

**SUPPLEMENTAL MATERIAL**

**Supplemental Table I: Baseline characteristics of participants (N=222)**

	<b>No PLME (n = 149)</b>	<b>PLME (n = 73)</b>	<b>Total (n = 222)</b>	<b>p-value</b>
<b>Demographics</b>				
Male gender, n	55 (37)	33 (45)	88 (40)	0.2607
Age, y	71 [56-82]	63 [54, 74]	68 [56, 81]	0.0494
Race, n				0.0234*
White	94 (63)	34 (47)	128 (58)	
Black	50 (34)	37 (51)	87 (39)	
Asian	1 (1)	0	1 (<1)	
Unknown	4 (3)	2 (3)	6 (3)	
<b>Past Medical History and Medications</b>				
Hypertension, n	116 (78)	49 (67)	165 (74)	0.0823
Past stroke, n	56 (38)	19 (26)	75 (34)	0.0785
AFIB, n	55 (37)	26 (36)	81 (37)	0.803
DM, n	46 (31)	30 (41)	76 (34)	0.1243
CHF, n	36 (2416)	20 (27)	56 (26)	0.661
CKD, n	17 (11)	6 (8)	23 (10)	0.475
Antiplatelets, n	64 (43)	26 (36)	90 (41)	0.3146
Anticoagulants, n	22 (15)	10 (14)	32 (14)	0.7471
<b>Presentation characteristics</b>				
Time to presentation, h	3.88 [1.5, 10.1]	4.32 [1.4, 8.3]	4 [1.42, 9.13]	0.4964
SBP, mm Hg	150 [136, 169]	160 [13.8, 180.5]	153 [136, 174]	0.6786
DBP, mm Hg	80 [71, 101.8]	89 [74, 102.3]	83. [72, 102]	0.5649
Temperature, °C	36.7 [36.5, 36.9]	36.6 [36.3, 36.8]	36.7 [36.4,	0.2791

			36.9]	
Creatinine, mg/dL	1.02 [0.84, 1.25]	1.04 [0.81,1.26]	1.03 [0.8-1.3]	0.963
Glucose, mg/dL	130 [110, 160]	143 [117, 185]	134 [111, 173]	0.008
WBC, cells/mcL	9.2 [7.4, 11.4]	10.2 [8, 13.1]	9.5 [7.6, 12.2]	0.0079
INR	1.07 [1, 1.2]	1.1 [1.0, 1.2]	1.1 [1, 1.2]	0.7829
<b>Stroke Characteristics and Therapies</b>				
NIHSS on arrival	17 [13, 22]	18 [16, 23]	18 [14, 22]	0.321
Max NIHSS within 24 hours	21 [17, 26]	23 [18, 28]	22 [18, 26]	0.0371
No acute intervention, n	74 (50)	43 (59)	117 (52)	0.1802
tPA , n	64 (43)	26 (36)	90 (41)	0.3146
Thrombectomy, n	24 (16)	8 (11)	32 (14)	0.3166
DNR within 24 hours, n	12 (8)	6 (8)	18 (8)	0.9548
<b>Imaging Characteristics</b>				
ASPECTS	8 [6, 9]	7 [4, 9]	8 [5, 9]	0.0548
Left Hemispheric Stroke, n	76 (51)	31 (42)	107 (48)	0.2146
MLS (mean)	0.5 (0.23)	2.88 (4.05)	1.29 (2.86)	<0.001
ACA involvement, n	8 (5)	16 (22)	24 (11)	0.0005
PCA involvement, n	3 (2)	7 (10)	10 (5)	0.0195
Hyperdense MCA, n	72 (48)	41 (56)	113 (51)	0.2939
Basal cistern effacement, n	2 (1)	14 (19)	16 (7)	0.0002
Hemorrhage, n	6 (4)	12 (16)	18 (8)	0.003
<b>Outcomes</b>				
PLME, n	NA	73 (100)	73 (33)	NA

Death, n	28 (19)	50 (68)	78 (35)	NA
Death due to cerebral edema, n	0 (0)	46 (63)	46 (21)	NA
Osmotics within 24 hours, n	9 (6)	27 (37)	36 (16)	<0.0001
Osmotics in hospitalization, n	32 (21)	62 (85)	94 (42)	<0.0001
DHC, n	0 (0)	27 (37)	27 (12)	NA
Time to DHC (hrs)	NA	48.23 [28.67, 65.51]	48.23 [28.67, 65.51]	NA

Data presented as number (%) or median [IQR] unless indicated otherwise. AFIB= previous or admission diagnosis of atrial fibrillation; DM= Diabetes Mellitus; CHF= Congestive Heart Failure; CKD= Chronic Kidney Disease; SBP= Systolic Blood Pressure; DBP= Diastolic Blood Pressure; INR= International Normalized Ratio; DNR= Do Not Resuscitate; ASPECTS= Alberta Stroke Program Early CT Score. ACA involvement= Anterior Cerebral Artery; PCA involvement= Posterior Cerebral Artery; MCA= Middle Cerebral Artery. \*P-value was calculated for Black race versus other races. Osmotics within 24 hours indicates that mannitol or hypertonic saline were administered within 24 hours of last known normal.

### Supplemental Table II: Multivariate Model for Potentially Lethal Malignant Edema

Variable	Beta	Standard Error	Odds Ratio Estimates	95% Wald Confidence Limits		p value
Intercept	-2.1679	0.4547	NA	NA	NA	NA
Glucose (10 mg/dL)	0.0545	0.0227	1.056	1.104	1.010	0.0161
Midline shift (mm)	0.2614	0.0744	1.299	1.112	1.503	0.0004
Basilar Cistern Effacement	1.6626	0.8792	5.273	0.941	29.542	0.0586
Previous stroke	-0.7034	0.3649	0.495	0.242	1.012	0.0539
No acute intervention	0.6626	0.3342	1.940	1.007	3.735	0.0475

Glucose is reported by increments of 10 units. Previous stroke is identified by history. No acute intervention indicates the absence of tissue-Plasminogen Activator or thrombectomy.

**Supplemental Table III: EDEMA Score Performance Measures**

<b>EDEMA Score</b>	<b>Case Frequency</b>	<b>Probability of PLME</b>	<b>Sensitivity</b>	<b>Specificity</b>	<b>PPV</b>
0	11	16.48%	1.000	0.000	33%
1	71	24.97%	0.986	0.067	34%
2	42	35.96%	0.849	0.477	44%
3	42	48.64%	0.726	0.698	54%
4	25	61.50%	0.452	0.846	59%
5	10	72.93%	0.342	0.960	81%
6	5	81.96%	0.247	0.980	86%
7	3	88.46%	0.205	0.993	93%
8	2	92.82%	0.164	0.993	92%
9	2	95.62%	0.137	0.993	91%
10	2	97.35%	0.110	0.993	89%
11	4	98.41%	0.082	0.993	85%
12	3	99.05%	0.027	0.993	65%

Performance measurements include sensitivity, specificity and positive predictive value (PPV).

**Supplemental Table IV: Radiographic Markers**

<b>Radiographic Marker</b>	<b>Mean Time (hrs)</b>
Midline Shift	
>0-3mm	17
>3-6mm	15.7
>6-9mm	15.5
Basilar Cistern Effacement	14.6