

Online Supplementary Materials

Figure S1. Cumulative Density Function for Readmissions within 30 Days in Takotsubo syndrome

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Figure S1. Cumulative Density Function for Readmissions within 30 Days in Takotsubo syndrome

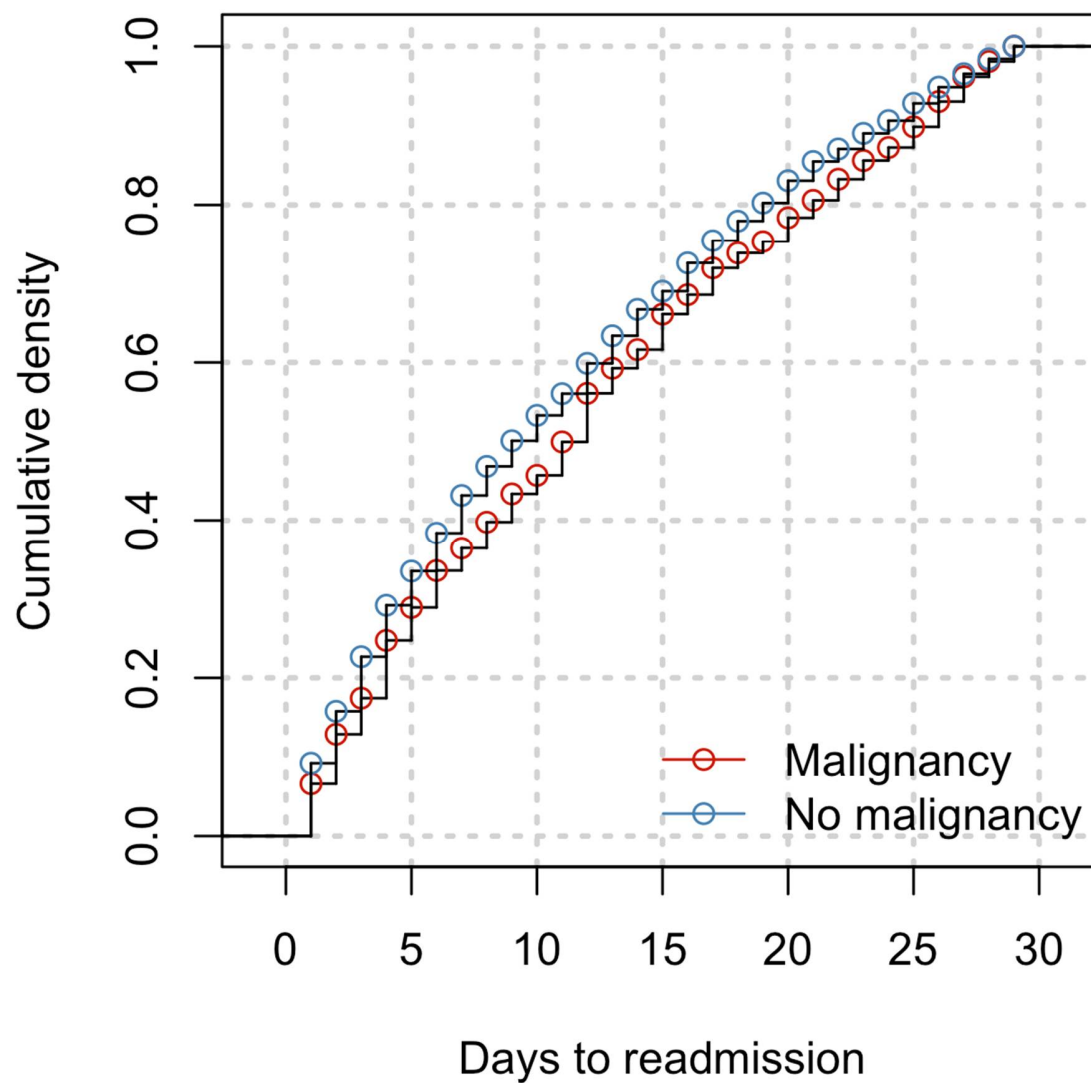


Table S1. Independent Predictors of In-hospital Mortality After Index Hospitalization With Takotsubo Syndrome

