

PREDICTING LONG-TERM OUTCOMES IN ACUTE INTRACEREBRAL HEMORRHAGE USING DELAYED PROGNOSTICATION SCORES – Supplemental Material

Number of Figures: 4

Number of Tables: 9

Figure I. Histogram of the distribution of baseline vs delayed scores for a) ICH score, b) modified-ICH score, c) max-ICH score, and d) FUNC score.

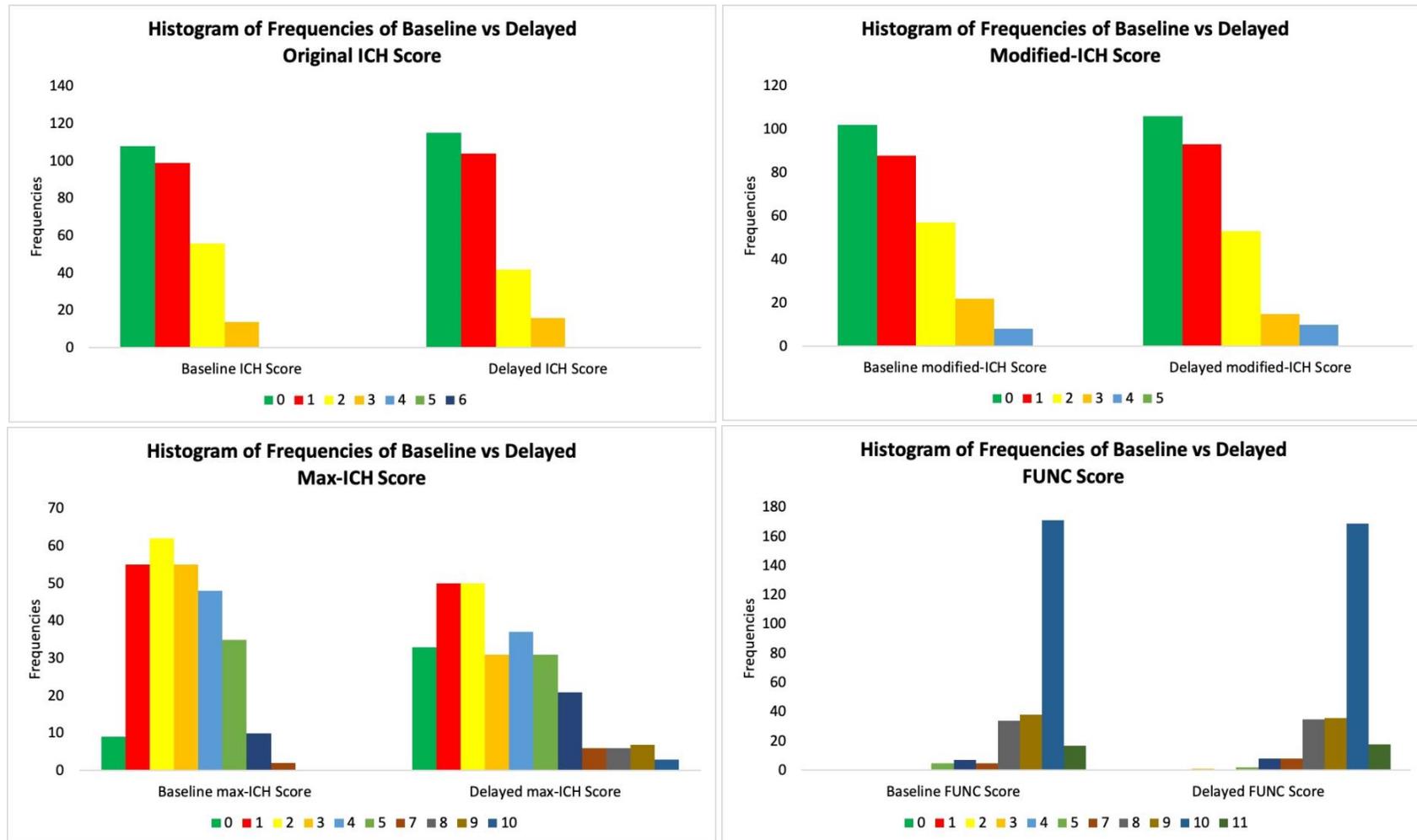


Figure II. ROC curves for the association between baseline and delayed modified-ICH (MICH) score for 30-day, 90-day, and 180-day mortality (top row), and 30-day, 90-day, and 180-day poor functional outcome, defined as mRS 4-5 (bottom row).

