

SUPPORTING INFORMATION

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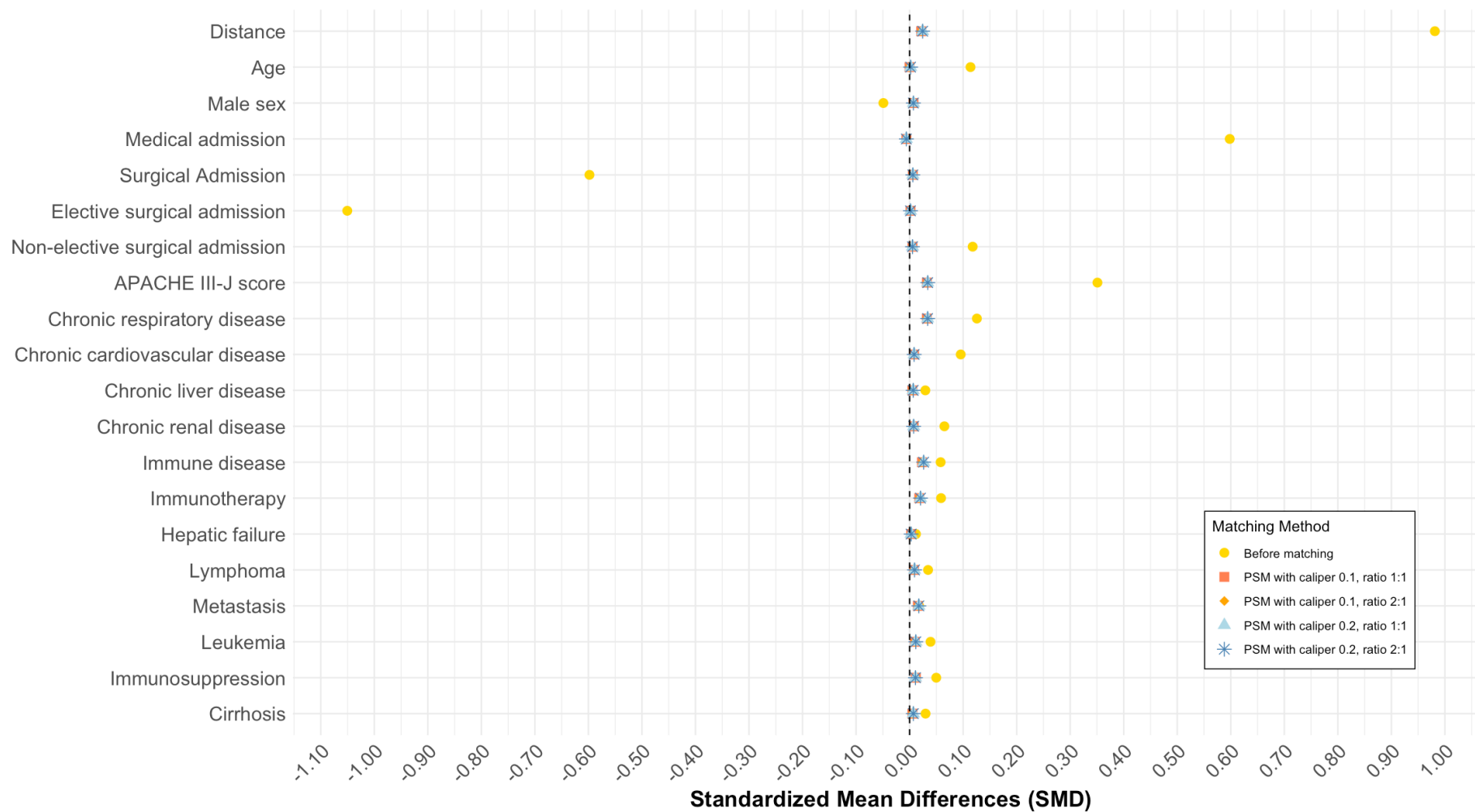
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Supplementary Table 1. Missing data.

Missing variables	Full treatment (n= 25,677)	Limited treatment (n= 10,961)	Palliative care (n = 330)
Age	0	0	0
Gender	2 (0.01)	1 (0.01)	0
Primary admission type	24 (0.09)	12 (0.11)	1 (0.30)
Frailty score	15,062 (58.66)	4,656 (42.48)	165(50.00)
APACHE III-J Diagnosis code	106 (0.41)	29 (0.27)	1 (0.30)
APACHE III-J Score	96 (0.37)	15 (0.14)	6 (1.82)
Chronic conditions			
Chronic respiratory disease	0	2 (0.02)	0
Chronic cardiovascular disease	0	2 (0.02)	0
Chronic liver disease	0	2 (0.02)	0
Chronic renal disease	0	2 (0.02)	0
Immune disease	0	2 (0.02)	0
Immunotherapy	0	2 (0.02)	0
AIDS	0	1 (0.01)	0
Hepatic failure	0	1 (0.01)	0
Lymphoma	0	1 (0.01)	0
Metastasis	0	1 (0.01)	0
Leukemia	0	1 (0.01)	0
Immunosuppression	0	1 (0.01)	0
Cirrhosis	0	1 (0.01)	0
ICU intervention			
Inotrope/vasopressor	18,262 (71.09)	3,976 (36.26)	143 (43.33)
Invasive ventilation	17,340 (67.52)	3,737 (34.09)	129 (39.09)
Non-invasive ventilation	17,857 (69.56)	3,833 (34.97)	133 (40.30)
Tracheostomy	18,524 (72.15)	4,134 (37.72)	145 (43.94)
Extracorporeal Membrane Oxygenation	18,504 (72.06)	4,095 (37.35)	148 (44.85)
Renal replacement therapy	18,502 (72.05)	4,096 (37.36)	148 (44.85)
Hospital admission source	613 (2.39)	164 (1.50)	9 (2.73)
ICU admission source	4 (0.02)	0	0
ICU outcomes	70 (0.27)	16 (0.15)	0
Hospital outcomes	119 (0.46)	39 (0.36)	1 (0.30)
ICU LOS	8 (0.03)	2 (0.02)	0
Hospital LOS	8 (0.03)	3 (0.03)	0

Data are expressed as number (%). *Abbreviations:* AIDS, Acquired Immunodeficiency Syndrome; APACHE III-J, Acute Physiology and Chronic Health Evaluation III-Japan; ICU, Intensive Care Unit; LOS, length of stay.

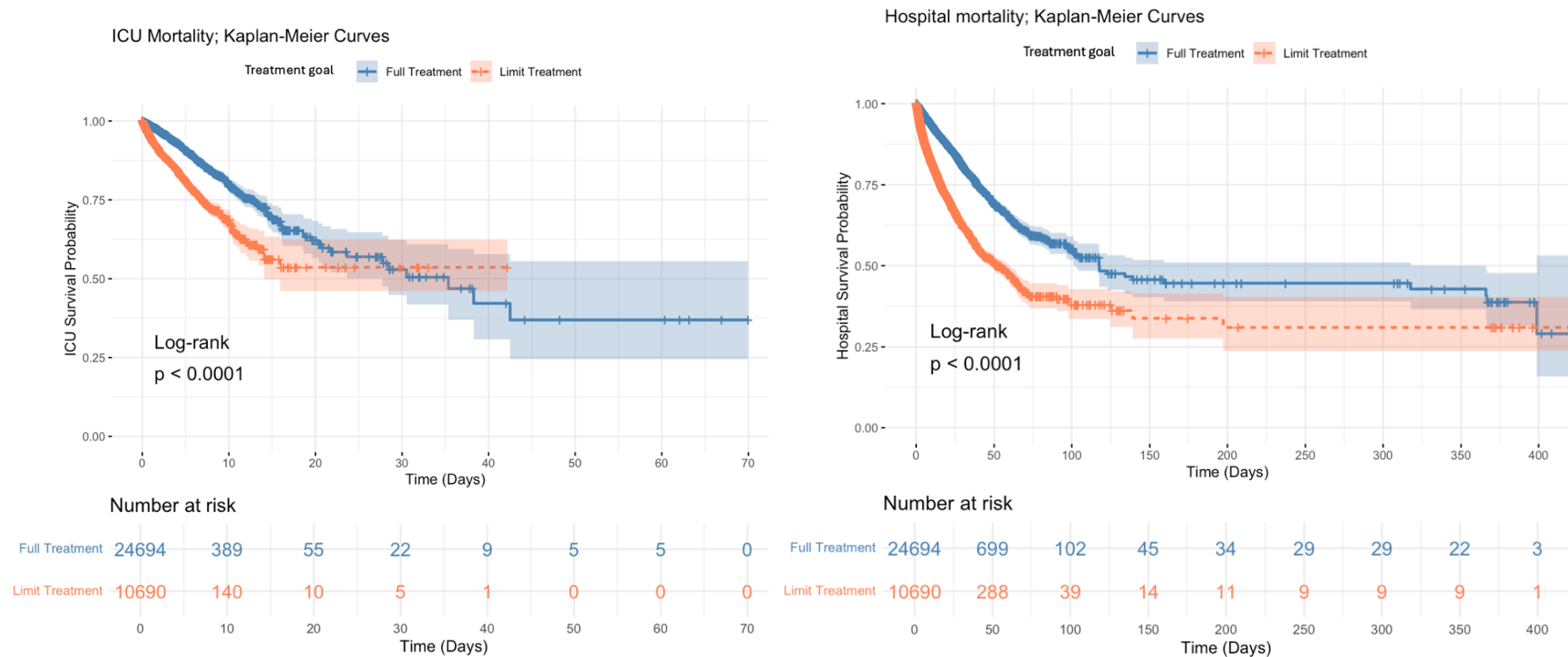
Supplementary Figure 1. Love Plot: Standardized mean differences before and after propensity score matching (PSM) with calipers 0.1–0.2 and ratios 1:1–2:1



Supplementary Table 2. Statistical methods and model selection for ICU and hospital mortality analysis.

Statistical consideration	ICU mortality	Hospital mortality
Survival Analysis	Kaplan-Meier survival curves and log-rank test	
	Original cohort: Supplementary Figure 2a	Original cohort: Supplementary Figure 2b
	Propensity-matched cohort: Supplementary Figure 3a	Propensity-matched cohort: Supplementary Figure 3b
Cox proportional hazards models	PH assumption violated in both unadjusted and adjusted models ($p < 0.001$)	
	Schoenfeld residual plots: Supplementary Figures 4 and 5	Schoenfeld residual plots: Supplementary Figures 6 and 7
	Full unadjusted and adjusted Cox models: Supplementary Table 3	
FPMs models	Used to account for time-varying effects, allowing hazard ratios to change over time. Model selection criteria: Supplementary Table 4 - Knots and degrees of freedom (df) were selected while ensuring event counts exceeded df. - Covariate linearity was assessed by comparing spline and linear models for key covariates; APACHE III-J score. - Both standard and time-varying coefficient (TVC) models were compared. - Final model selection was based on AIC and BIC for optimal fit and stability.	
FPMs: Restricted cubic spline adjustments	- APACHE III-J score included as a non-linear term to improve model performance - Other covariates showed linear relationships.	- All covariates maintained linear relationships; no spline transformations were necessary
Kaplan-Meier survival curves and Cox proportional hazards models initially assessed ICU and hospital mortality but violated the proportional hazards (PH) assumption ($p < 0.001$, Schoenfeld residuals; see Appendix IV: Supplementary Figures 5–8). Flexible Parametric Models (FPMs) were selected as the primary survival analysis method, allowing hazard ratios to change over time using restricted cubic splines. Unlike Cox models, which assume a constant hazard ratio, FPMs provide a smoother hazard function that improves model fit when event risk changes dynamically. Model selection was guided by Akaike Information Criterion (AIC) and Bayesian Information Criterion (BIC) (Supplementary Table 4). APACHE III-J was modelled non-linearly for ICU mortality, while hospital mortality covariates remained linear to maintain model simplicity. <i>Abbreviations:</i> APACHE III-J, Acute Physiology and Chronic Health Evaluation III-Japan; ICU, Intensive Care Unit; PH, proportional hazards.		

