Supplemental Materials

Table S1. ICD-10 Admission & Principal Diagnosis Codes Included in Each Etiology Group. *ICD = international classification of disease; AMI = acute myocardial infarction; AHF = acute heart failure; ARDS = acute respiratory distress syndrome.*

Etiology	**ICD-10 Diagnosis Codes**	
AMI	I20.0, I20.9, I21.01, I21.02, I21.09, I21.11, I21.19, I21.21, I21.29, I21.3, I21.4, I21.9, I21.A1, I21.A9, I22.2, I24.9, I25.10, I25.110, I25.118, I25.119, I25.5, I25.9, I20.8, I22.0, I22.8, I24.8, I25.810, I23.0, I23.2, I23.3, I23.8, I24.0, I25.42, R93.1, T82.855A, T82.857A, T82.867A, Z82.49, Z98.61, R07.89, R07.9 I50.9	
AHF	Heart Failure	I50.9, I09.81, I11.0, I13.0, I13.2, I50.1, I50.20, I50.21, I50.22, I50.23, I50.30, I50.31, I50.33, I50.40, I50.41, I50.43, I50.810, I50.811, I50.813, I50.814, I50.82, I97.130, I97.131, J81.0, J81.1, I50.84, I31.9, I40.0, I40.9, I42.0, I42.2, I42.8, I42.9, I51.4, I51.7, I51.81, O90.3, O99.42, Z94.1, Z95.811, B57.2, I40.8, I42.6, I42.7, O99.43
	Arrhythmia	I47.1, I47.2, I48.0, I48.1, I48.19, I48.20, I48.3, I48.91, I48.92, I49.01, I49.3, I49.5, I49.8, I49.9, R00.0, R00.1, R00.2, I48.21, I44.1, I45.5, I45.9, R94.31, I44.2, I44.30
	Valvular disorders	I05.0, I05.1, I05.9, I06.0, I07.1, I08.0, I08.1, I08.3, I34.0, I34.1, I34.8, I34.9, I35.0, I35.1, I35.2, I35.9, Q23.0, Q23.1, I05.2, I33.0, I33.9, I34.2, I35.8, I36.1, I37.1, I38 T82.03XA, T82.09XA, T82.228A, T82.6XXA, T82.01XA, T82.221A, T82.310A
Other	Spesis/Infection	A09, A32.7, A40.0, A40.1, A40.3, A40.8, A40.9, A41.01, A41.02, A41.1, A41.3, A41.4, A41.50, A41.51, A41.52, A41.53, A41.59, A41.81, A41.89, A41.9, A48.1, A49.9, B02.7, B19.20, B34.9, J06.9, J12.1, J12.9, J15.8, J15.9, J18.1, J18.9, J20.9, J85.1, O98.52, R65.21, T80.211A, T80.212A, T81.42XA, T81.44XA, U07.1, B20, B33.8, B37.7, J10.01, J10.08, J10.1, J12.89, J15.211, J15.6, J20.8, T80.218A, T80.29XA, T81.41XA, T81.43XA, T81.4XXA, T83.511A, T83.512A, T83.518A, T83.592A
	Surgical	I71.00, I71.01, I71.02, I71.03, I71.1, I71.2, I71.3, I71.4, I71.6, I71.8, I71.9, I74.09, I74.11, I77.810, I97.190, I97.51, I97.621, I97.790, I97.88, I97.89, Q25.43, Q25.49, T82.330A
	Pulmonary Embolism	I23.6, I26.02, I26.09, I26.90, I26.92, I26.93, I26.94, I26.99, I27.82, I82.220, I82.403, I82.409, I82.432, I82.441, I82.4Z2, I82.622, I87.8
	Cardiac Arrest	I46.8, I46.9, I97.120, I97.121, I97.711
	ARDS	J80, J96.00, J96.01, J96.02, J96.20, J96.21, J96.22, J96.90, J96.91, J96.92, J98.9, R06.03, R09.2
	Kidney Disease	I12.0, I12.9, I13.10, N17.0, N17.8, N17.9, N18.3, N18.6, N18.9, N19