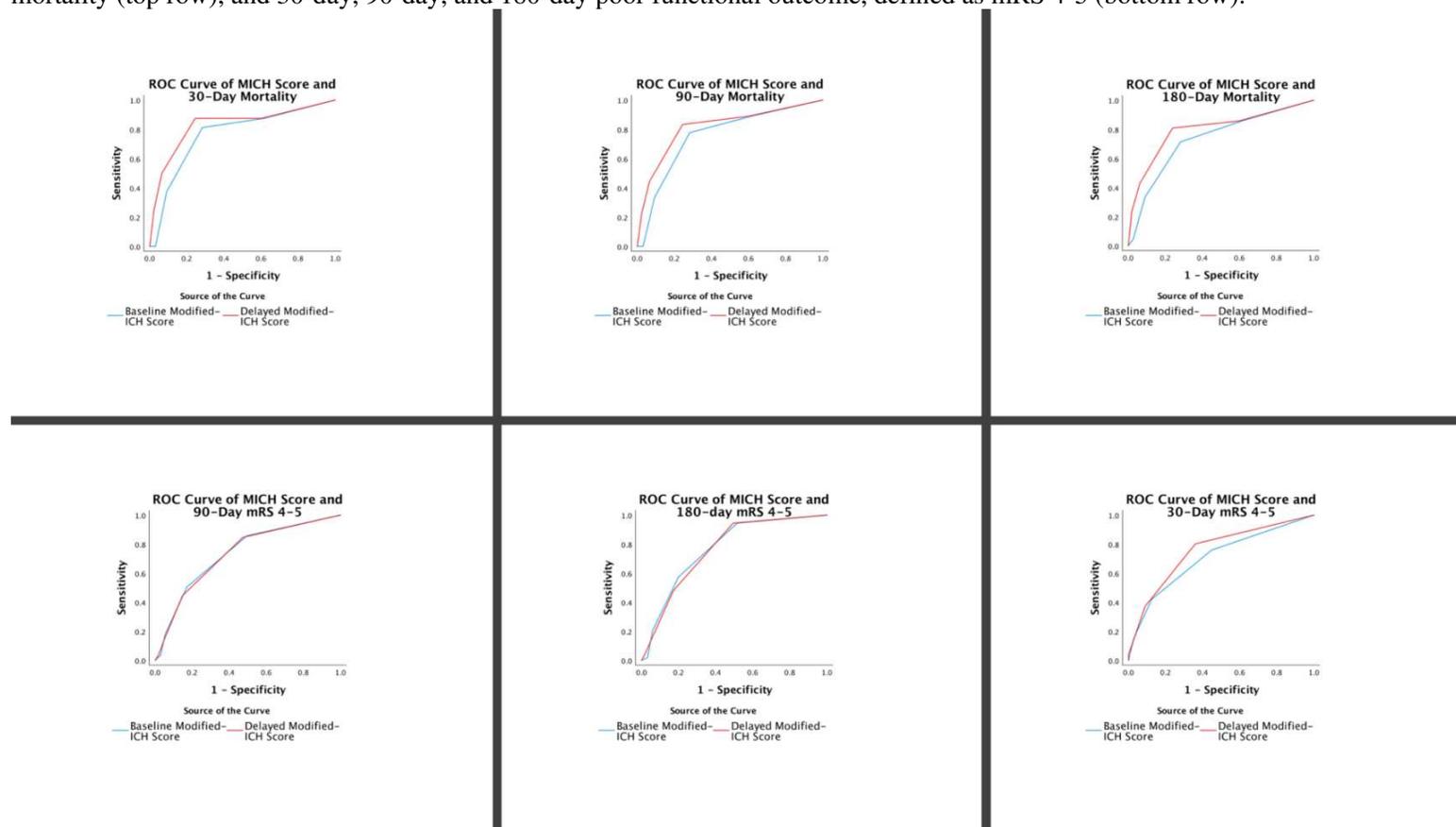


Figure III. ROC curves for the association between baseline and delayed max-ICH score for 30-day, 90-day, and 180-day mortality (top row), and 30-day, 90-day, and 180-day poor functional outcome, defined as mRS 4-5 (bottom row).