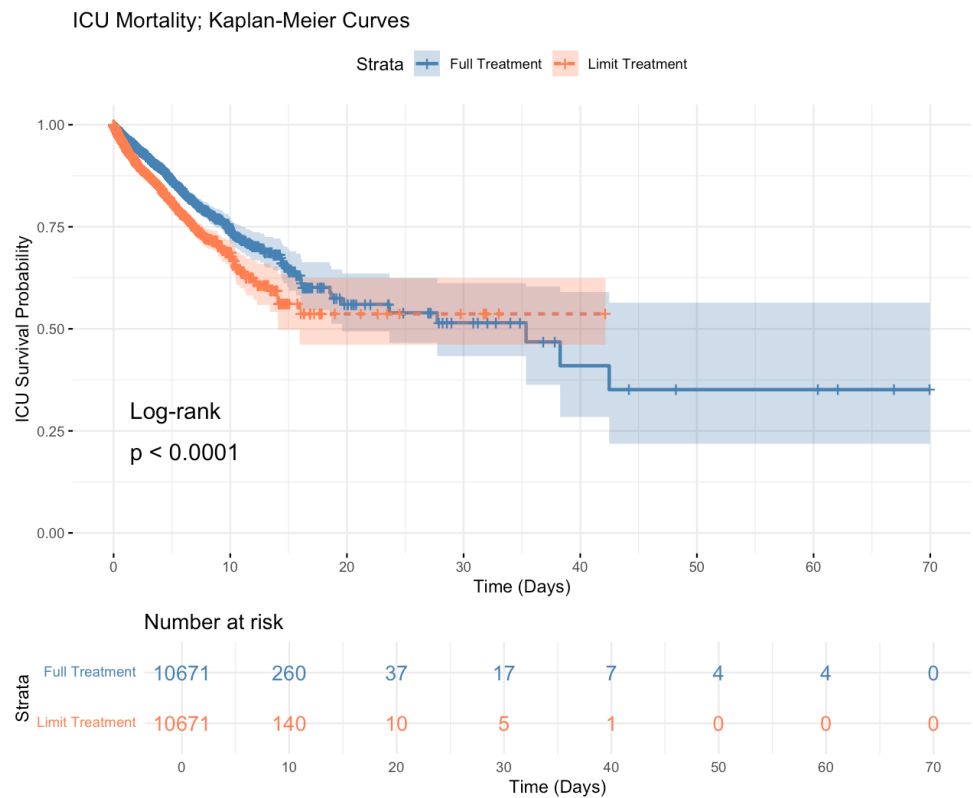
Supplementary Figure 2. Kaplan-Meier survival curves for ICU and hospital mortality in the original cohort.



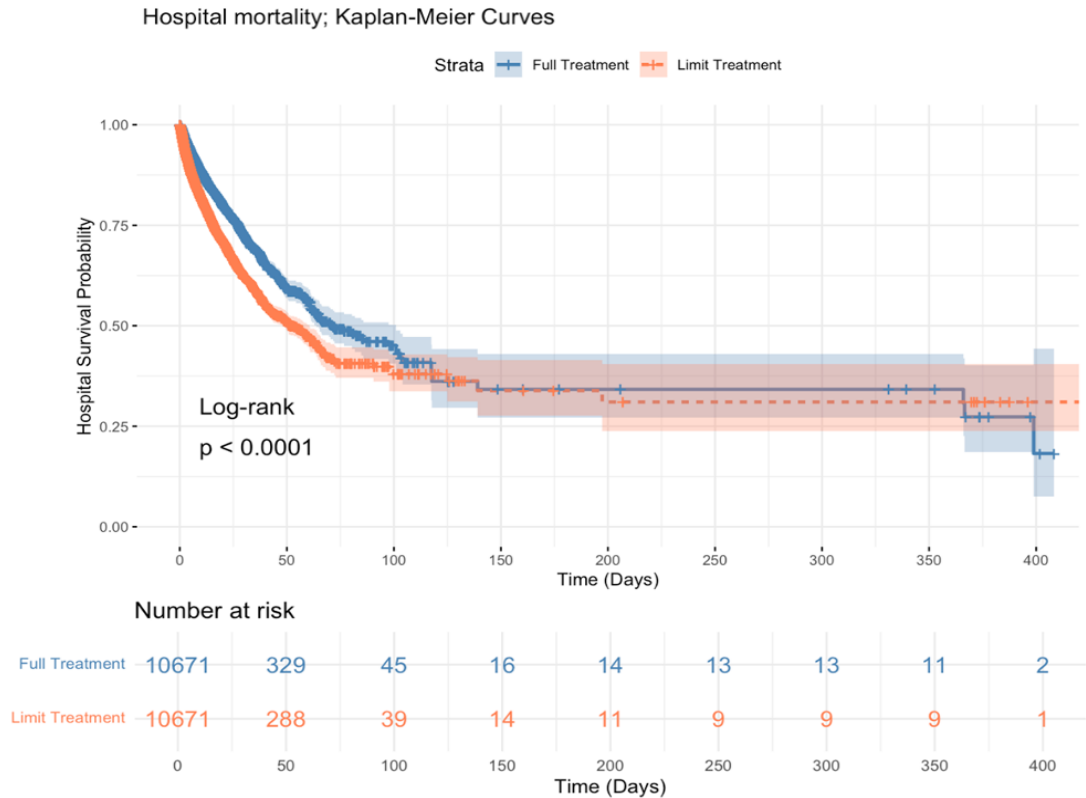
Supplementary Figure 2a. The Kaplan–Meier survival curves for ICU mortality of the original cohort illustrate a more rapid decline in survival probability for the limited-treatment group compared to the full-treatment group, with a pronounced divergence observed early during the ICU stay. While the survival gap narrows slightly over time, significant differences persist, reflecting the early and substantial impact of limited treatment on ICU mortality (log-rank $p < 0.001$).

Supplementary Figure 2b. The Kaplan–Meier survival curves for hospital mortality of the original cohort illustrate a sharper decline in survival probability for the limited-treatment group compared to the full-treatment group early in the hospital stay. Over time, the survival gap narrows, though significant differences between the groups persist (log-rank $p < 0.001$). These findings suggest that the impact of limited treatment is more pronounced in the earlier stages of hospitalization.

Supplementary Figure 3. Kaplan-Meier survival curves for ICU and hospital mortality in the propensity-matched cohort.



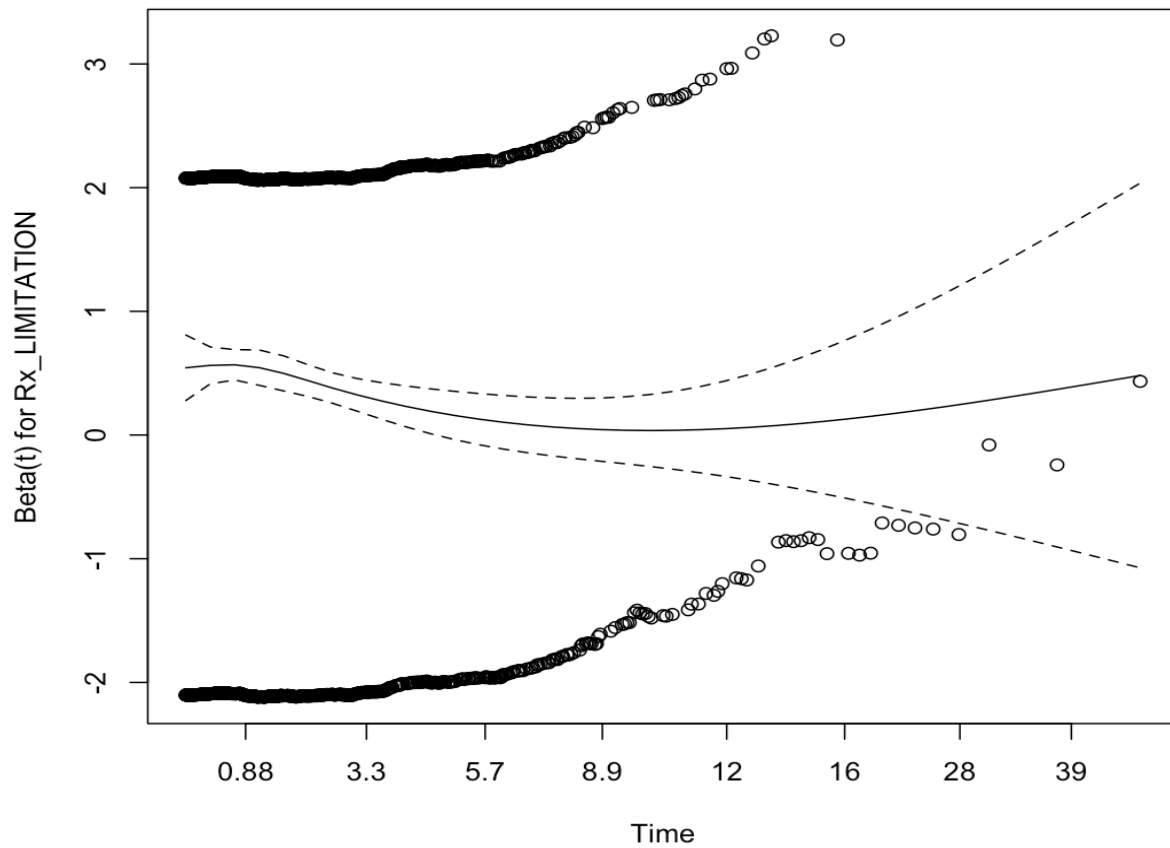
Supplementary Figure 3a. The Kaplan–Meier survival curves for ICU mortality illustrate a more rapid decline in survival probability for the limited-treatment group compared to the full-treatment group, with a clear divergence observed early in the ICU stay. While the survival gap narrows slightly over time, significant differences persist, reflecting the early and substantial impact of limited treatment on ICU mortality (log-rank $p < 0.001$).



Supplementary Figure 3b. The Kaplan–Meier survival curves for hospital mortality illustrate a sharper decline in survival probability for the limited-treatment group compared to the full-treatment group early in the hospital stay. Over time, the survival gap narrows, though significant differences between the groups persist (log-rank $p < 0.001$). These findings suggest that the impact of limited treatment is more pronounced in the earlier stages of hospitalization.