Other Cardiac Diagnosis	D15.1, I25.3, I27.9, I30.8, I30.9, I31.1, I31.2, I31.3, I31.4, I51.1, I51.3, I51.89, I51.9, I73.9, I74.3, I74.2, I74.5, I74.9, I77.9, I99.8, M32.12, O9A.12, Q21.0, Q21.1, Q21.3, Q23.4, R09.89, R94.30, R94.39, T82.110A, T82.118A, T82.120A, T82.190A, T82.198A, T82.41XA, T82.42XA, T82.518A, T82.524A, T82.594A, T82.598A, T82.818A, T82.838A, T82.897A, T82.898A, T82.9XXA, Z45.010, Z45.02, Z95.810
Other Non-Cardiac Diagnosis	000.00, A04.72, A15.0, A24.9, A26.7, A48.0, B01.11, B19.9, B37.81, B96.5, C13.9, C15.4, C15.9, C16.8, C17.0, C18.0, C18.4, C18.6, C18.7, C18.9, C19, C21.8, C25.0, C25.2, C34.02, C34.11, C34.12, C34.90, C34.91, C34.92, C38.0, C40.21, C48.0, C49.3, C54.1, C55, C61, C64.1, C67.9, C70.1, C71.9, C77.1, C78.00, C78.01, C78.6, C78.7, C79.31, C79.51, C7A.1, C80.1, C82.90, C83.30, C83.32, C83.39, C84.48, C85.10, C85.11, C85.18, C85.89, C85.90, C85.91,C85.95, C86.5, Other C90.00, C91.00, C91.10,C91.50, C91.51, C91.92, C92.00, C92.Z0, C95.90, D32.0, D35.01, D35.1, D35.2, D3A.090, D3A.8, D46.9, D50.0, D57.00, D57.01, D59.1, D59.13, D61.810, D61.818, D62, D64.9, D65, D68.32, D68.9, D69.3, D69.6, D70.9, D72.829, D86.0, D86.89, E03.5, E05.01, E10.10, E11.00, E11.10, E11.22, E11.43, E11.51, E11.52, E11.621, E11.649, E11.65, E11.69, E15, E16.2, E22.2, E32.8, E66.01, E72.20, E80.6, E83.42, E83.51, E83.52, E83.59, E85.2, E85.4, E85.81, E85.82, E86.0, E86.9, E87.0, E87.1, E87.2, E87.5, E87.70, E87.79, E87.8, E88.09, E88.3, F10.10, F10.120, F10.221, F10.231, F10.239, G00.8, G04.81, G06.2, G40.101, G40.401, G40.89, G40.901, G40.909, G45.1, G45.9, G58.8, G70.01, G89.11, G92, G93.1, G93.40, G93.41, G93.49, G93.6, G93.89, G95.29, H50.07, H53.9, I10, I16.0, I16.1, I27.0, I27.20, I27.21, I27.24, I27.29, I28.8, I60.00, I60.11, I60.2, I60.31, I60.4, I60.7, I60.8, I60.9, I61.1, I61.5, I61.8, I61.9, I62.00, I62.01, I62.9, I63.12, I63.211, I63.212, I63.231, I63.233, I63.311, I63.40, I63.411, I63.433, I63.50, I63.511, I63.512, I63.519, I63.521, I63.59, I63.89, I63.9, I65.1, I65.22, I65.29, I67.1, I67.89, I69.398, I70.201, I70.203, I70.211, I70.222, I70.232, I70.234, I70.261, I70.421, I72.4, I72.9, I77.71, I77.74, I81, I85.01, I96, J36, J39.8, J43.9, J44.0, J44.1, J45.51, J45.901, J45.902, J68.1, J69.0, J69.8, J70.2, J84.10, J84.112, J85.2, J86.0, J86.9, J90, J91.8, J93.0, J93.9, J94.2, J95.03, J95.811, J95.830, J95.89, J98.4, J98.51, J98.59, J98.8, K11.20, K11.21, K20.91, K22.3, K25.1, K25.4, K25.5, K25.6, K26.0, K26.4, K26.5, K26.6, K29.01, K31.1, K31.811, K31.82, K35.80, K40.30, K41.40, K42.0, K43.0, K43.1, K43.2, K43.3, K43.5, K43.6, K43.9, K45.0, K45.8, K46.0, K52.9, K55.019, K55.039, K55.059, K55.1, K55.21, K55.8, K55.9, K56.1, K56.2, K56.41, K56.5, K56.50, K56.60, K56.601, K56.609, K56.69, K56.691, K56.7, K57.20, K57.31, K57.33, K57.40, K57.91, K57.92, K58.0, K59.00, K62.5, K62.89, K63.1, K65.1, K65.9, K66.1, K66.8, K70.30, K70.31, K70.40, K70.9, K71.10, K71.11, K72.00, K72.01, K72.90, K74.60, K74.69, K75.0, K76.1, K76.7, K80.00, K80.20, K80.30, K80.31, K80.50, K80.71, K81.0, K81.9, K82.8, K83.09, K83.3, K85.10, K85.12, K85.20, K85.21, K85.90, K86.1, K91.840, K92.0, K92.1, K92.2, K92.9, K95.89, L02.214, L02.511, L02.91, L03.115, L03.116, L03.119, L03.90, L08.9, L29.9, L76.22, L76.34, L89.150, L89.159, L97.101, L97.509, L97.519, L98.492, M00.011, M10.9, M17.11, M17.12, M25.511, M25.519, M25.551, M25.561, M31.1, M33.12, M35.81, M35.9, M40.205,