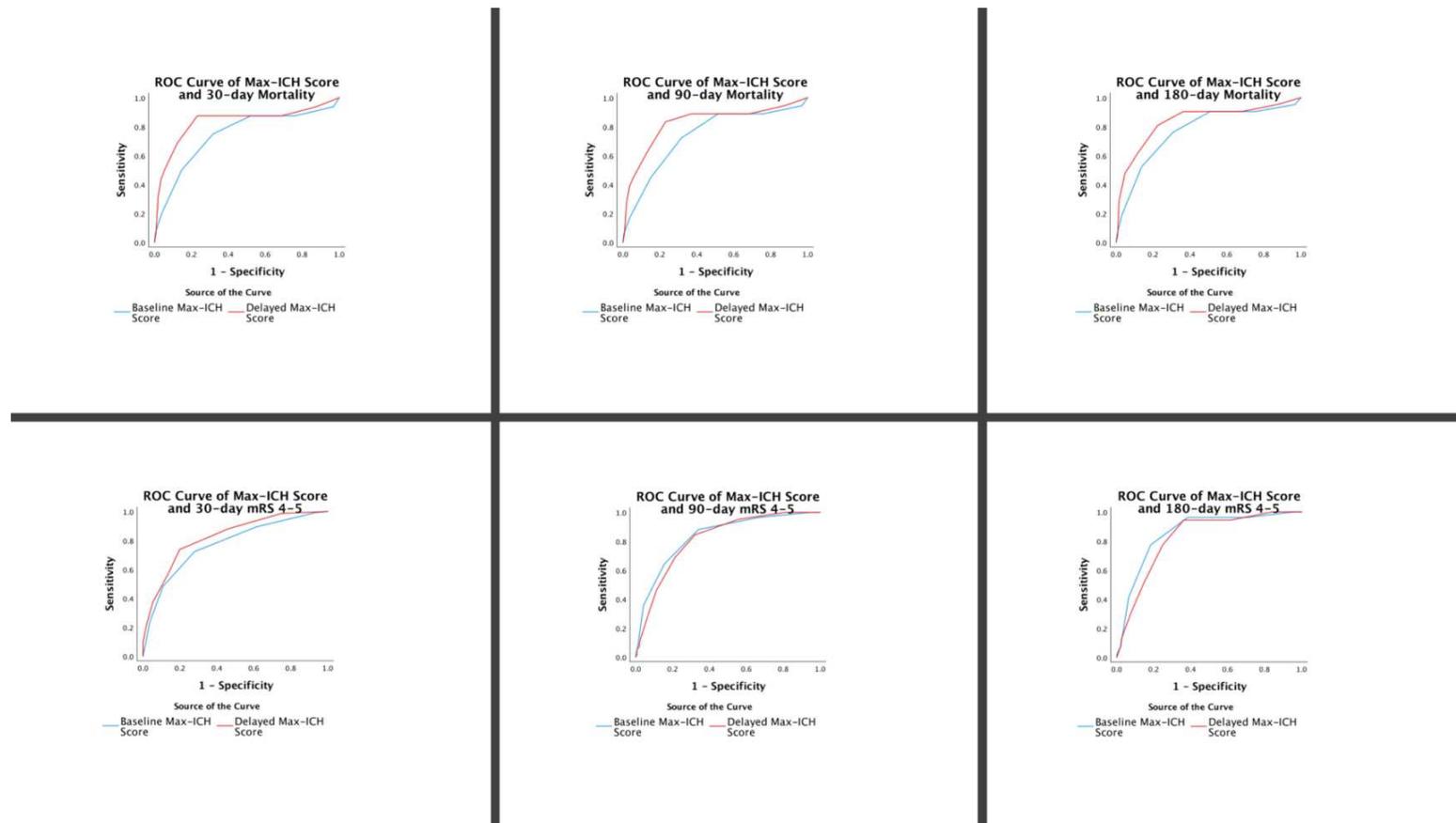


Figure IV. ROC curves for the association between baseline and delayed FUNC score for 30-day, 90-day, and 180-day mortality (top row), and 30-day, 90-day, and 180-day poor functional outcome, defined as mRS 4-5 (bottom row).