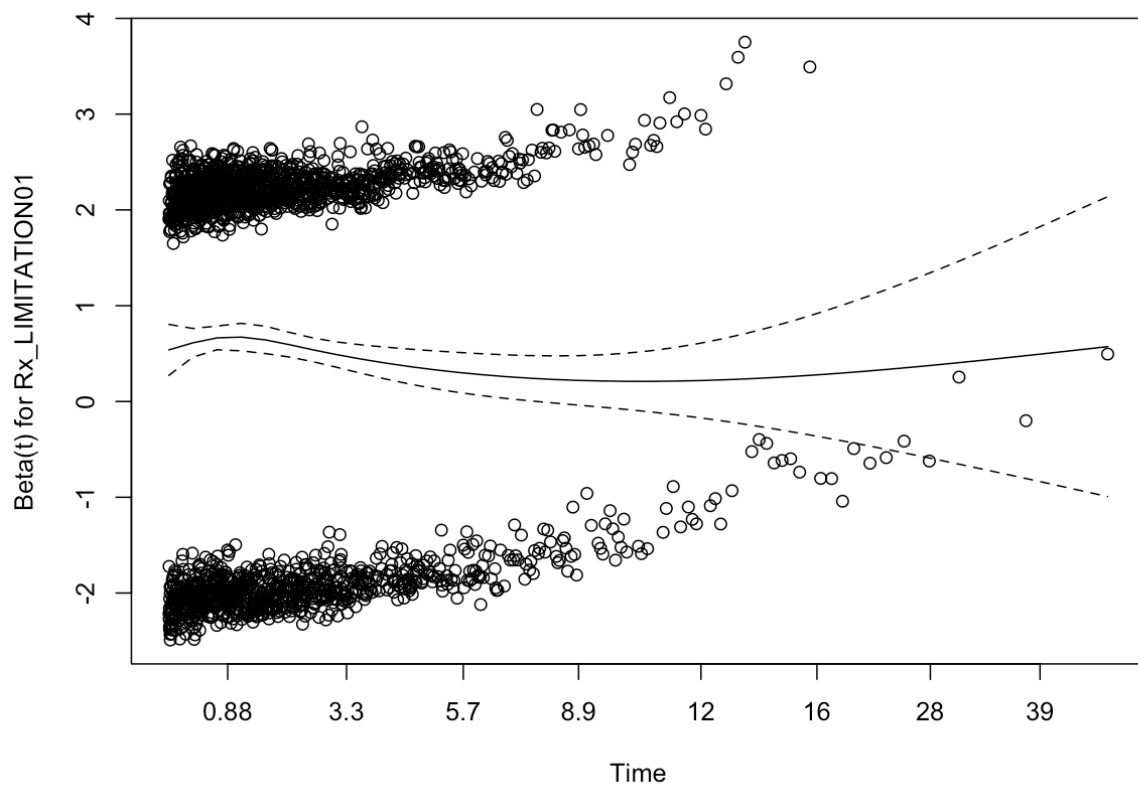
Supplementary Figure 4. Schoenfeld residual plot: Unadjusted Cox proportional hazards model for ICU mortality by treatment goal.

The solid line represents the estimated time-varying beta coefficient ($\beta(t)$) for limited treatment, while the dashed lines indicate the 95% confidence intervals. The deviation of the solid line from zero over time suggests a potential violation of the proportional hazard assumption, indicating that the effect of limited treatment on ICU mortality is not constant over time.



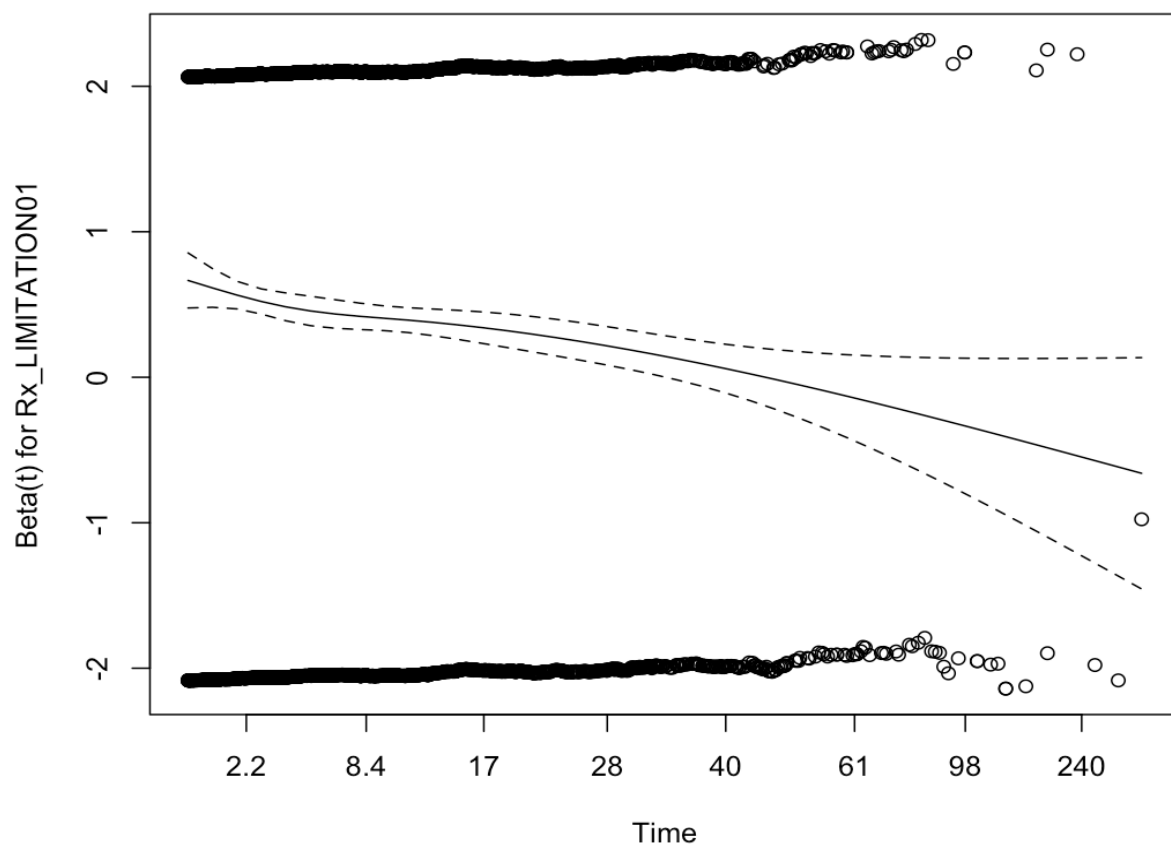
Supplementary Figure 5. Schoenfeld residual plot: Adjusted Cox proportional hazards model for ICU mortality by treatment goal.

The solid line represents the estimated time-varying beta coefficient ($\beta(t)$) for limited treatment, while the dashed lines indicate the 95% confidence intervals. The deviation of the solid line from zero over time suggests a potential violation of the proportional hazard assumption, indicating that the effect of limited treatment on ICU mortality may change over time. The widening confidence intervals at later time points suggest increasing variability in the estimate.



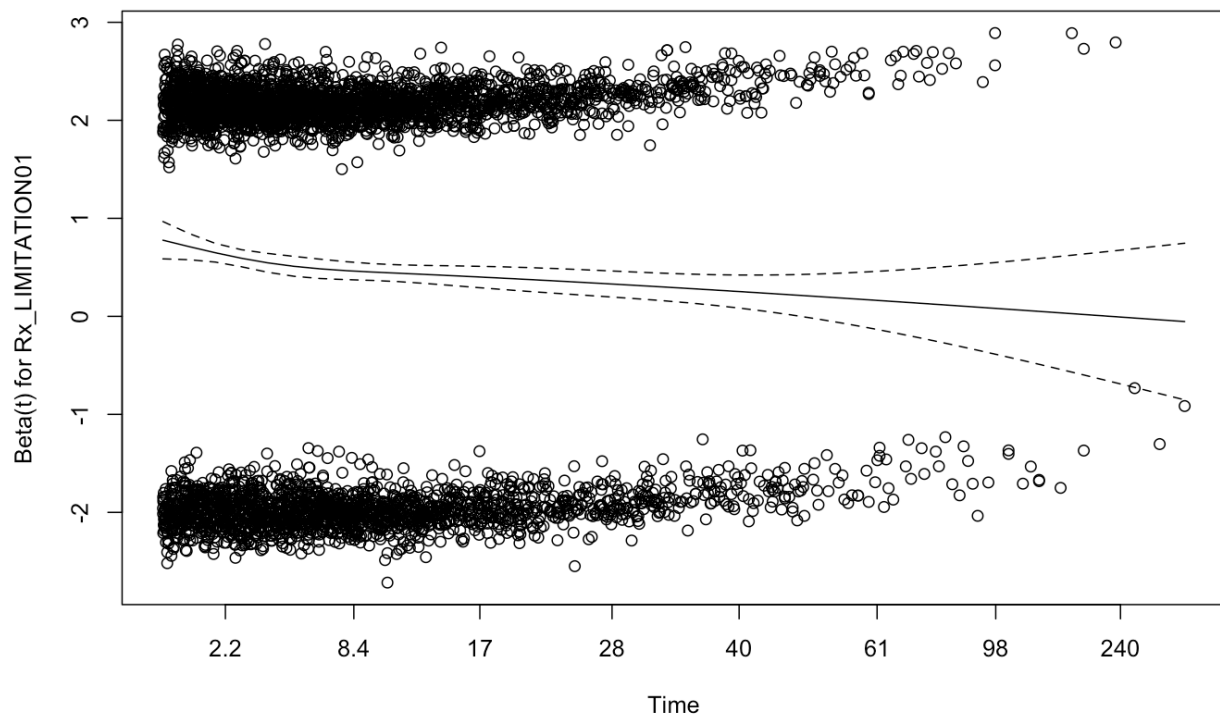
Supplementary Figure 6. Schoenfeld residual plot: Unadjusted Cox proportional hazards model for hospital mortality by treatment goal.

The solid line represents the estimated time-varying beta coefficient ($\beta(t)$) for limited treatment, while the dashed lines indicate the 95% confidence intervals. The gradual downward deviation of the solid line from zero over time suggests a violation of the proportional hazard assumption, indicating that the effect of limited treatment on hospital mortality changes over time. The widening confidence intervals at later time points reflect increased variability in the estimate, suggesting more uncertainty in the effect at longer hospital stays.



Supplementary Figure 7. Schoenfeld residual plot: Adjusted Cox proportional hazards model of hospital mortality for treatment goal.

The solid line represents the estimated time-varying beta coefficient ($\beta(t)$) for limited treatment, while the dashed lines indicate the 95% confidence intervals. The downward trend of the solid line and the widening of the confidence intervals over time suggest a time-dependent effect of limited treatment in the adjusted model, indicating a potential violation of the proportional hazard assumption.



Supplementary Table 3. Univariable and multivariable survival analysis of risk factors for ICU and hospital mortality.

