1	2.2	13.8
Low-volume hospital, ≥3 characteristics	1.9	5.6	25.0	11.3	4.4	35.6	1.9	14.4
Medium-volume hospital	1.8	5.0	29.8	5.9	3.9	38.3	1.6	20.6
High-volume hospital	1.1	4.6	25.4	7.4	4.1	46.6	0.9	24.0

Appendix 2b – Mortality rate according to esophageal lesion location and disease type *

	Upper esophagus	Mid esophagus	Lower esophagus	Other	Unspecified	Cardia	Carcinoma in situ	Barrett's
Low-volume hospital, < 3 characteristics	5.9	9.2	11.8	20.3	10.5	10.7	7.1	5.1
Low-volume hospital, ≥3 characteristics	0	0	7.5	5.6	14.3	8.8	0	0
Medium-volume hospital	14.8	14.5	4.8	12.1	3.4	5.0	4.2	3.2
High-volume hospital	5.9	4.2	2.3	5.3	9.5	3.1	7.7	1.6

*all numbers are percentages

Appendix 3a – Frequency of esophagectomy type*

	Total esophagectomy	Partial esophagectomy	Esophagectomy not otherwise specified	Intra-thoracic anastomosis
Low-volume hospital, < 3 characteristics	23.2	71.8	5.0	27.7
Low-volume hospital, ≥ 3 characteristics	23.8	66.3	10.6	24.4
Medium-volume hospital	28.4	66.8	4.9	25.5
High-volume hospital	28.5	69.4	2.2	29.6

Appendix 3b – Mortality rate according to esophagectomy type*

	Total esophagectomy	Partial esophagectomy	Esophagectomy not otherwise specified	Intra-thoracic anastomosis
Low-volume hospital, < 3 characteristics	10.8	12.7	18.8	11.6
Low-volume hospital, ≥ 3 characteristics	7.9	7.6	5.9	5.1
Medium-volume hospital	6.7	6.1	8.0	4.9
High-volume hospital	2.5	3.4	11.8	2.6

*all numbers are percentages