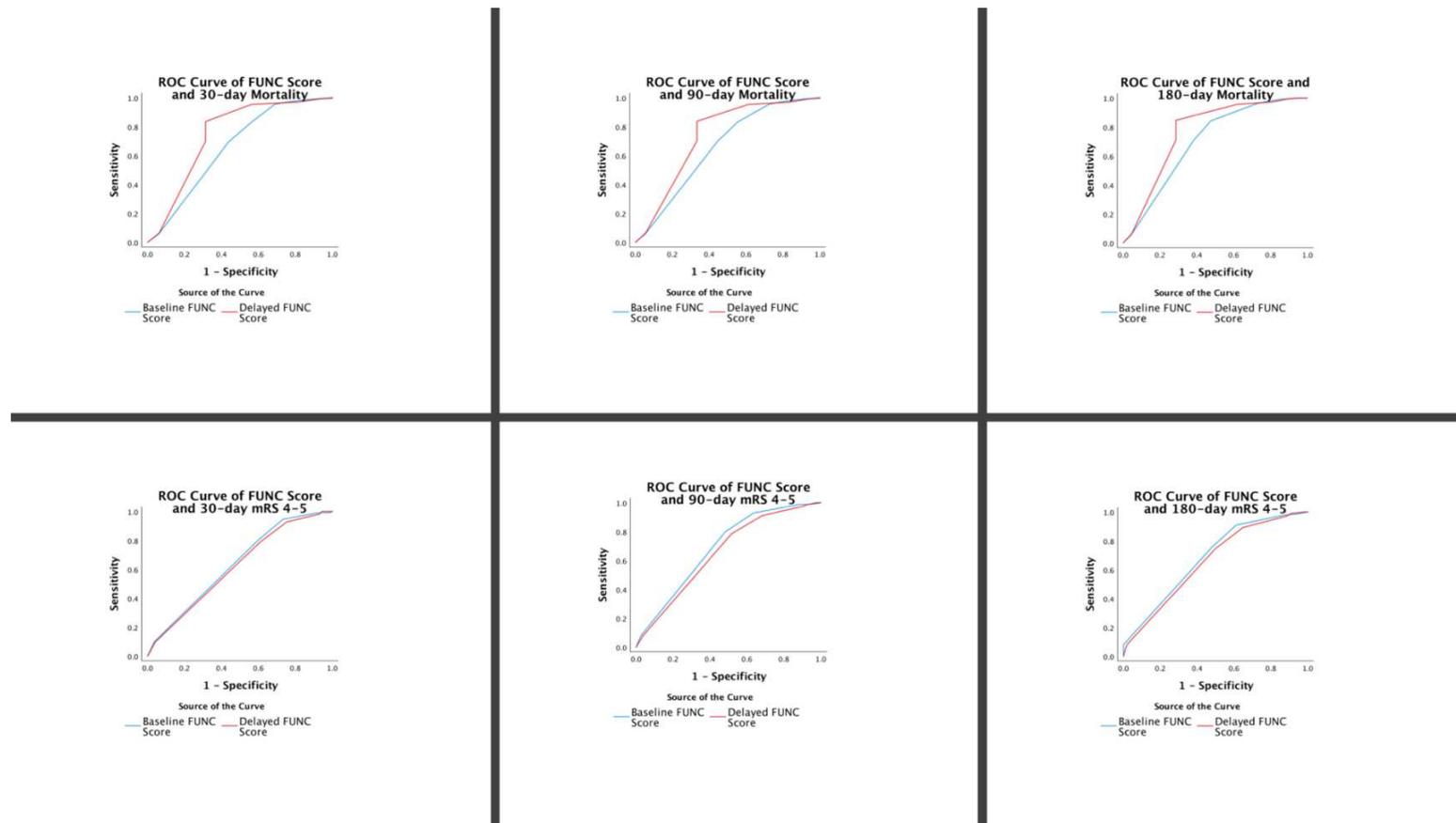


Table 1. Area under the curve (AUC) values for ROC curves of baseline vs delayed prognostication scores (listed left) for 30, 90, and 180-day mortality and poor functional outcome (defined as mRS of 4-5) in **placebo** treated patients meeting inclusion criteria. Statistical significance is highlighted using bold-font. P-values are represented in parentheses.

	Mortality (baseline vs delayed)			Poor Functional Outcome (baseline vs delayed)		
	30-day	90-day	180-day	30-day	90-day	180-day
Original ICH Score (N = 157 for mortality)	0.71 vs 0.84	0.69 vs 0.85	0.73 vs 0.87	0.71 vs 0.75	0.70 vs 0.69	0.78 vs 0.75
Modified ICH Score (N = 157 for mortality)	0.75 vs 0.83	0.72 vs 0.83	0.75 vs 0.85	0.72 vs 0.77	0.72 vs 0.71	0.77 vs 0.74
Max ICH Score (N = 157 for mortality)	0.74 vs 0.83	0.72 vs 0.83	0.75 vs 0.85	0.78 vs 0.81	0.81 vs 0.77	0.89 vs 0.83
FUNC Score (N = 158 for mortality)	0.67 vs 0.76	0.69 vs 0.77	0.73 vs 0.80	0.57 vs 0.55	0.61 vs 0.55	0.64 vs 0.59

Table II. Area under the curve (AUC) values for ROC curves of baseline vs delayed prognostication scores (listed left) for 30, 90, and 180-day mortality and poor functional outcome in **Deferoxamine** treated patients meeting inclusion criteria. Statistical significance is highlighted using bold-font. P-values are represented in parentheses.

	Mortality (baseline vs delayed)			Poor Functional Outcome (baseline vs delayed)		
	30-day	90-day	180-day	30-day	90-day	180-day