Univariable and Multivariable Cox proportional hazard of ICU mortality				
Variables	Unadjusted HRs [95% CI]	p-value	Adjusted HRs [95% CI][†]	p-value
Age	0.969 [0.950–0.989]	0.002*	—	—
Male	1.121 [1.027–1.223]	0.108	—	—
Treatment goal				
Limited treatment	1.544 [1.412–1.688]	<0.001*	1.718 [1.570–1.879]	<0.001*
Primary admission				
Medical admission	3.380 [2.641–4.325]	<0.001*	—	—
Non-elective surgery	2.205 [1.698–2.863]	<0.001*	—	—
Severity score				
APACHE III-J score	1.035 [1.034–1.037]	<0.001*	1.036 [1.035–1.037]	<0.001*
Comorbidity				
Chronic respiratory disease	1.033 [0.893–1.195]	0.660	—	—
Chronic cardiovascular disease	1.004 [0.903–1.117]	0.935	—	—
Chronic liver disease	1.102 [0.524–2.314]	0.798	—	—
Chronic renal disease	0.947 [0.784–1.144]	0.572	—	—
Immune disease	0.976 [0.641–1.486]	0.909	—	—
Immunotherapy	1.060 [0.791–1.419]	0.698	—	—
Hepatic failure	1.108 [0.357–3.438]	0.860	—	—
Lymphoma	0.924 [0.546–1.563]	0.767	—	—
Metastasis	1.004 [0.752–1.341]	0.976	—	—
Leukemia	1.075 [0.692–1.670]	0.747	—	—
Immunosuppression	1.118 [0.835–1.498]	0.453	—	—
Cirrhosis	1.228 [0.585–2.580]	0.587	—	—
Univariable and Multivariable Cox proportional hazard of Hospital mortality				
Variables	Unadjusted HRs [95% CI]	p-value	Adjusted HRs [95% CI][†]	p-value
Age	0.986 [0.973–0.999]	0.030*	-	-
Male	1.279 [1.206–1.357]	<0.001*	1.133 [1.068–1.202]	<0.001*
Treatment goal				
Limited treatment	1.522 [1.433–1.616]	<0.001*	1.643 [1.546–1.745]	<0.001*
Primary admission				
Medical admission	2.936 [2.580–3.342]	<0.001*	—	—
Non-elective surgery	1.811 [1.574–2.082]	<0.001*	—	—
Severity score				

APACHE III-J score	1.030 [1.029–1.032]	<0.001*	1.031 [1.030–1.032]	<0.001*
Comorbidity				
Chronic respiratory disease	1.161 [1.054–1.280]	0.002*	—	—
Chronic cardiovascular disease	1.054 [0.981–1.132]	0.150	—	—
Chronic liver disease	1.234 [0.730–2.086]	0.432	—	—
Chronic renal disease	1.098 [0.976–1.235]	0.122	—	—
Immune disease	0.893 [0.672–1.187]	0.438	—	—
Immunotherapy	1.111 [0.912–1.353]	0.296	—	—
Hepatic failure	0.860 [0.323–2.292]	0.763	—	—
Lymphoma	0.892 [0.627–1.271]	0.528	—	—
Metastasis	1.082 [0.903–1.297]	0.392	—	—
Leukemia	1.017 [0.750–1.378]	0.914	—	—
Immunosuppression	1.162 [0.952–1.418]	0.140	—	—
Cirrhosis	1.383 [0.818–2.337]	0.226	—	—

Data are presented as hazard ratios (HRs) with 95% confidence intervals (CIs) from Cox proportional hazards models, comparing limited vs. full-treatment groups. [†] Covariates with $p < 0.2$ in univariable analysis were included in multivariable models, excluding age, primary admission type, and chronic comorbidities to avoid redundancy with APACHE III-J. Stepwise selection with Akaike Information Criterion (AIC) refined the models. Multicollinearity was assessed using variance inflation factor (VIF), and the proportional hazards (PH) assumption via Schoenfeld residuals. * p -value < 0.05 indicates statistical significance. *Abbreviations:* APACHE III-J, Acute Physiology and Chronic Health Evaluation III-Japan; ICU, Intensive Care Unit.

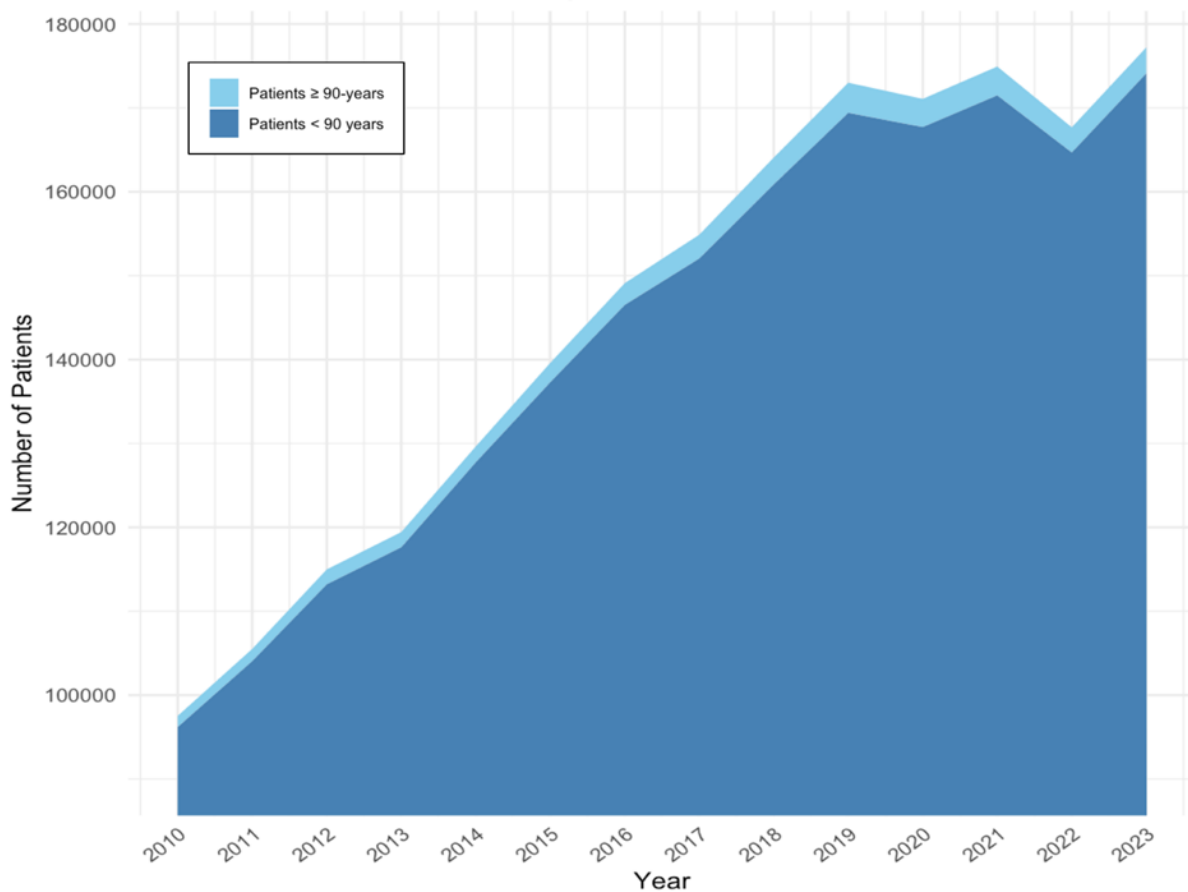
Supplementary Table 4. Model selection for flexible parametric survival analysis of ICU and hospital mortality.

Mortality outcomes	Adjustment	Model type	Number of knots (k)	Degrees of freedom (df)	AIC	BIC
ICU mortality [†]	Unadjusted	Standard model 1	2	5	17,233.31	17,273.15
		Standard model 2	3	6	17,234.82	17,282.63
		Standard model 3	4	7	17,236.29	17,292.07
		Time-Varying model 1 ^a	2	6	17,231.55	17,279.36
		Time-Varying model 2	3	7	17,233.06	17,288.84
		Time-Varying model 3	4	8	17,234.52	17,298.26
	Adjusted	Time-Varying model 1 ^b	2	9	15,337.23	15,408.94
		Time-Varying model 2	3	10	15,339.01	15,418.70
		Time-Varying model 3	4	11	15,340.65	15,428.31
Hospital mortality [‡]	Unadjusted	Standard model 1	2	5	45,786.22	45,826.06
		Standard model 2	3	6	45,766.77	45,814.58
		Standard model 3	4	7	45,763.53	45,819.31
		Time-Varying model 1	2	6	45,768.48	45,816.29
		Time-Varying model 2 ^c	3	7	45,748.74	45,804.52
		Time-Varying model 3	4	8	45,745.01	45,808.76
	Adjusted	Time-Varying model 1	2	8	43,346.72	43,406.27
		Time-Varying model 2 ^d	3	9	43,328.47	43,400.18
		Time-Varying model 3	4	10	43,325.94	43,405.62

Flexible parametric survival models (FPMs) were selected using Akaike (AIC) and Bayesian Information Criteria (BIC) to balance model fit and complexity. Restricted cubic splines were tested for both age and APACHE III-J score in ICU and hospital mortality models, but only APACHE III-J score in the ICU mortality model improved performance, while other covariates demonstrated linearity. [†] For ICU mortality, the best models were the unadjusted Time-Varying model 1^a and the adjusted Time-Varying model 1^b, which included sex, and restricted cubic splines for APACHE III-J score. [‡] For hospital mortality, the best models were the unadjusted Time-Varying model 2^c and the adjusted Time-Varying model 2^d, which included sex, and APACHE III-J score. *Abbreviations:* APACHE III-J, Acute Physiology and Chronic Health Evaluation III-Japan; ICU, Intensive Care Unit.

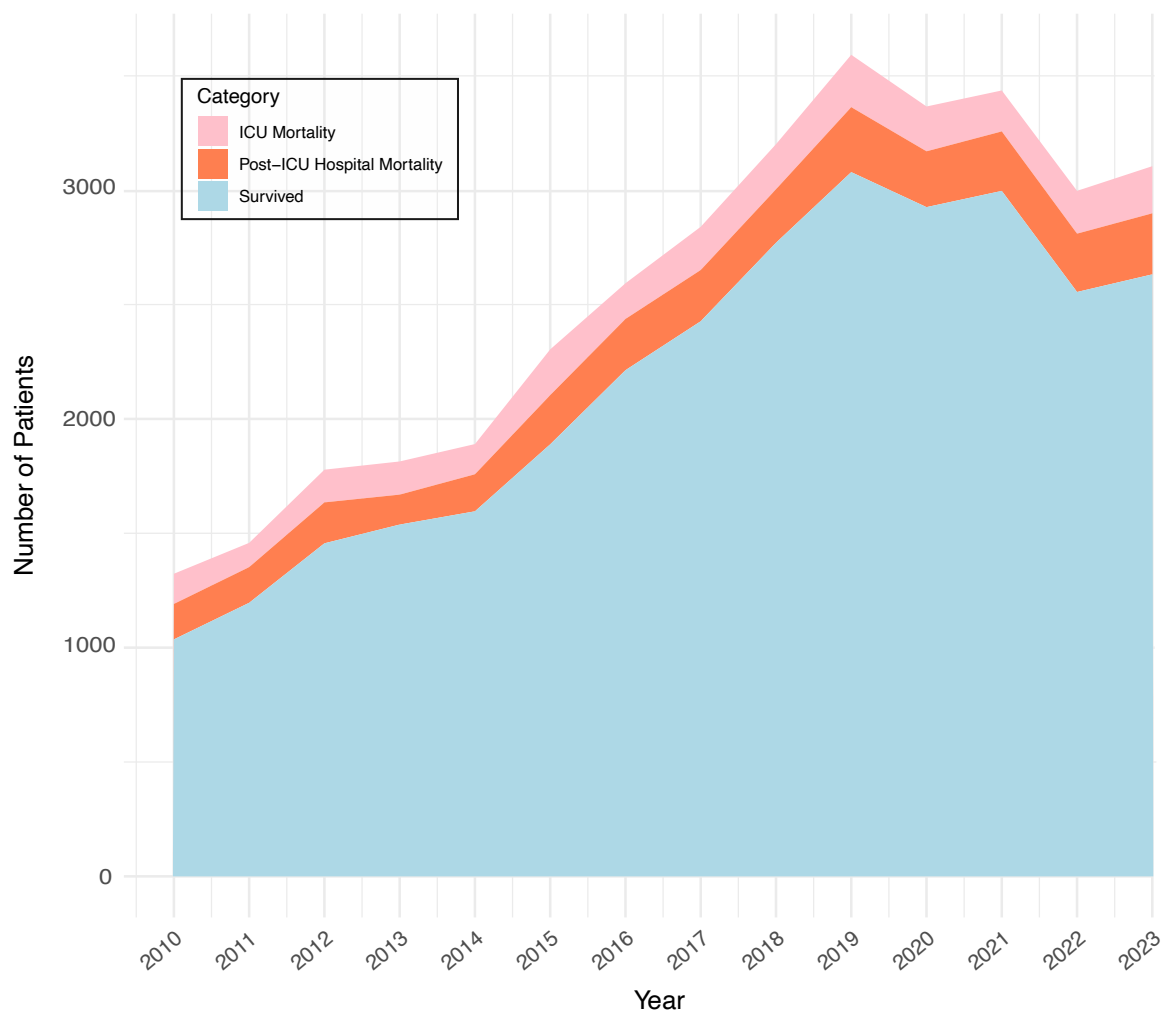
Supplementary Figure 8. Trends in ICU admissions for patients aged < 90 and ≥ 90 years (2010–2023).