		M40.209, M43.9, M46.27, M48.06, M48.061, M48.062, M48.56XA, M50.20, M51.16, M54.16, M54.2, M54.9, M62.82, M66.862, M71.551, M72.6, M79.602, M79.604, M79.605, M79.606, M79.609, M79.662, M79.671, M79.89, M80.052A, M80.88XA, M84.40XA, M84.551A, M84.552A, M84.562A, M84.58XA, M86.10, M86.171, M86.642, M89.18, M97.11XA, N05.8, N10, N12, N13.6, N14.1, N20.0, N25.9, N28.9, N30.01, N30.90, N32.1, N32.89, N36.5, N39.0, N39.3, N48.89, N49.3, N76.89, N81.3, N82.3, N82.4, N92.0, N93.9, N95.0, O75.3, O9A.212, P76.9, Q27.33, Q43.0, R04.0, R04.2, R04.89, R05, R06.2, R06.89, R09.02, R10.11, R10.13, R10.31, R10.84, R10.9, R11.0, R11.10, R11.15, R11.2, R13.10, R13.13, R14.0, R17, R18.8, R19.00, R19.01, R19.7, R22.2, R22.43, R23.0, R25.1, R26.2, R26.81, R26.89, R26.9, R29.6, R29.810, R29.898, R29.90, R31.0, R31.9, R40.1, R40.20, R40.4, R41.0, R41.82, R41.89, R42, R47.01, R47.1, R47.81, R50.9, R51, R52, R53.1, R53.81, R53.83, R55, R56.1, R56.9, R57.1, R57.8, R57.9, R58, R59.1, R60.0, R60.1, R60.9, R62.7, R63.0, R63.8, R68.0, R68.89, R73.9, R74.0, R74.01, R74.8, R77.8, R78.81, R79.1, R79.89, R91.1, R91.8, R94.8, S00.83XA, S01.81XA, S02.2XXA, S02.80XA, S06.339A, S06.4X0A, S06.5X0A, S06.5X9A, S06.6X0A, S06.6X9A, S09.90XA, S12.111A, S12.120A, S15.121A, S21.431A, S22.009A, S22.069A, S22.081A, S22.20XA, S22.31XA, S22.39XA, S22.41XA, S22.42XA, S22.43XA, S22.49XA, S27.1XXA, S32.19XA, S32.511A, S32.591A, S32.599A, S32.810A, S36.031A, S36.032A, S36.899A, S39.91XA, S42.201K, S46.221A, S70.11XA, S72.001A, S72.002A, S72.009A, S72.012A, S72.021A, S72.041A, S72.091A, S72.092A, S72.111A, S72.141A, S72.142A, S72.145A, S72.21XA, S72.341A, S72.401A, S72.452A, S72.491A, S72.492A, S72.91XA, S73.005A, S76.112A, S80.11XA, S82.109C, S82.142C, S82.252A, S82.842C, S82.892B, T07, T14.8, T14.8XXA, T14.90, T14.90XA, T14.91XA, T17.820A, T17.890A, T17.908A, T17.920A, T17.928A, T22.391A, T24.311A, T30.0, T40.1X1A, T40.1X4A, T40.2X1A, T40.3X2A, T40.5X1A, T42.1X1A, T42.4X1A, T42.4X2A, T42.4X4A, T43.212A, T43.591A, T43.594A, T43.621A, T44.7X1A, T44.7X2A, T44.8X1A, T44.901A, T45.0X2A, T45.511A, T46.0X1A, T46.1X1A, T46.1X1S, T46.1X2A, T46.5X1A, T46.5X2A, T50.4X2A, T50.4X4A, T50.901A, T50.902A, T50.991A, T53.6X4A, T56.891A, T67.5XXA, T68.XXXA, T71.162A, T71.164A, T78.2XXA, T78.3XXA, T79.4XXA, T79.6XXA, T79.A0XA, T79.A21A, T79.A22D, T81.30XA, T81.31XA, T81.32XA, T81.595A, T81.718A, T81.719A, T81.83XA, T81.89XA, T81.9XXA, T84.125A, T85.611A, T85.868A, T86.19, T86.5, T87.43, T87.44, T87.54, T87.89, T88.6XXA, V87.7XXA, Z04.3, Z20.828, Z34.80, Z41.8, Z45.2, Z47.33, Z51.11, Z51.5, Z51.89, Z68.42, Z82.3, Z86.711, Z90.10, Z92.81