Original ICH Score (N = 141 for mortality)	0.76 vs 0.81	0.77 vs 0.80	0.75 vs 0.80	0.69 vs 0.72	0.78 vs 0.75	0.79 vs 0.79
Modified ICH Score (N = 141 for mortality)	0.79 vs 0.83	0.80 vs 0.80	0.73 vs 0.76	0.68 vs 0.73	0.74 vs 0.75	0.76 vs 0.79
Max ICH Score (N = 140 for mortality)	0.74 vs 0.83	0.75 vs 0.82	0.78 vs 0.82	0.76 vs 0.83	0.86 vs 0.85	0.82 vs 0.81
FUNC Score (N = 141 for mortality)	0.65 vs 0.74	0.62 vs 0.70	0.68 vs 0.74	0.69 vs 0.68	0.77 vs 0.76	0.73 vs 0.73

Table III: Delayed ICH scores and their interaction with treatment effect on poor functional outcome (defined as mRS = 4-5) at various time-points.

	ICH Score x Treatment interaction	FUNC Score x Treatment interaction	MICH x Treatment interaction	Max-ICH x Treatment interaction
mRS 30d	OR 0.72 (95% CI 0.31 – 1.66) P = 0.441	OR 1.92 (1.05 – 3.49) P = 0.034	OR 0.715 (0.331 – 1.55) P = 0.394	OR 1.02 (95% CI 0.69 – 1.52) P = 0.909
mRS 90d	OR 1.28 (95% CI 0.62 – 2.62) P = 0.502	OR 2.59 (1.45 – 4.67) P = 0.001	OR 1.22 (0.66 – 2.25) P = 0.524	OR 1.27 (95% CI 0.90 – 1.78) P = 0.176
mRS 180d	OR 1.09 (95% CI 0.49 – 2.45) P = 0.827	OR 2.0 (1.09 – 3.7) P = 0.024	OR 1.33 (0.676 – 2.62) P = 0.408	OR 0.97 (95% CI 0.68 – 1.39) P = 0.883

Sensitivity Analyses based on Sex and Race

Table IV: Frequency of outcomes of interest, stratified by sex. Statistically significant results are highlighted with bold-font. Frequency of poor functional outcomes is calculated out of survivors only.