Admissions for patients aged <90 years showed steady growth over the study period. Similarly, ICU admissions for patients aged ≥90 years consistently increased from 2010, peaking at 1.93% of total admissions in 2019. However, a slight decline in nonagenarian admissions occurred after 2019, likely due to changes in admission practices and healthcare priorities during the COVID-19 pandemic.



Supplementary Figure 9. Survival and mortality rates for nonagenarian ICU patients (2010–2023).

ICU mortality declined from 9.98% in 2010 to 6.63% in 2023, and post-ICU hospital mortality from 21.69% to 15.23%. Values are proportions of annual ICU admissions in patients aged ≥ 90 years.



Supplementary Table 5. APACHE III-J diagnosis of original and propensity-matched cohort.

APACHE III-J Diagnosis		Original Cohort		Matched Cohort	
		Limited treatment (n= 10,690)	Full Treatment (n= 24,694)	Limited treatment (n= 10,671)	Full Treatment (n= 10,671)
Non-operative diagnosis					
Cardiovascular					
101	Cardiogenic shock	126 (1.15)	123 (0.50)	124 (1.16)	115 (1.08)
102	Cardiac arrest	172 (1.57)	270 (1.09)	172 (1.6)	243 (2.28)
103	Aortic aneurysm	19 (0.17)	34 (0.14)	19 (0.18)	20 (0.19)
104	Congestive heart failure	481 (4.39)	467 (1.89)	479 (4.49)	385 (3.61)
105	Peripheral vascular disease	4 (0.04)	48 (0.19)	4 (0.04)	35 (0.33)
106	Rhythm disturbance	350 (3.19)	498 (2.02)	350 (3.28)	394 (3.69)
107	Acute myocardial infarction	151 (1.38)	166 (0.67)	151 (1.41)	132 (1.24)
108	Hypertension	16 (0.15)	48 (0.19)	16 (0.15)	40 (0.37)
109	Other cardiovascular disease	240 (2.19)	438 (1.77)	240 (2.25)	332 (3.11)
110	Cardiomyopathy	5 (0.05)	6 (0.02)	5 (0.05)	4 (0.04)
111	Unstable angina	11 (0.10)	18 (0.07)	11 (0.10)	12 (0.11)
Respiratory					
201	Aspiration pneumonia	202 (1.84)	194 (0.79)	202 (1.89)	164 (1.54)
202	Respiratory neoplasm including larynx/trachea	4 (0.04)	4 (0.02)	4 (0.04)	4 (0.04)
203	Respiratory arrest	21 (0.19)	50 (0.20)	21 (0.20)	44 (0.41)
204	Pulmonary oedema: non-cardiac	94 (0.86)	155 (0.63)	94 (0.88)	131 (1.23)
206	Chronic obstructive pulmonary disease	215 (1.96)	166 (0.67)	215 (2.01)	150 (1.41)
207	Pulmonary embolism	49 (0.45)	48 (0.19)	49 (0.46)	33 (0.31)
208	Mechanical airway obstruction	45 (0.41)	93 (0.38)	45 (0.42)	68 (0.64)
209	Asthma	19 (0.17)	14 (0.06)	19 (0.18)	12 (0.11)
210	Parasitic pneumonia	5 (0.05)	3 (0.01)	5 (0.05)	2 (0.02)
211	Other respiratory diseases	259 (2.36)	341 (1.38)	259 (2.43)	280 (2.62)
212	Bacterial pneumonia	536 (4.89)	406 (1.64)	536 (5.02)	337 (3.16)
213	Viral pneumonia	143 (1.30)	92 (0.37)	143 (1.34)	84 (0.79)
Gastrointestinal					
301	Hepatic failure	5 (0.05)	11 (0.04)	5 (0.05)	11 (0.10)
303	GI bleeding – varices	7 (0.06)	9 (0.04)	7 (0.06)	7 (0.07)
305	GI bleeding - ulcer/laceration	190 (1.73)	390 (1.58)	190 (1.78)	307 (2.88)
306	GI bleeding - diverticulosis	95 (0.87)	233 (0.94)	95 (0.89)	183 (1.71)
307	Other GI disease	62 (0.57)	116 (0.47)	62 (0.58)	89 (0.83)
308	GI perforation	34 (0.31)	44 (0.18)	34 (0.32)	39 (0.37)

309	GI obstruction	54 (0.49)	127 (0.51)	54(0.51)	110 (1.03)
310	GI vascular insufficiency	10 (0.09)	17 (0.07)	9 (0.08)	13 (0.12)
311	Pancreatitis	54 (0.49)	81 (0.33)	54 (0.51)	73 (0.68)
312	GI cancer	7 (0.06)	24 (0.10)	7 (0.07)	18 (0.17)
313	Other GI inflammatory disease	79 (0.72)	87 (0.35)	79 (0.74)	78 (0.73)
Neurological					
401	Intracerebral haemorrhage	26 (0.24)	37 (0.15)	26 (0.24)	29 (0.27)
402	Subarachnoid haemorrhage	14 (0.13)	16 (0.06)	14 (0.13)	12 (0.11)
403	Stroke	283 (2.58)	269 (1.09)	283 (2.65)	212 (1.99)
404	Neurologic infection	5 (0.05)	5 (0.02)	5 (0.05)	5 (0.05)
405	Neurologic neoplasm	2 (0.02)	4 (0.02)	2 (0.02)	3 (0.03)
406	Neuromuscular disease	4 (0.04)	6 (0.02)	4 (0.04)	3 (0.03)
407	Seizure	42 (0.38)	62 (0.25)	42 (0.39)	53 (0.50)
408	Other neurologic disease	25 (0.23)	55(0.22)	25 (0.23)	38 (0.36)
409	Epidural haematoma	12 (0.11)	29 (0.12)	12 (0.11)	22 (0.21)
410	Coma	53 (0.48)	56 (0.23)	52 (0.49)	43 (0.40)
Sepsis					
501	Sepsis other than urinary	497(4.53)	439 (1.78)	495 (4.64)	365 (3.42)
502	Sepsis of urinary tract origin	225 (2.05)	271 (1.10)	225 (2.11)	230 (2.16)
503	Sepsis with shock other than urinary	436 (3.98)	365 (1.48)	435 (4.08)	310 (2.91)
504	Sepsis of urinary tract origin with shock	190 (1.73)	184 (0.75)	190 (1.78)	163 (1.53)
Trauma					
601	Head trauma ± multi trauma	85 (0.78)	119 (0.48)	85 (0.80)	94 (0.88)
602	Multiple traumas excluding head	331 (3.02)	431 (1.75)	330 (3.09)	326 (3.06)
603	Burns	5 (0.05)	13 (0.05)	5 (0.05)	10 (0.09)
604	Multi trauma with spinal injury	37 (0.34)	46 (0.19)	37 (0.35)	31 (0.29)
605	Isolated cervical spine injury	5 (0.05)	11 (0.04)	5 (0.05)	7 (0.07)
Metabolic					
701	Metabolic coma	26 (0.24)	22 (0.09)	26 (0.24)	21 (0.20)
702	Diabetic ketoacidosis	36 (0.33)	48 (0.19)	36 (0.34)	43 (0.40)
703	Drug overdose	80 (0.73)	91 (0.37)	80 (0.75)	81 (0.76)
704	Other metabolic disorders	198 (1.81)	285 (1.15)	198 (1.86)	231 (2.16)
Haematologic					
801	Coagulopathy/Neutropenia/Thrombocytopaenia	9 (0.08)	10 (0.04)	9 (0.08)	8 (0.07)
802	Other haematologic disorders	17 (0.16)	44 (0.18)	17 (0.16)	34 (0.32)
Renal/Genitourinary					
901	Renal disorders	152 (1.39).	228 (0.92)	152 (1.42)	189 (1.77)

902	Pre-eclampsia	0	0	0	0
903	Haemorrhage, post-partum	0	0	0	0
Other medical					
1002	Other medical disorders	14 (0.13)	57 (0.23)	42 (0.39)	13 (0.12)
Musculoskeletal disease/skin disease					
1101	Musculoskeletal / skin disease	26 (0.24)	54 (0.22)	26 (0.24)	47 (0.44)
1102	Cellulitis/ soft tissue infection	18 (0.16)	42 (0.17)	18 (0.17)	35 (0.33)
Operative diagnosis					
Cardiovascular					
1202	Peripheral vascular disease	59 (0.54)	276 (1.12)	59 (0.55)	84 (0.79)
1203	Peripheral artery bypass graft	43 (0.39)	207 (0.84)	43 (0.40)	40 (0.37)
1204	Elective AAA	7 (0.06)	105 (0.43)	7 (0.07)	14 (0.13)
1205	Carotid endarterectomy	18 (0.16)	178 (0.72)	18 (0.17)	23 (0.22)
1206	Valvular heart surgery	5 (0.05)	434 (1.76)	5 (0.05)	68 (0.64)
1207	Coronary artery bypass grafts	0	108 (0.44)	0	16 (0.15)
1208	Other cardiovascular diseases	86 (0.78)	1,297 (5.25)	86 (0.81)	223 (2.09)
1209	Dissecting aortic aneurysm	3 (0.03)	11 (0.04)	3 (0.03)	3 (0.03)
1210	Ruptured aortic aneurysm	9 (0.08)	37 (0.15)	9 (0.08)	16 (0.15)
1211	Aorto-femoral bypass graft	7 (0.06)	34 (0.14)	7 (0.07)	7 (0.07)
1212	CABG with valve repair/replacement	0	74 (0.30)	0	7 (0.07)
1213	Endoluminal aortic repair	13 (0.12)	213 (0.86)	13 (0.12)	29 (0.27)
Respiratory					
1301	Respiratory infection	13 (0.12)	42 (0.17)	13 (0.12)	14 (0.13)
1302	Respiratory neoplasm: lung	12 (0.11)	155 (0.63)	12 (0.11)	21 (0.20)
1303	Respiratory neoplasm: mouth	11 (0.10)	174 (0.70)	11 (0.10)	23 (0.22)
1304	Other respiratory diseases	42 (0.38)	364 (1.47)	42 (0.39)	64 (0.60)
Gastrointestinal					
1401	GI perforation/ rupture	195 (1.78)	384 (1.56)	195 (1.83)	199 (1.86)
1403	GI bleeding	173 (1.58)	279 (1.13)	172 (1.61)	123 (1.15)
1404	GI obstruction	539 (4.92)	1,292 (5.23)	537 (5.03)	510 (4.78)
1405	GI neoplasm	237 (2.16)	1,637 (6.63)	237 (2.22)	252 (2.36)
1406	Cholecystitis/ cholangitis	168 (1.53)	575 (2.33)	167 (1.56)	161 (1.51)
1407	Liver transplant	0	0	0	0
1408	Other GI diseases	203 (1.85)	1,068 (4.32)	201 (1.88)	270 (2.53)
1409	Fistula/ abscess surgery	18 (0.16)	52 (0.21)	18 (0.17)	11 (0.10)
1410	GI vascular ischemia resection surgery	51 (0.47)	155 (0.63)	51 (0.48)	72 (0.67)
1411	Pancreatitis	2 (0.02)	12 (0.05)	2 (0.02)	2 (0.02)