Table S2. ICD-10 Procedure Codes. *LHC = left heart catheterization; RHC = right heart catheterization; SWAN = swan-ganz catheterization; PCI = percutaneous coronary intervention; CABG = coronary artery bypass graft; VA ECMO = Veno-arterial extracorporeal membrane oxygenation; MCS = percutaneous temporary mechanical circulatory support; IABP = intra-aortic balloon pump; pVAD = percutaneous ventricular assist device, LVAD = left ventricular assist device*

Procedure	**ICD-10 Procedure Codes**	
LHC	4A023N7, 4A023N8, B2111ZZ, B211YZZ, B2161ZZ, B216YZZ, B2151ZZ, B215YZZ, B2181ZZ, B218YZZ, B2131ZZ, B213YZZ, B21F1ZZ, B2121ZZ, B2101ZZ, B210110	
PAC	4A023N6, 4A023N8, B2141ZZ, B31S1ZZ, B31U1ZZ, B214YZZ, B2161ZZ, B216YZZ, B2171ZZ, 5A12012, B31TYZZ, 02HR32Z, 02HQ33Z, 02HR33Z, 02HP32Z, 02HQ02Z, 02HQ32Z, 4A133B3, 5A1221Z	
PCI	027337Z, 027037Z, 027036Z, 02703FZ, 027035Z, 02703EZ, 0270346, 0270356, 027034Z, 0270456, 02703DZ, 02703Z6, 02703ZZ, 027237Z, 027236Z, 0272356, 0272346, 027234Z, 02723ZZ, 027137Z, 027136Z, 027135Z, 02713EZ, 0271376, 0271366, 0271356, 027134Z, 02713DZ, 02714E6, 02713ZZ, 02C03ZZ, X2C2361, 02C13Z6, X2C1361, 02C13ZZ, 0271346, 0273346, 0270366, 027046Z, 02C00ZZ	
CABG	021309W, 02130Z9, 0210093, 0210099, 02100AW, 02100KW, 02100JW, 02100J3, 02100Z3, 02100A9, 02100Z9, 02100Z8, 02100AC, 02100ZC, 0212093, 0212099, 021209W, 0211093, 0211099, 02110AW, 021109W, 021009W, 02110KW, 02110JW, 02100K8, 02110Z9, 02110Z8, 02110AC, 0213099, 02100A8, 021009C, 02120Z9, 02110A8, 02110Z3	
Valve Procedure	025G3ZZ, 027F3ZZ, 02BF0ZZ, 02BG0ZX, 02BG0ZZ, 02BJ0ZZ, 02CF0ZZ, 02CG0ZZ, 02CJ0ZZ, 02QF0ZZ, 02QG0ZZ, 02QJ0ZZ, 02RF07Z, 02RF08Z, 02RF0KZ, 02RF38Z, 02RF3JZ, 02RG08Z, 02RG0JZ, 02RG0KZ, 02RH0KZ, 02RJ08Z, 02UF08Z, 02UF0JZ, 02UF0KZ, 02UG07Z, 02UG08Z, 02UG0JZ, 02UG3JZ, 02UJ0JZ, 0DBC8ZX, X2RF032, 02RG3JH, 02RH08Z, 02RJ38Z, 02UJ3JZ, 02UJ4JZ, 02VG0ZZ, 02WG0JZ	
MCS	IABP	5A02210, 5A02110
	pVAD	5A0221D, 02HA3RZ, 02HA4RZ, 02HA3RJ, 02HA0RZ, 5A0211D, 02HA3RS
	VA ECMO	5A15223, 5A1522G, 5A1522F, 5A02216
	Protek Duo	02HA3QZ
	LVAD	02HA0QZ
Heart Transplant	02YA0Z0	