Outcome Variable	Male (n=169)	Female (n=108)	P Value
30-day mortality (n, %)	10 (5.9%)	6 (5.6%)	0.90
90-day mortality (n, %)	11 (6.5%)	7 (6.5%)	0.99
180-day mortality (n, %)	13 (7.7%)	8 (7.5%)	0.95
30-day poor functional outcome (mRS 4-5) (n, %)	87 (56.9%)	55 (55.0%)	0.77
90-day poor functional outcome (mRS 4-5) (n, %)	45 (28.8%)	40 (40.8%)	0.049
180-day poor functional outcome (mRS 4-5) (n, %)	30 (20.3%)	24 (26.1%)	0.29

Table V: Frequency of outcomes of interest, stratified by ethnicity. Statistically significant results are highlighted with bold-font. Frequency of poor functional outcomes is calculated out of survivors only.

Outcome Variable	Latino/ Hispanic (n=43)	Non-Latino/ Hispanic (n=234)	P Value
30-day mortality (n, %)	3 (6.3%)	16 (6.5%)	0.94
90-day mortality (n, %)	3 (6.3%)	18 (7.4%)	0.78
180-day mortality (n, %)	3 (6.3%)	21 (8.6%)	0.59
30-day poor functional outcome (mRS 4-5) (n, %)	23 (59.0%)	119 (55.6%)	0.70
90-day poor functional outcome (mRS 4-5) (n, %)	14 (35.0%)	71 (33.2%)	0.82
180-day poor functional outcome (mRS 4-5) (n, %)	12 (30.0%)	42 (21.0%)	0.21

Table VI: Area under the curve (AUC) values for ROC curves of baseline vs delayed prognostication scores (listed left) for 30, 90, and 180-day mortality and poor functional outcome in **male** patients meeting inclusion criteria. Statistical significance is highlighted using bold-font. P-values are represented in parentheses.

	Mortality (baseline vs delayed)			Poor Functional Outcome (baseline vs delayed)		
	30-day	90-day	180-day	30-day	90-day	180-day
Original ICH Score (N = 169)	0.75 vs 0.85 (0.02)	0.74 vs 0.86 (0.006)	0.75 vs 0.85 (0.006)	0.64 vs 0.72 (0.01)	0.72 vs 0.73 (0.65)	0.81 vs 0.80 (0.59)
Modified ICH Score (N = 169)	0.78 vs 0.85 (0.095)	0.76 vs 0.85 (0.035)	0.74 vs 0.82 (0.037)	0.64 vs 0.72 (0.006)	0.71 vs 0.72 (0.71)	0.80 vs 0.78 (0.58)
Max ICH Score (N = 168)	0.76 vs 0.86 (0.001)	0.75 vs 0.86 (< 0.001)	0.79 vs 0.87 (0.035)	0.73 vs 0.79 (0.025)	0.83 vs 0.80 (0.45)	0.87 vs 0.83 (0.17)
FUNC Score (N = 169)	0.67 vs 0.69 (0.44)	0.69 vs 0.71 (0.44)	0.74 vs 0.75 (0.43)	0.62 vs 0.63 (0.871)	0.69 vs 0.69 (0.93)	0.70 vs 0.70 (0.86)

Table VII: Area under the curve (AUC) values for ROC curves of baseline vs delayed prognostication scores (listed left) for 30, 90, and 180-day mortality and poor functional outcome in **female** patients meeting inclusion criteria. Statistical significance is highlighted using bold-font. P-values are represented in parentheses.