1412	Peritonitis	19 (0.17)	51 (0.21)	19 (0.18)	27 (0.25)
1413	Other GI inflammatory disease	9 (0.08)	54 (0.22)	9 (0.08)	12 (0.11)
Neurological					
1501	Intracerebral haemorrhage	5 (0.05)	19 (0.08)	5 (0.05)	6 (0.06)
1502	Subdural/ epidural haematoma	37 (0.34)	214 (0.87)	37 (0.35)	46 (0.43)
1503	Subarachnoid haemorrhage	4 (0.04)	11 (0.04)	4 (0.04)	1 (0.01)
1504	Laminectomy/ spinal Cord Surgery	26 (0.24)	471 (1.91)	26 (0.24)	63 (0.59)
1505	Craniotomy for neoplasm	4 (0.04)	79 (0.32)	4 (0.04)	11 (0.10)
1506	Other neurologic disease	10 (0.97)	250 (1.01)	106 (0.99)	89 (0.83)
Trauma					
1601	Head trauma ±multi trauma	19 (0.17)	39 (0.16)	19 (0.18)	24 (0.22)
1602	Multiple traumas excluding head	633 (5.78)	952 (3.86)	633 (5.93)	342 (3.20)
1603	Burns	3 (0.03)	3 (0.01)	0	0
1604	Multi trauma with spinal injury	6 (0.05)	3 (0.01)	6 (0.06)	2 (0.02)
1605	Isolated cervical spine injury	3(0.03)	9 (0.04)	3 (0.03)	2 (0.02)
Renal/Genitourinary					
1701	Renal neoplasm	28 (0.26)	177 (0.72)	28 (0.26)	24 (0.22)
1703	Other renal diseases	82 (0.75)	221 (0.89)	82 (0.77)	44 (0.41)
1704	Kidney transplant	0	0	0	0
1705	Genitourinary surgery/ procedure	34 (0.31)	200 (0.81)	34 (0.32)	42 (0.39)
Gynaecological					
1801	Hysterectomy	3(0.03)	112 (0.45)	3 (0.03)	19 (0.18)
1802	Pregnancy-related disorder	0	0	0	0
1803	Other gynaecological disease	5 (0.05)	68 (0.28)	5 (0.05)	9 (0.08)
Musculoskeletal					
1902	Orthopaedic surgery	1,045 (9.53)	4,007 (16.23)	1044 (9.78)	946 (8.87)
1903	Skin surgery	48 (0.44)	312 (1.26)	48 (0.45)	50 (0.47)
1904	Cellulitis/ soft tissue infection	33 (0.30)	48 (0.19)	33 (0.31)	9 (0.08)
Haematological					
2101	Hematological disease	1 (0.01)	6 (0.02)	1 (0.01)	2 (0.02)
Metabolic					
2201	Metabolic disease	6 (0.05)	105 (0.43)	6 (0.06)	13 (0.12)
Data are expressed as number (%). <i>Abbreviations:</i> AAA, Abdominal aortic aneurysm; APACHE III-J, Acute Physiology and Chronic Health Evaluation III-Japan; CABG, Coronary artery bypass graft surgery; GI, Gastrointestinal.					

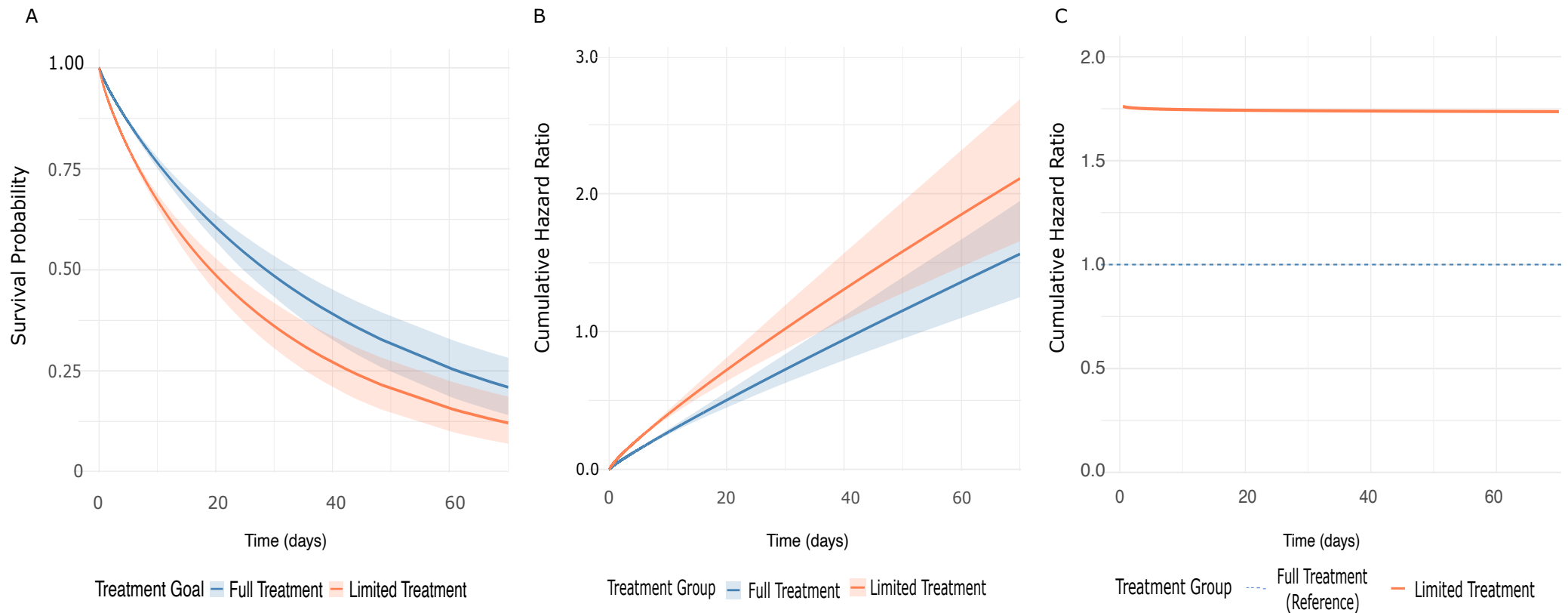
Supplementary Table 6. Characteristics and outcomes of the original and propensity-matched acute-admission cohorts, stratified by treatment goal.

Characteristics	Original cohort				Matched cohort			
	Overall (n = 22,670)	Limited treatment (n = 9,400)	Full treatment (n = 13,270)	SMD [‡]	Overall (n = 18,628)	Limited treatment (n = 9,314)	Full treatment (n = 9,314)	SMD [‡]
Age (years)	92.00 (90.90–93.78)	92.17 (90.97–94.00)	91.96 (90.80–93.60)	0.110	92.16 (90.93–93.96)	92.15 (90.95–94.00)	92.18 (90.90–93.91)	0.124
Sex								
Female	12,219 (53.90)	5,209 (55.41)	7,010 (52.83)	0.052	10,317 (55.38)	5,151 (55.30)	5,166 (55.46)	0.002
Males	10,444 (46.07)	4,190 (44.57)	6,254 (47.13)	-0.051	8,311 (44.62)	4,163 (44.70)	4,148 (44.54)	-0.002
Intersex/Indeterminate	7 (0.03)	1 (0.01)	6 (0.05)	-0.034	0 (0.00)	0 (0.00)	0 (0.00)	0.000
Primary admission								
Medical admission	14,737 (65.01)	6,617 (70.39)	8,120 (61.19)	0.202	13,172 (70.71)	6,540 (70.22)	6,632 (71.20)	-0.010
Surgical admission	7,933 (34.99)	2,783 (29.61)	5,150 (38.81)	-0.202	5,456 (29.29)	2,774 (29.78)	2,682 (28.80)	0.010
Severity score								
APACHE III-J score	67 (56–80)	69 (57–83)	65 (55–77)	0.186	68 (57–82)	69 (57–82)	68 (57–81)	0.021
Comorbidity								
Chronic respiratory disease	1,865 (8.23)	951 (10.12)	914 (6.89)	0.107	1,760 (9.45)	926 (9.94)	834 (8.95)	0.010
Chronic cardiovascular disease	4,253 (18.76)	1,961 (20.86)	2,292 (17.27)	0.088	3,803 (20.42)	1,931 (20.73)	1,872 (20.20)	0.006
Chronic liver disease	56 (0.25)	31 (0.33)	25 (0.19)	0.025	52 (0.28)	28 (0.30)	24 (0.26)	0.000
Chronic renal disease	1,182 (5.21)	559 (5.95)	623 (4.69)	0.053	1,082 (5.81)	551 (5.92)	531 (5.70)	0.002
Immune disease	245 (1.08)	133 (1.41)	112 (0.84)	0.048	221 (1.18)	117 (1.26)	104 (1.12)	0.001
Immunotherapy	451 (1.99)	224 (2.38)	227 (1.71)	0.044	405 (2.17)	211 (2.27)	194 (2.08)	0.002
AIDS	2 (0.01)	2 (0.02)	0 (0.00)	NA	2 (0.01)	2 (0.02)	0 (0.00)	NA
Hepatic failure	21 (0.09)	10 (0.11)	11 (0.08)	0.007	19 (0.10)	9 (0.10)	10 (0.11)	0.000
Lymphoma	157 (0.69)	76 (0.81)	81 (0.61)	0.022	135 (0.72)	72 (0.77)	63 (0.68)	0.001
Metastasis	440 (1.94)	219 (2.33)	221 (1.67)	0.044	398 (2.14)	207 (2.22)	191 (2.05)	0.002
Leukemia	177 (0.78)	87 (0.93)	90 (0.68)	0.026	162 (0.87)	83 (0.89)	79 (0.85)	0.000
Immunosuppression	423 (1.87)	203 (2.16)	220 (1.66)	0.035	384 (2.06)	197 (2.12)	187 (2.01)	0.001
Cirrhosis	51 (0.22)	29 (0.31)	22 (0.17)	0.026	47 (0.25)	26 (0.28)	21 (0.23)	0.000
Outcomes								
ICU mortality	2,048 (9.03)	1,154 (12.28)	894 (6.74)	–	1,895 (10.17)	1,119 (12.01)	776 (8.33)	–
Hospital mortality	4,505 (19.87)	2,448 (26.04)	2,057 (15.50)	–	4,077 (21.88)	2,399 (25.76)	1,678 (18.02)	–
ICU LOS [†]	1.87 (0.94–3.34)	1.89 (0.96–3.36)	1.84 (0.92–3.31)	–	1.90 (0.96–3.43)	1.89 (0.96–3.37)	1.91 (0.97–3.48)	–
Hospital LOS [†]	10.35 (5.78–18.33)	9.91 (5.21–17.60)	10.71 (6.06–18.88)	–	10.22 (5.63–18.14)	9.92 (5.24–17.64)	10.59 (5.91–18.72)	–

Note: Data are presented as number (%) or median (interquartile range). [†]ICU and hospital LOS values were log10-transformed for statistical analysis to reduce skewness and stabilize variance. Reported values in the table are back-transformed medians (IQR), presented in days for clinical interpretation. [‡]Standardized mean difference (SMDs): Positive values indicate higher covariate values in the limited-treatment group, while negative values indicate higher values in the full-treatment group. *Abbreviations:* AIDS, Acquired Immunodeficiency Syndrome; APACHE III-J, Acute Physiology and Chronic Health Evaluation III-Japan; ICU, Intensive care unit; LOS, Length of stay; NA, Not applicable; SMD, standard mean difference.