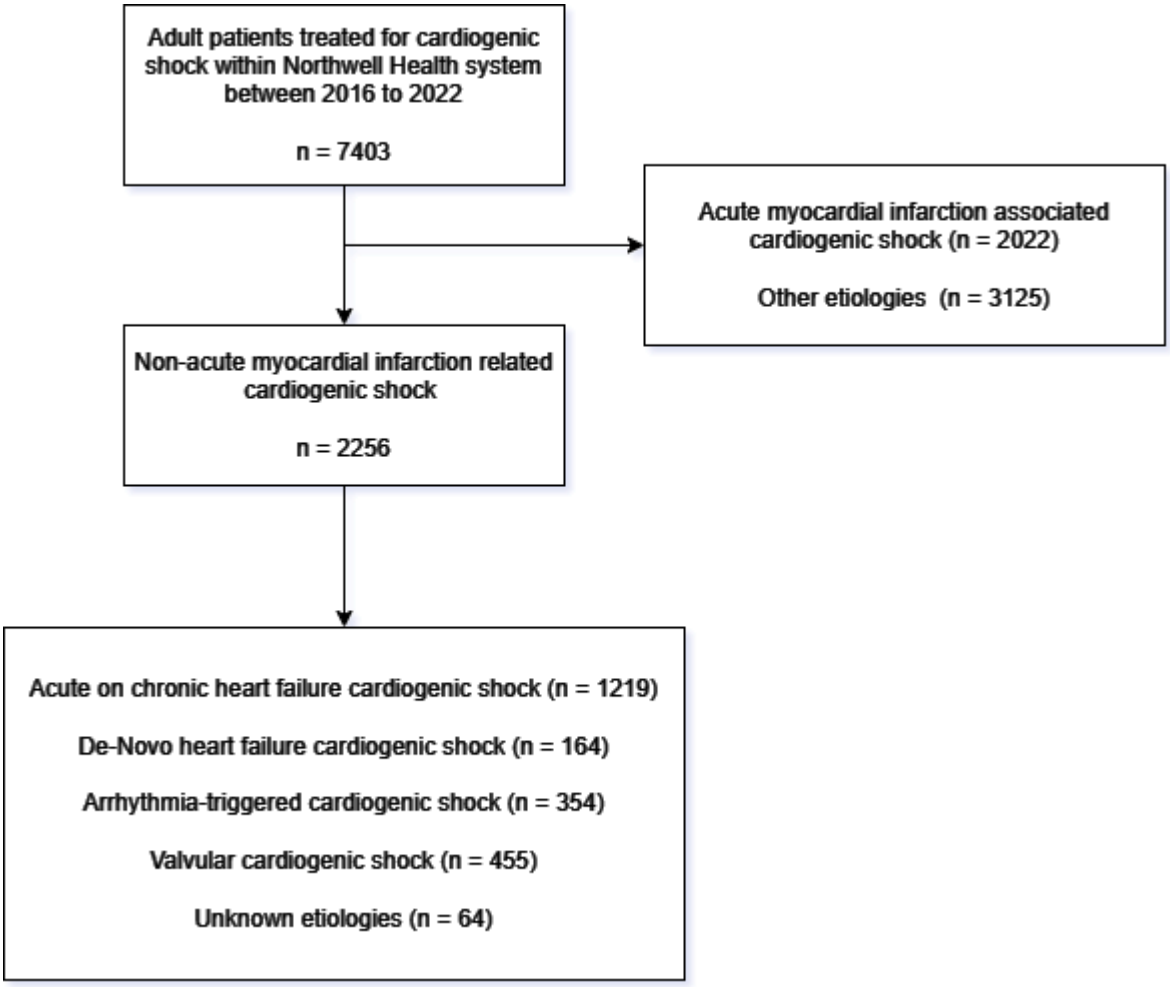


Figure S1. Patients included in the study cohort

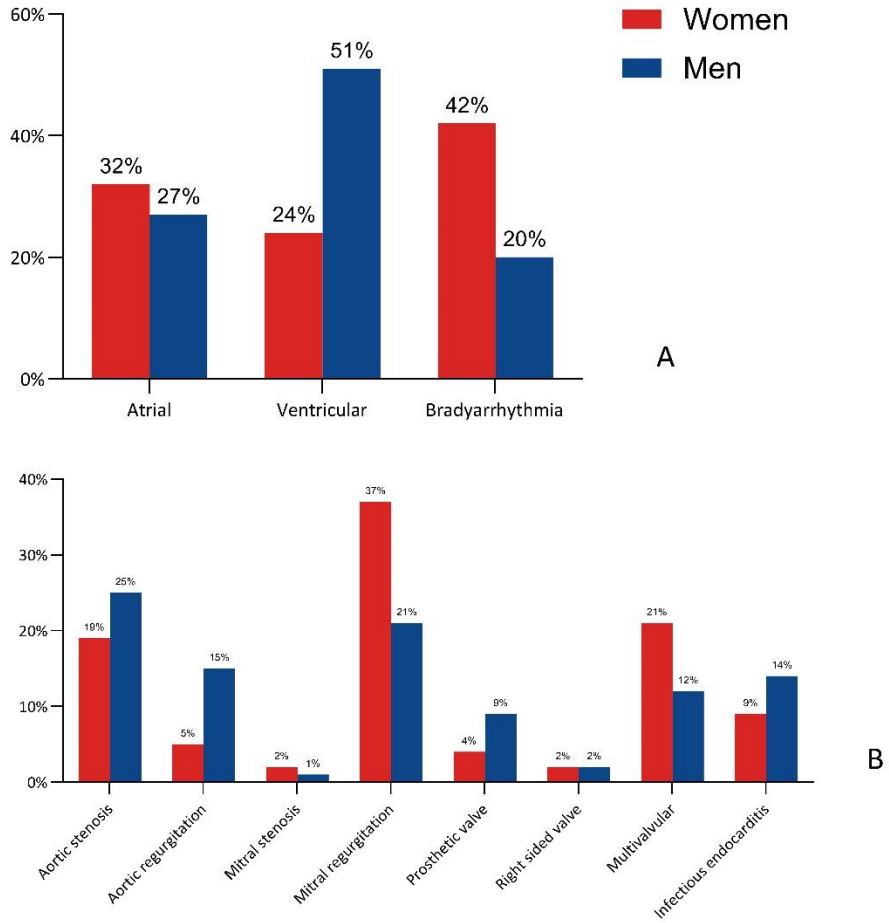


Figure S2. Sub-etiologies of arrhythmic (Panel A) and valvular (Panel B) related cardiogenic shock by patient sex