Variables	Unadjusted OR	Lower CI	Higher CI	P value	Adjusted OR	Lower CI	Higher CI	P value
Malignancy	1.96	1.56	2.46	<0.001	1.68	1.29	2.17	<0.001
Age≥70 yrs	1.81	1.49	2.19	<0.001	1.85	1.49	2.30	<0.001
Smoking	0.71	0.58	0.88	<0.001	0.72	0.57	0.91	0.006
Fluid and electrolyte	3.80	3.17	4.56	<0.001	2.06	1.67	2.55	<0.01
Pulmonary Circ Disease	3.81	2.65	5.48	<0.001	1.86	1.18	2.93	0.008
Chronic Pulmonary disease	1.41	1.15	1.74	<0.001	1.31	1.04	1.65	0.022
Cardiogenic shock	11.26	9.18	13.82	<0.001	5.80	4.53	7.43	<0.001
Cardiac arrest	16.88	13.10	21.74	<0.001	8.63	6.34	11.76	<0.001
Arrhythmia	2.66	2.19	3.24	<0.001	1.62	1.31	2.01	<0.001

Abbreviations: OR, odds ratio; CI, confidence interval.

Table S2. Independent Predictors of 30-Day Total Mortality After Index Hospitalization With Takotsubo Syndrome*

Variables	Unadjusted OR	Lower CI	Higher CI	P value	Adjusted OR	Lower CI	Higher CI	P value
Malignancy	1.93	1.55	2.42	<0.001	1.62	1.25	2.10	<0.001
Age≥70 yrs	1.87	1.55	2.26	<0.001	1.88	1.51	2.34	<0.001
Smoking	0.75	0.63	0.93	<0.001	0.77	0.62	0.96	0.019
Fluid and electrolyte	3.74	3.14	4.45	<0.001	2.15	1.76	2.63	<0.001
Pulmonary Circ Disease	3.85	2.68	5.55	<0.001	1.90	1.22	2.96	<0.001
Chronic pulmonary disease	1.58	1.31	1.90	<0.001	1.45	1.18	1.79	<0.001
Cardiogenic shock	9.39	7.66	11.51	<0.001	4.82	3.78	6.16	<0.001
Cardiac arrest	14.18	11.08	18.16	<0.001	7.60	5.64	10.26	<0.001
Arrhythmia	2.47	2.05	2.97	<0.001	1.52	1.24	1.85	<0.001
Family Hx of CAD	0.36	0.21	0.63	<0.001	0.58	0.34	0.98	0.042

Abbreviations: OR, odds ratio; CI, confidence interval; CAD, coronary artery disease.

*Thirty-day total mortality included inhospital mortality and 30-day readmission mortality together.

Table S3. Causes of Readmission in all takotsubo syndrome patients

Causes of Readmission	CCS codes	Frequency (%)
Cardiac causes		21.6
Heart failure	108	10.62
Arrhythmia	106	4.70
Angina and Chronic Ischemic Heart Disease	101	2.60
Acute myocardial infarction	100	2.23
Non-specific chest pain	102	1.93
Cardiac arrest	107	1.10
Other cardiac causes		9.0
Other circulatory (heart) disease/Complication of hypertension	98, 99, 104, 117	2.83
Syncope	245	0.73
Myocarditis/pericarditis	97	0.70
Valvular heart disease	96	0.45
Conduction disorder	105	0.40
Non-cardiac causes		69.4
Infectious	2, 4, 122, 135, 148, 159, 197, 201	19.76
Respiratory	103, 127, 128, 129*, 130, 131, 133, 134	12.44
Others	81, 85, 199, 205, 211, 212, 231, 248, 251, 252, 259, N/S	6.9
Gastrointestinal	120, 138, 140, 141, 145, 146, 149, 151, 152, 153, 154, 155, 230, 246, 250	6.39
Endocrine/Metabolic	50, 51, 55, 58	4.4
Neuropsychiatric/Substance	83, 95, 242, 653, 657, 659, 660, 661	3.42
Genitourinary	157, 158, 163, 164	3.08
Hematologic/oncologic	19, 42, 45, 59, 60, 62	1.99
Stroke/Transient ischemic attack	109, 110, 112, 113	1.56
Peripheral vascular disease	114, 115, 116, 118	1.48
Trauma	226, 233, 234, 244	1
Complication of medical procedure or implant/graft	237, 238	8.8
Rehabilitation	254	1.14

*Aspiration pneumonitis (CCS 129) was included in the respiratory problem.