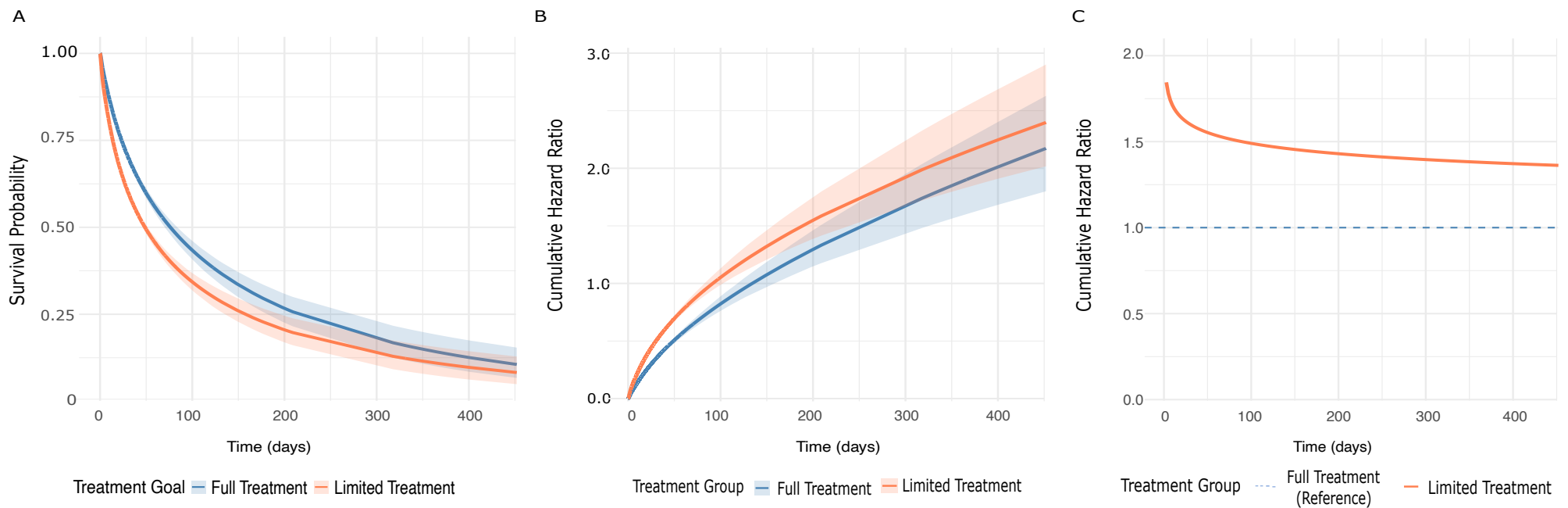
Supplementary Figure 10. Time-varying effects of treatment goal on ICU mortality in the propensity-matched acute-admission cohort using flexible parametric models (TVC-FPM)

- (A) Unadjusted survival curve showing lower survival probability for the limited-treatment group, especially during early ICU days.
- (B) Unadjusted cumulative hazard function indicating a persistently higher hazard in the limited-treatment group, with divergence increasing over time.
- (C) Adjusted cumulative hazard ratio showing a consistently elevated mortality risk associated with limited treatment throughout the ICU stay. The full-treatment group is the reference in adjusted models.



Supplementary Figure 11. Time-varying effects of treatment goal on hospital mortality in the propensity-matched acute-admission cohort using flexible parametric models (TVC-FPM)

- (A) Unadjusted survival curve showing lower survival probability for the limited-treatment group over the hospital stay.
- (B) Unadjusted cumulative hazard function indicating a persistently higher hazard in the limited-treatment group, with divergence increasing over time.
- (C) Adjusted cumulative hazard ratio showing a consistently elevated mortality risk associated with limited treatment throughout the hospital stay. The full-treatment group is the reference in adjusted models.



Supplementary Table 7. Univariable and multivariable linear regression analysis of ICU and hospital length of stay (LOS).

Variables	Univariable linear regression of ICU LOS [†]			Multivariable linear regression of ICU LOS ^{†,‡}		
	β-coefficient [95%CI]	t-value	P-value	β-coefficient [95%CI]	t-value	p-value
Age	0.975 [0.970–0.980]	- 9.485	<0.001*	–	–	–
Male	1.129 [1.101–1.157]	9.536	<0.001*	1.107 [1.080–1.135]	8.036	<0.001*
Treatment goal						
Limited treatment	0.970 [0.946–0.994]	-2.414	0.016*	0.966 [0.943–0.990]	-2.730	0.006*
Primary admission						
Medical admission	1.212 [1.161–1.266]	14.150	<0.001*	–	–	–
Non-elective surgery	1.323 [1.273–1.376]	8.780	<0.001*	–	–	–
Severity score						
APACHE III-J score	1.005 [1.005–1.006]	17.240	<0.001*	1.005 [1.004–1.006]	16.490	<0.001*
Comorbidity						
Chronic respiratory disease	1.067 [1.022–1.113]	2.958	0.003*	–	–	–
Chronic cardiovascular disease	1.040 [1.008–1.072]	2.493	0.013*	–	–	–
Chronic liver disease	1.176 [0.929–1.490]	1.350	0.177	–	–	–
Chronic renal disease	1.014 [0.961–1.069]	0.507	0.612	–	–	–
Immune disease	0.948 [0.847–1.062]	-0.920	0.358	–	–	–
Immunotherapy	1.012[0.929–1.102]	0.264	0.792	–	–	–
Hepatic failure	1.374 [0.925–2.040]	1.576	0.115	–	–	–
Lymphoma	1.001 [0.871–1.151]	0.018	0.986	–	–	–
Metastasis	0.981 [0.904–1.064]	-0.465	0.642	–	–	–
Leukemia	1.014[0.888–1.158]	0.212	0.832	–	–	–
Immunosuppression	1.006 [0.921–1.098]	0.135	0.893	–	–	–
Cirrhosis	1.141 [0.894–1.457]	1.060	0.289	–	–	–
Variables	Univariable linear regression of Hospital LOS [†]			Multivariable linear regression of hospital LOS ^{†,‡}		

	β -coefficient [95%CI]	t-value	p-value	β -coefficient [95%CI]	t-value	p-value
Age	0.997 [0.991–1.002]	-1.167	0.243	-	-	-
Male	0.960 [0.934–0.986]	-3.023	0.003*	0.973 [0.948–1.000]	-1.976	0.048
Treatment goal						
Limited treatment	0.942 [0.917–0.967]	-4.454	<0.001*	0.944 [0.919–0.969]	-4.281	<0.001*
Primary admission						
Medical admission	0.741 [0.711–0.722]	-14.223	<0.001*	–	–	–
Non-elective surgery	0.964 [0.921–1.009]	-1.565	0.118	–	–	–
Severity score						
APACHE III-J score	0.996 [0.996–0.997]	-11.38	<0.001*	0.996 [0.996–0.997]	-11.085	< 0.001*
Comorbidity						
Chronic respiratory disease	0.993 [0.949–1.039]	-0.305	0.760	–	–	–
Chronic cardiovascular disease	1.024 [0.992–1.058]	1.455	0.146	–	–	–
Chronic liver disease	0.983 [0.764–1.265]	-0.135	0.892	–	–	–
Chronic renal disease	1.104 [1.043–1.168]	3.418	<0.001*	–	–	–
Immune disease	1.046 [0.927–1.180]	0.727	0.467	–	–	–
Immunotherapy	0.971 [0.887–1.064]	-0.622	0.534	–	–	–
Hepatic failure	1.130 [0.741–1.723]	0.567	0.571	–	–	–
Lymphoma	1.008 [0.869–1.170]	0.106	0.916	–	–	–
Metastasis	1.095 [1.004–1.194]	2.045	0.041*	–	–	–
Leukemia	1.065 [0.924–1.227]	0.874	0.382	–	–	–
Immunosuppression	0.959 [0.873–1.053]	-0.879	0.379	–	–	–
Cirrhosis	0.930 [0.716–1.207]	-0.546	0.585	–	–	–

† Data are presented as back-transformed β -coefficients with 95% confidence intervals (CIs) from linear regression analyses using log10-transformed ICU and hospital length of stay (LOS). ‡ Covariates with $p < 0.2$ in univariable analysis were selected for multivariable models, excluding age, admission type, and chronic comorbidities to avoid redundancy with APACHE III-J. Stepwise selection using Akaike Information Criterion (AIC) refined the final models. * p -value < 0.05 indicates statistical significance. *Abbreviations:* APACHE III-J: Acute Physiology and Chronic Health Evaluation III-Japan; ICU: intensive care unit; LOS: length of stay.

Supplementary Table 8. Fine-Gray competing risks regression for ICU and hospital mortality

Variables	Univariable competing risk regression of ICU mortality		Multivariable competing risk regression of ICU mortality [†]	
	sHR [95%CI]	p-value	sHR [95%CI]	p-value
Age	0.969 [0.950–0.989]	0.002*	–	–
Sex	1.120 [1.030–1.220]	0.011*	0.964 [0.876–1.006]	0.460
Treatment goal				
Limited treatment	1.54 [1.410–1.690]	<0.001*	1.717 [1.555–1.900]	<0.001*
Primary admission type				
Medical admission	1.800 [1.620–2.000]	<0.001*	–	–
Non-elective surgery	1.670 [1.540–1.810]	<0.001*	–	–
Severity score				
APACHE III-J score	1.035 [1.033–1.037]	<0.001*	1.036 [1.034–1.040]	<0.001*
Comorbidity				
Chronic respiratory disease	1.030 [0.893–1.200]	0.660	–	–
Chronic cardiovascular disease	1.000 [0.903–1.120]	0.940	–	–
Chronic liver disease	1.100 [0.533–2.280]	0.790	–	–
Chronic renal disease	0.947 [0.785–1.140]	0.570	–	–
Immune disease	0.976 [0.645–1.480]	0.910	–	–
Immunotherapy	1.060 [0.795–1.410]	0.690	–	–
Hepatic failure	1.110 [0.346–3.580]	0.860	–	–
Lymphoma	0.924 [0.546–1.560]	0.770	–	–
Metastasis	1.000 [0.754–1.340]	0.980	–	–
Leukemia	1.080 [0.687–1.680]	0.750	–	–
Immunosuppression	1.120 [0.838–1.490]	0.450	–	–
Cirrhosis	1.230 [0.597–2.530]	0.580	–	–
Variables	Univariable competing risk regression of Hospital mortality		Multivariable competing risk regression of Hospital mortality [†]	
	sHR [95%CI]	p-value	sHR [95%CI]	p-value
Age	0.985 [0.973–0.999]	0.029*	–	–
Sex	1.280 [1.210–1.360]	<0.001*	1.133 [1.064–1.207]	<0.001*
Treatment goal				
Limited treatment	1.520 [1.430–1.620]	<0.001*	1.643 [1.541–1.752]	<0.001*
Primary admission type				

Medical admission	1.890 [1.770–2.020]	<0.001*	—	—
Non-elective surgery	1.670 [1.590–1.760]	<0.001*	—	—
Severity score				
APACHE III-J score	1.030 [1.029–1.032]	<0.001*	1.031 [1.030–1.032]	<0.001*
Comorbidity				
Chronic respiratory disease	1.160 [1.050–1.280]	0.002*	—	—
Chronic cardiovascular disease	1.050 [0.981–1.130]	0.150	—	—
Chronic liver disease	1.100 [0.978–1.230]	0.110	—	—
Chronic renal disease	1.230 [0.732–2.080]	0.430	—	—
Immune disease	0.893 [0.675–1.180]	0.430	—	—
Immunotherapy	1.110 [0.915–1.350]	0.290	—	—
Hepatic failure	0.860 [0.300–2.460]	0.780	—	—
Lymphoma	0.892 [0.630–1.260]	0.520	—	—
Metastasis	1.080 [0.906–1.290]	0.380	—	—
Leukemia	1.020 [0.749–1.380]	0.910	—	—
Immunosuppression	1.160 [0.955–1.410]	0.130	—	—
Cirrhosis	1.390 [0.824–2.330]	0.220	—	—
Competing risks regression using the Fine-Gray model was performed to evaluate factors associated with ICU and hospital mortality. Results are presented as subdistribution hazard ratios (sHR) with 95% confidence intervals (CI). † Covariates with $p < 0.2$ in univariable analysis were selected for multivariable models, excluding age, primary admission type, and chronic comorbidities to avoid redundancy with APACHE III-J. For ICU mortality, the Pseudo Log-likelihood was -17,349, and the Likelihood Ratio Test was 1,974 on 3 degrees of freedom (df). For hospital mortality, the Pseudo Log-likelihood was -39,184, and the Likelihood Ratio Test was 2,931 on 3 df. * p-value < 0.05 indicates statistical significance. <i>Abbreviations:</i> APACHE III-J: Acute Physiology and Chronic Health Evaluation III-Japan; ICU: intensive care unit.				