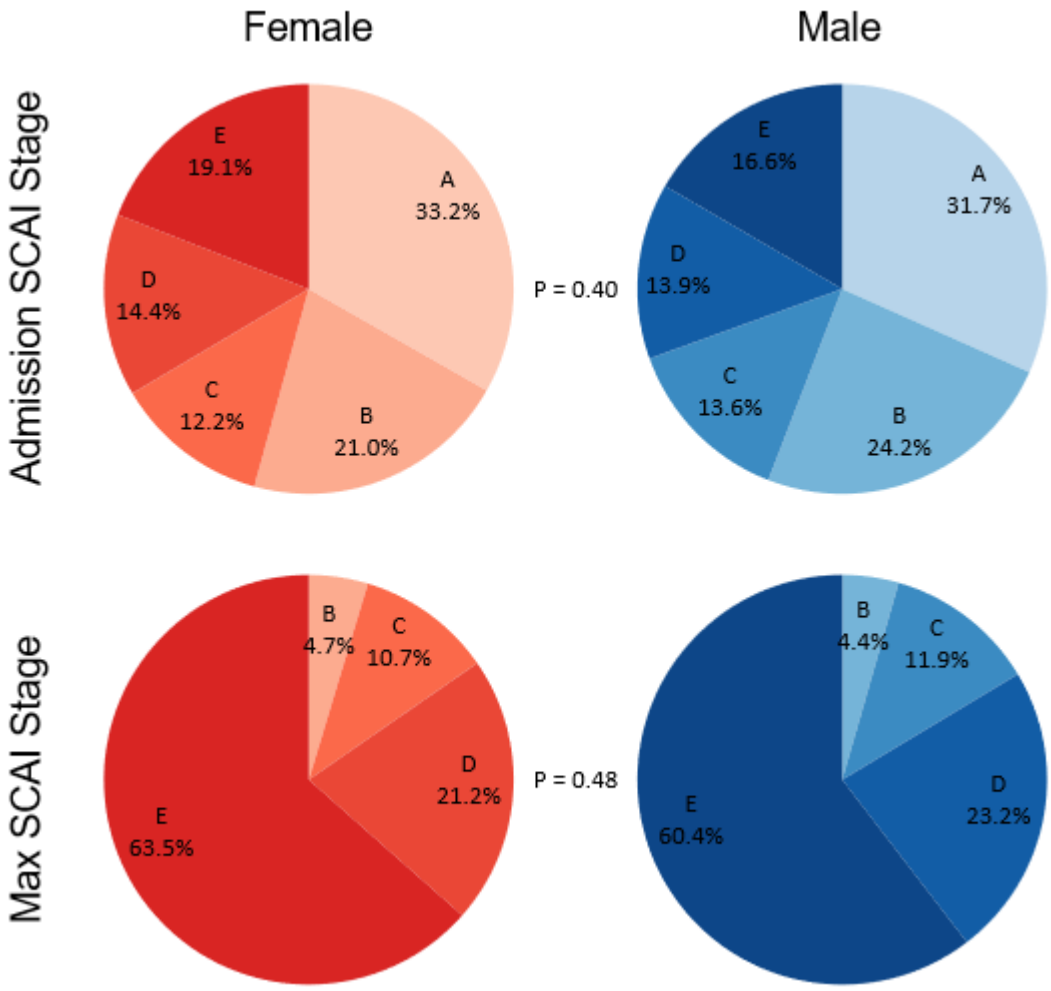


Figure S3. Admission and maximum SCAI stage during cardiogenic shock hospitalization. *SCAI = Society for Cardiovascular Angiography and Interventions*