Table S4. Causes of Readmission in takotsubo syndrome patients with malignancy

Causes of Readmission	CCS codes	Frequency (%)
Cardiac causes		18.3
Heart failure	108	8.1
Arrhythmia	106	4.9
Angina and Chronic Ischemic Heart Disease	101	1.8
Acute myocardial infarction	100	0.8
Non-specific chest pain	102	2.6
Cardiac arrest	107	0.1
Other cardiac causes		6.2
Other circulatory (heart) disease/Complication of hypertension	98, 99, 104, 117	4.3
Syncope	245	0.2
Myocarditis/pericarditis	97	1.6
Valvular heart disease	96	0.1
Conduction disorder	105	0
Non-cardiac causes		75.5
Infectious	2, 4, 122, 135, 148, 159, 197, 201	20.1
Respiratory	103, 127, 128, 129*, 130, 131, 133, 134	8.4
Others	81, 85, 199, 205, 211, 212, 231, 248, 251, 252, 259, N/S	10.9
Gastrointestinal	120, 138, 140, 141, 145, 146, 149, 151, 152, 153, 154, 155, 230, 246, 250	7.8
Endocrine/Metabolic	50, 51, 55, 58	3.1
Neuropsychiatric/Substance	83, 95, 242, 653, 657, 659, 660, 661	3.8
Genitourinary	157, 158, 163, 164	4.6
Hematologic/oncologic	19, 42, 45, 59, 60, 62	6.7
Stroke/Transient ischemic attack	109, 110, 112, 113	2.5
Peripheral vascular disease	114, 115, 116, 118	1.2
Trauma	226, 233, 234, 244	0.9
Complication of medical procedure or implant/graft	237, 238	5.5
Rehabilitation	254	0

*Aspiration pneumonitis (CCS 129) was included in the respiratory problem.

Table S5. Causes of Readmission in takotsubo syndrome patients without malignancy

Causes of Readmission	CCS codes	Frequency (%)
Cardiac causes		22.3
Heart failure	108	11.14
Arrhythmia	106	3.29
Angina and Chronic Ischemic Heart Disease	101	2.42
Acute myocardial infarction	100	1.67
Non-specific chest pain	102	3.5
Cardiac arrest	107	0.28
Other cardiac causes		9.5
Other circulatory (heart) disease/Complication of hypertension	98, 99, 104, 117	6.46
Syncope	245	0.87
Myocarditis/pericarditis	97	1.55
Valvular heart disease	96	0.35
Conduction disorder	105	0.27
Non-cardiac causes		68.1
Infectious	2, 4, 122, 135, 148, 159, 197, 201	12.04
Respiratory	103, 127, 128, 129*, 130, 131, 133, 134	12.41
Others	81, 85, 199, 205, 211, 212, 231, 248, 251, 252, 259, N/S	8.8
Gastrointestinal	120, 138, 140, 141, 145, 146, 149, 151, 152, 153, 154, 155, 230, 246, 250	9.45
Endocrine/Metabolic	50, 51, 55, 58	3.7
Neuropsychiatric/Substance	83, 95, 242, 653, 657, 659, 660, 661	4.75
Genitourinary	157, 158, 163, 164	3.62
Hematologic/oncologic	19, 42, 45, 59, 60, 62	0.99
Stroke/Transient ischemic attack	109, 110, 112, 113	3.96
Peripheral vascular disease	114, 115, 116, 118	2.33
Trauma	226, 233, 234, 244	1.2
Complication of medical procedure or implant/graft	237, 238	4.85
Rehabilitation	254	0.11

*Aspiration pneumonitis (CCS 129) was included in the respiratory problem.

Tale S6. Costs and Charges over 30-days after Index Hospitalization for Takotsubo syndrome with or without Malignancy

Outcomes	Overall	TTS with malignancy	TTS without malignancy	P Value†
Number of patients, n (%)	61583 (100)	7542 (12.2)	54041 (87.8)	
Charge (index hospitalization), \$	39498 (25935-68521)*	46876 (28416-87536)	38593 (25481-66425)	<0.001
Cumulative charges (index hospitalization + 30-day readmission), \$	41830 (26501-75167)	50936 (29819-97989)	40735 (26160-72619)	<0.001
Cost (index hospitalization), \$	11427 (7999-17933)	13344 (8909-24171)	11194 (7900-17933)	<0.001
Cumulative costs (index hospitalization + 30-day readmission), \$	11998 (8181-20564)	14686 (9294-27337)	11704 (8065-19630)	<0.001

Abbreviations: TTS, Takotsubo syndrome.

*All values are shown as a median (interquartile range).

†Mann-Whitney-Wilcoxon test was used in all comparisons.