Supplementary Table 9. Sex-based differences in baseline characteristics and clinical outcomes among critically ill nonagenarians in the propensity-matched cohort.

Variables	Female (n = 11,974)	Male (n = 9,368)	p-value
Age	92.3 (91–94.2)	92.1 (90.9–93.9)	<0.001*
Primary admission type			<0.001*
Medical admission	6,992 (58.40)	6,249 (66.71)	
Planned surgery	1,545 (12.90)	1,027 (10.96)	
Unplanned surgery	3,437 (28.70)	2,092 (22.33)	
Severity score			
APACHE III-J score	66 (55–79)	70 (58–83)	<0.001*
Treatment goal			
Limited treatment	5,968 (49.84)	4,703 (50.16)	0.600
Comorbidity			
Chronic respiratory disease	1,000 (8.35)	1,004 (10.40)	<0.001*
Chronic cardiovascular disease	2,409 (20.12)	2,033 (21.70)	0.024*
Chronic liver disease	27 (0.23)	32 (0.34)	0.109
Chronic renal disease	590 (4.93)	643 (6.86)	<0.001*
Immune disease	130 (1.09)	129 (1.38)	0.054
Immunotherapy	248 (2.07)	211 (2.25)	0.365
Hepatic failure	9 (0.08)	12 (0.13)	0.221
Lymphoma	78 (0.65)	92 (0.98)	0.007*
Metastasis	179 (1.49)	331 (3.53)	<0.001*
Leukemia	91 (0.76)	97 (1.04)	0.033*
Immunosuppression	231 (1.93)	203 (2.17)	0.222
Cirrhosis	26 (0.24)	29 (0.31)	0.186
Outcomes			
ICU mortality	1,011 (8.44)	1,002 (10.72)	<0.001*
Hospital mortality	2,212 (17.71)	2,180 (23.27)	<0.001*
ICU LOS [†]	1.77 (0.90–3.05)	1.95 (0.98–3.60)	<0.001*
Hospital LOS [†]	10.72 (5.94–18.62)	10.23 (5.51–18.20)	0.001*

Data are expressed as number (%) or median (interquartile range, IQR). [†] ICU and hospital LOS values were log10-transformed for statistical analysis to reduce skewness and stabilize variance. Reported values in the table are back-transformed medians (IQR), presented in days for clinical interpretation. * p-value < 0.05 indicates statistical significance. *Abbreviations:* APACHE III-J: Acute Physiology and Chronic Health Evaluation III-Japan; ICU: intensive care unit; LOS: Length of stay.

Supplementary Table 10. Contributing hospitals to the ANZICS Adult Patient Database for this study, by country, state/region, and hospital name.

Country	State/Region	Hospital
Australia	Australian Capital Territory	Calvary Bruce Private Hospital HDU Calvary John James Hospital ICU Canberra Hospital ICU National Capital Private Hospital ICU North Canberra Hospital ICU
	New South Wales	Albury Wodonga Health ICU Bankstown-Lidcombe Hospital ICU Bathurst Base Hospital ICU Blacktown Hospital ICU Bowral Hospital HDU Brisbane Waters Private Hospital ICU Broken Hill Base Hospital & Health Services ICU Calvary Mater Newcastle ICU Campbelltown Hospital ICU Coffs Harbour Health Campus ICU Concord Hospital (Sydney) ICU Dubbo Base Hospital ICU Fairfield Hospital ICU Figtree Private Hospital ICU Gosford Hospital ICU Gosford Private Hospital ICU Goulburn Base Hospital ICU Grafton Base Hospital ICU Griffith Base Hospital ICU Hornsby Ku-ring-gai Hospital ICU Hurstville Private Hospital ICU John Hunter Hospital ICU Kareena Private Hospital ICU Lingard Private Hospital ICU Lismore Base Hospital ICU Liverpool Hospital ICU Macquarie University Private Hospital ICU Maitland Hospital ICU Maitland Private Hospital ICU Manly Hospital & Community Health ICU Manning Rural Referral Hospital ICU Mater Private Hospital (Sydney) ICU Nepean Hospital ICU Nepean Private Hospital ICU Newcastle Private Hospital ICU North Shore Private Hospital ICU Northern Beaches Hospital ICU Norwest Private Hospital ICU Orange Base Hospital ICU Port Macquarie Base Hospital ICU

		Prince of Wales Hospital (Sydney) ICU Prince of Wales Private Hospital (Sydney) ICU Royal North Shore Hospital ICU Royal Prince Alfred Hospital ICU Ryde Hospital and Community Health Services ICU Shoalhaven Hospital ICU South East Regional Hospital ICU St George Hospital (Sydney) CICU St George Hospital (Sydney) ICU St George Hospital (Sydney) ICU2 St George Private Hospital (Sydney) ICU St Vincent's Hospital (Sydney) ICU St Vincent's Private Hospital (Sydney) ICU Sutherland Hospital & Community Health Services ICU Sydney Adventist Hospital ICU Sydney Southwest Private Hospital ICU Tamworth Base Hospital ICU The Chris O'Brien Lifehouse ICU Tweed Valley Hospital ICU Wagga Wagga Base Hospital & District Health ICU Westmead Hospital ICU Westmead Private Hospital ICU Wollongong Hospital ICU Wollongong Private Hospital ICU Wyong Hospital ICU
	Northern Territory	Alice Springs Hospital ICU Royal Darwin Hospital ICU
	Queensland	Allamanda Private Hospital ICU Brisbane Private Hospital ICU Buderim Private Hospital ICU Bundaberg Base Hospital ICU Caboolture Hospital ICU Cairns Hospital ICU Gold Coast Private Hospital ICU Gold Coast University Hospital ICU Greenslopes Private Hospital ICU Hervey Bay Hospital ICU Ipswich Hospital ICU John Flynn Private Hospital ICU Logan Hospital ICU Mackay Base Hospital ICU Mater Adults Hospital (Brisbane) ICU Mater Private Hospital (Brisbane) ICU Mater Private Hospital (Townsville) ICU Mount Isa Hospital ICU Nambour General Hospital ICU Noosa Hospital ICU North West Private Hospital ICU Peninsula Private Hospital ICU Pindara Private Hospital ICU

		Princess Alexandra Hospital ICU Queen Elizabeth II Jubilee Hospital ICU Redcliffe Hospital ICU Robina Hospital ICU Rockhampton Hospital ICU Royal Brisbane and Women's Hospital ICU St Andrew's Hospital Toowoomba ICU St Andrew's Private Hospital (Ipswich) ICU St Andrew's War Memorial Hospital ICU St Vincent's Private Hospital Northside ICU St Vincent's Hospital (Toowoomba) ICU Sunnybank Hospital ICU Sunshine Coast University Hospital ICU Sunshine Coast University Private Hospital ICU The Prince Charles Hospital ICU The Wesley Hospital ICU Toowoomba Hospital ICU Townsville University Hospital ICU
	South Australia	Ashford Community Hospital ICU Calvary Adelaide Hospital ICU Calvary North Adelaide Hospital ICU Flinders Medical Centre ICU Flinders Private Hospital ICU Lyell McEwin Hospital ICU Modbury Public Hospital ICU Repatriation General Hospital (Adelaide) ICU Royal Adelaide Hospital ICU St Andrew's Hospital (Adelaide) ICU The Memorial Hospital (Adelaide) ICU The Queen Elizabeth (Adelaide) ICU Western Hospital (SA) ICU
	Tasmania	North West Regional Hospital (Burnie) ICU Calvary Hospital (Lenah Valley) ICU Royal Hobart Hospital ICU Launceston General Hospital ICU
	Victoria	Alfred Hospital ICU Angliss Hospital ICU Austin Hospital ICU Bendigo Health Care Group ICU Box Hill Hospital ICU Cabrini Hospital ICU Casey Hospital ICU Central Gippsland Health Service (Sale) ICU Dandenong Hospital ICU Echuca Regional Hospital HDU Epworth Eastern Private Hospital ICU Epworth Freemasons Hospital ICU Epworth Geelong ICU Epworth Hospital (Richmond) ICU Footscray Hospital ICU

		Frankston Hospital ICU Goulburn Valley Health ICU Grampians Health Ballarat ICU Grampians Health Horsham ICU Holmesglen Private Hospital ICU John Fawkner Hospital ICU Knox Private Hospital ICU Latrobe Regional Hospital ICU Maroondah Hospital ICU Melbourne Private Hospital ICU Mildura Base Public Hospital ICU Monash Medical Centre-Clayton Campus ICU Mulgrave Private Hospital ICU Northeast Health Wangaratta ICU Peter MacCallum Cancer Institute ICU Royal Melbourne Hospital ICU South West Healthcare (Warrnambool) ICU St John Of God Hospital (Ballarat) ICU St John of God Hospital (Bendigo) ICU St John of God Hospital (Berwick) ICU St John Of God Hospital (Geelong) ICU St Vincent's Hospital (Melbourne) ICU St Vincent's Private Hospital Fitzroy ICU Sunshine Hospital ICU The Bays Hospital ICU The Northern Hospital ICU University Hospital Geelong ICU Victorian Heart Hospital ICU Warringal Private Hospital ICU Werribee Mercy Hospital ICU Western District Health Service (Hamilton) ICU Western Private Hospital ICU
	Western Australia	Armadale Health Service ICU Bunbury Regional Hospital ICU Fiona Stanley Hospital ICU Fremantle Hospital ICU Hollywood Private Hospital ICU Joondalup Health Campus ICU Mount Hospital ICU Rockingham General Hospital ICU Royal Perth Hospital ICU Sir Charles Gairdner Hospital ICU St John Of God Health Care (Subiaco) ICU St John Of God Hospital (Murdoch) ICU St John of God Midland Public & Private ICU
New Zealand	Auckland	Auckland City Hospital CV ICU Auckland City Hospital DCCM Middlemore Hospital ICU North Shore Hospital ICU

	Bay of Plenty	Rotorua Hospital ICU Tauranga Hospital ICU Whakatane Hospital ICU
	Canterbury	Christchurch Hospital ICU Timaru Hospital ICU
	Hawke's Bay	Hawkes Bay Hospital ICU
	Marlborough	Wairau Hospital ICU
	Nelson	Nelson Hospital ICU
	Northland	Whangarei Area Hospital - Northland Health Ltd ICU
	Otago	Dunedin Hospital ICU
	Southland	Southland Hospital ICU
	Taranaki	Taranaki Health ICU
	Waikato	Braemar Hospital SCU Waikato Hospital ICU
	Wellington	Hutt Hospital ICU Southern Cross Hospital (Wellington) ICU Wellington Hospital ICU