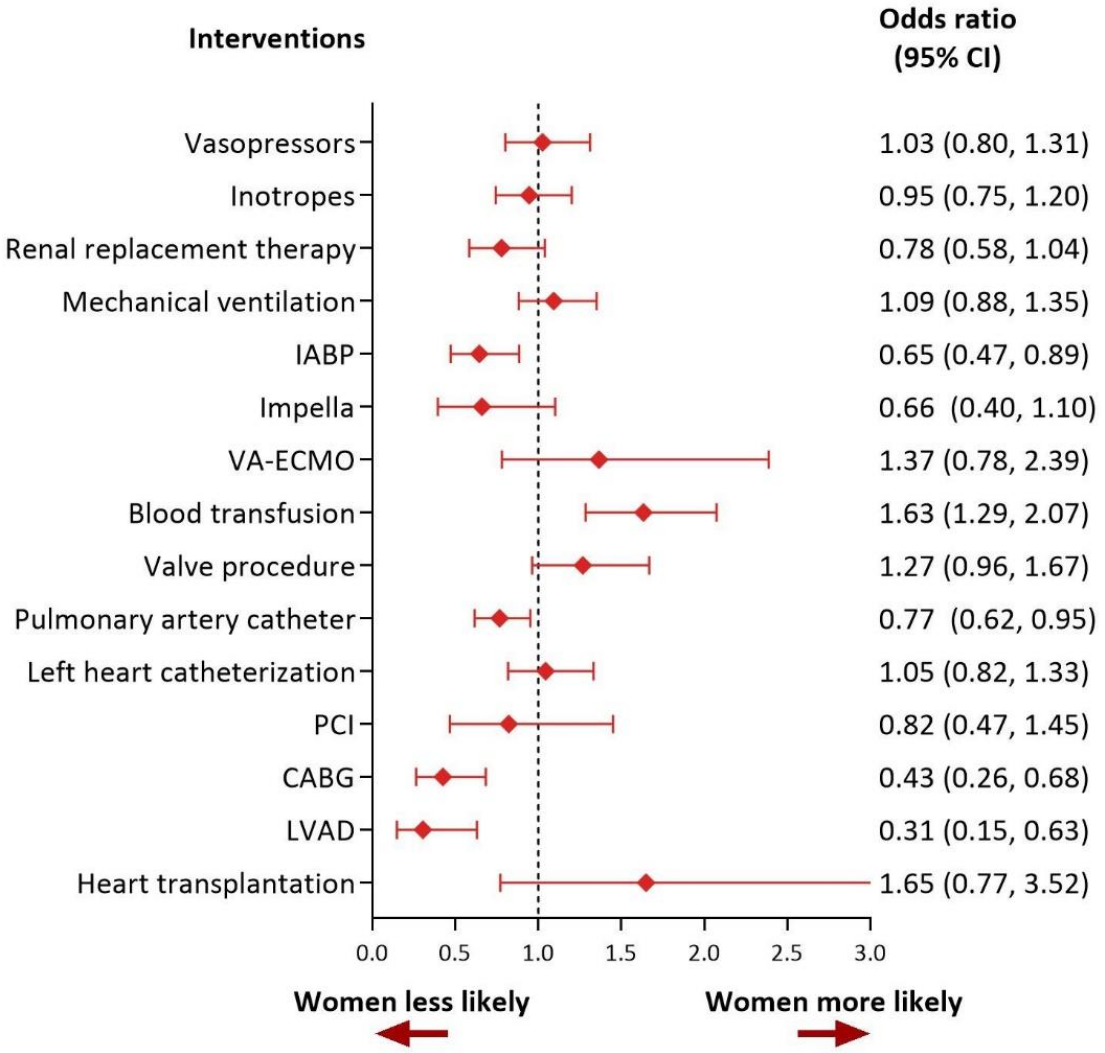


Figure S4. Multivariate logistic regression assessing differences in therapeutic interventions according to patient sex. *CABG = coronary artery bypass graft, IABP = intra-aortic balloon pump, LVAD = left ventricular assist device, PCI = percutaneous coronary intervention, VA-ECMO = venoarterial extracorporeal membrane oxygenation.*

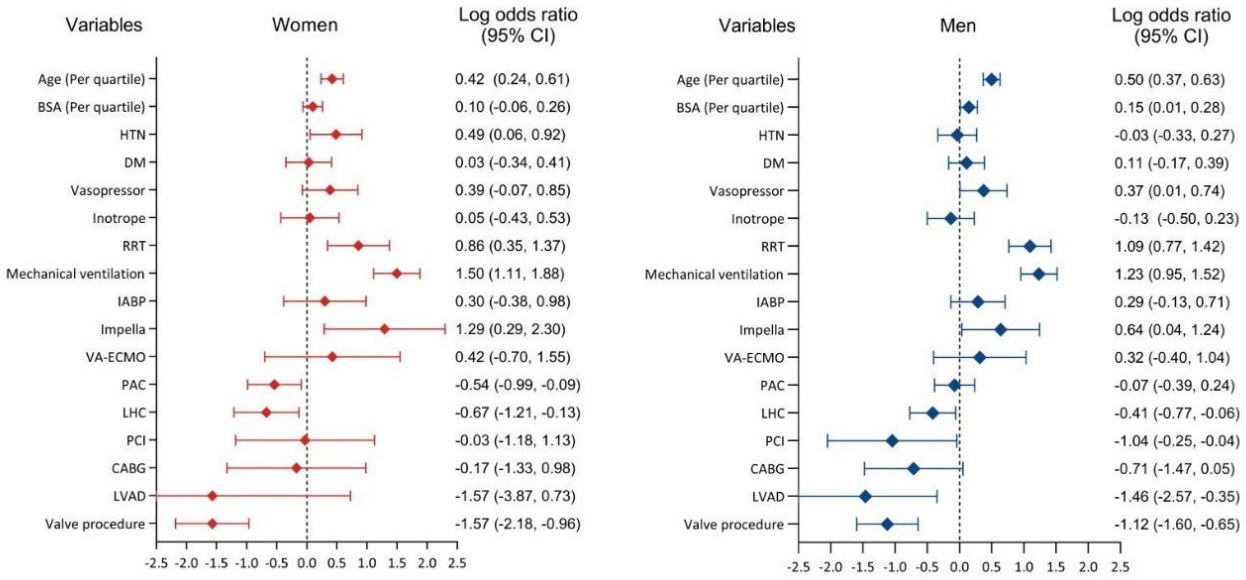


Figure S5. Mortality associated factors in women and men treated with non-acute myocardial infarction related cardiogenic shock. *BSA = Body surface area, CABG = coronary artery bypass graft, CS = cardiogenic shock, DM = Diabetes mellitus, HTN = hypertension, IABP = intra-aortic balloon pump, LHC = left heart catheterization, LVAD = left ventricular assist device, PAC = pulmonary artery catheter, PCI = percutaneous coronary intervention, RRT = renal replacement therapy, VA-ECMO = venoarterial extracorporeal membrane oxygenation*