	Mortality (baseline vs delayed)			Poor Functional Outcome (baseline vs delayed)		
	30-day	90-day	180-day	30-day	90-day	180-day
Original ICH Score (N = 107)	0.72 vs 0.79 (0.019)	0.73 vs 0.76 (0.55)	0.71 vs 0.78 (0.23)	0.80 vs 0.77 (0.41)	0.76 vs 0.70 (0.099)	0.76 vs 0.72 (0.41)
Modified ICH Score (N = 107)	0.76 vs 0.80 (0.017)	0.76 vs 0.76 (0.97)	0.73 vs 0.77 (0.43)	0.43 vs 0.54 (0.96)	0.76 vs 0.74 (0.57)	0.72 vs 0.73 (0.81)
Max ICH Score (N = 106)	0.72 vs 0.79 (0.02)	0.72 vs 0.77 (0.16)	0.75 vs 0.79 (0.10)	0.83 vs 0.86 (0.35)	0.85 vs 0.84 (0.67)	0.83 vs 0.81 (0.43)
FUNC Score (N = 107)	0.64 vs 0.85 (0.041)	0.61 vs 0.78 (0.051)	0.64 vs 0.79 (0.06)	0.65 vs 0.60 (0.16)	0.69 vs 0.61 (0.051)	0.65 vs 0.60 (0.31)

Table VIII: Area under the curve (AUC) values for ROC curves of baseline vs delayed prognostication scores (listed left) for 30, 90, and 180-day mortality and poor functional outcome in **Latino or Hispanic** patients meeting inclusion criteria. Statistical significance is highlighted using bold-font. P-values are represented in parentheses.

	Mortality (baseline vs delayed) (N = 43)			Poor Functional Outcome (baseline vs delayed) (N = 40)		
	30-day	90-day	180-day	30-day	90-day	180-day
Original ICH Score	0.73 vs 0.77 (0.095)	0.73 vs 0.77 (0.095)	0.73 vs 0.77 (0.095)	0.74 vs 0.80 (0.11)	0.88 vs 0.92 (0.30)	0.93 vs 0.93 (0.96)
Modified ICH Score	0.87 vs 0.84 (0.71)	0.87 vs 0.84 (0.71)	0.87 vs 0.84 (0.71)	0.76 vs 0.83 (0.11)	0.90 vs 0.95 (0.26)	0.96 vs 0.96 (0.85)
Max ICH Score	0.75 vs 0.85 (0.53)	0.75 vs 0.85 (0.53)	0.75 vs 0.85 (0.53)	0.82 vs 0.90 (0.20)	0.85 vs 0.95 (0.078)	0.93 vs 0.97 (0.36)
FUNC Score	0.39 vs 0.42 (0.60)	0.39 vs 0.42 (0.60)	0.39 vs 0.42 (0.60)	0.59 vs 0.64 (0.53)	0.71 vs 0.74 (0.82)	0.76 vs 0.72 (0.78)

Table IX: Area under the curve (AUC) values for ROC curves of baseline vs delayed prognostication scores (listed left) for 30, 90, and 180-day mortality and poor functional outcome in **non-Hispanic or Latino** patients meeting inclusion criteria. Statistical significance is highlighted using bold-font. P-values are represented in parentheses.

	Mortality (baseline vs delayed) (N = 234)			Poor Functional Outcome (baseline vs delayed) (N = 200)		
	30-day	90-day	180-day	30-day	90-day	180-day
Original ICH Score	0.74 vs 0.83 (0.004)	0.74 vs 0.82 (0.023)	0.74 vs 0.83 (0.008)	0.71 vs 0.73 (0.26)	0.71 vs 0.68 (0.22)	0.75 vs 0.73 (0.40)
Modified ICH Score	0.75 vs 0.83 (0.014)	0.74 vs 0.81 (0.058)	0.72 vs 0.79 (0.025)	0.70 vs 0.74 (0.075)	0.70 vs 0.69 (0.65)	0.72 vs 0.71 (0.80)
Max ICH Score	0.74 vs 0.83 (<0.001)	0.73 vs 0.82 (<0.001)	0.77 vs 0.84 (0.013)	0.76 vs 0.81 (0.026)	0.83 vs 0.79 (0.088)	0.84 vs 0.79 (0.047)
FUNC Score	0.70 vs 0.80 (0.056)	0.69 vs 0.78 (0.060)	0.73 vs 0.81 (0.062)	0.64 vs 0.61 (0.12)	0.68 vs 0.64 (0.024)	0.69 vs 0.64 (0.29)