

Explicit Consideration of Baseline Factors to Assess Recombinant Tissue-Type Plasminogen Activator Response With Respect to Race and Sex

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Stroke. 2013;44:1525-1531; originally published online May 14, 2013;

doi: 10.1161/STROKEAHA.113.001116

Stroke is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231

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Print ISSN: 0039-2499. Online ISSN: 1524-4628

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://stroke.ahajournals.org/content/44/6/1525>

Data Supplement (unedited) at:

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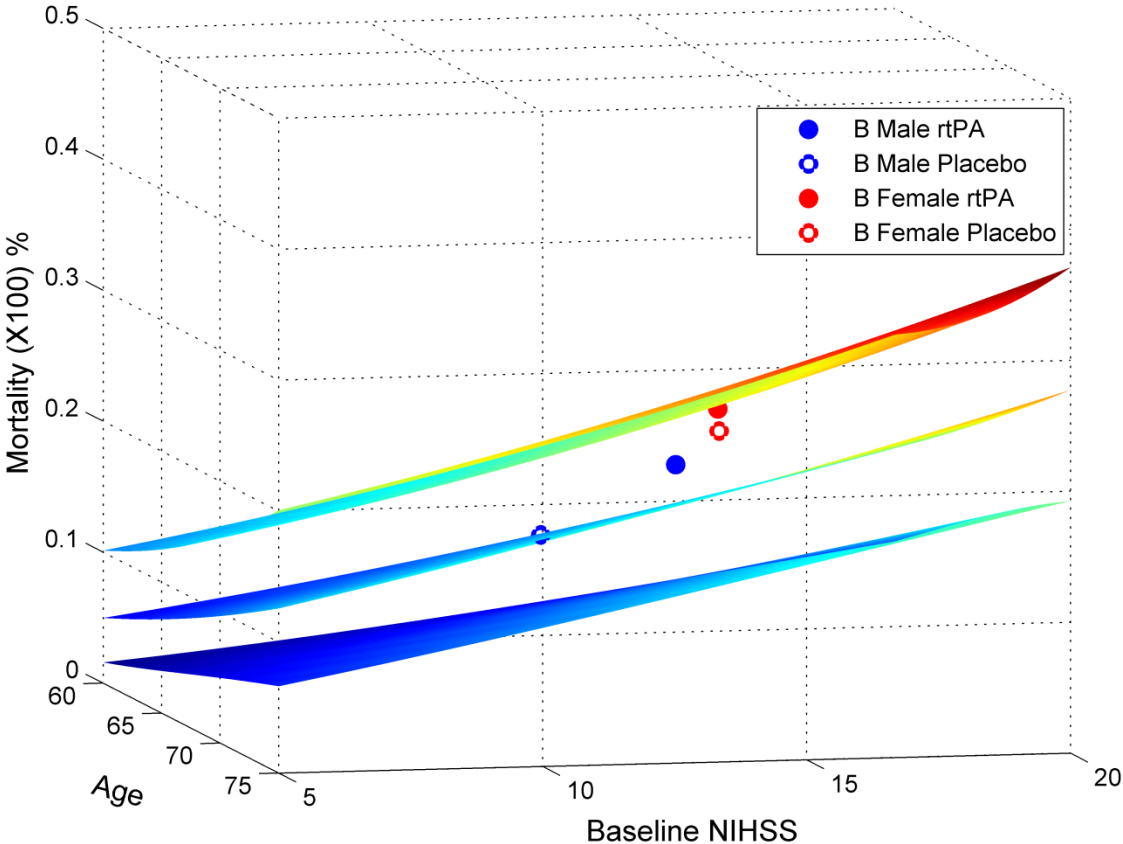
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Supplemental Material



Supplement Figure I. Mortality at 90 days for NINDS black subgroups relative to the pPREDICTS© natural history model of acute ischemic stroke

The pPREDICTS© mortality model shows percent mortality at 90 days according to baseline NIHSS and age. The NINDS black (B) subgroup results are superimposed on the model at the corresponding baseline NIHSS and age. Black groups tended to have a higher mortality than predicted by natural history, even in the rtPA treated groups. The subgroup of black females treated with rtPA approached the $p=0.05$ upper boundary for significantly higher mortality.

Supplement Table IA: Post-match results by gender. All treated with rtPA

	Males	Females	p
Median NIHSS	15.0	14.0	0.997
Mean NIHSS	14.1±7.13	14.0±7.07	0.985
Age	68.9±10.6	69.4±11.2	0.692
Glucose	140±51.26	140±49.00	0.990
SV/LV/CE n	20/36/60	20/36/60	
SV/LV/CE %	17/31/52	17/31/52	
mRS 0-1	0.431	0.440	1.000
mRS 0-2	0.517	0.500	0.883
BI 95-100	0.543	0.509	0.265
GOS 0-1	0.474	0.466	1.000
NIHSS 0-1	0.379	0.319	0.371
Mortality	0.172	0.138	0.540
Symp Hem	0.060	0.052	1.000
Asym Hem	0.043	0.052	1.000

No race matching. Ninety-day outcomes of post matched pairs compared by McNemar's test.

Supplement Table IB. Post match results by gender showing treatment effect of rtPA

	Males rtPA	Males Plac	p	Females rtPA	Females Plac	p
Median NIHSS	15.0	13.5	0.758	16.0	16.0	0.608
Mean NIHSS	14.1±6.65	13.9±6.49	0.776	16.0±6.86	16.5±6.57	0.580
Age	67.5±11.2	66.2±10.2	0.258	69.3±11.3	67.0±13.4	0.160
Glucose	145±71.01	148±71.65	0.775	149±65.01	146±65.30	0.776
SV/LV/CE n	20/72/64	20/72/64		9/38/62	9/38/62	
SV/LV/CE %	13/46/41	13/46/41		8/35/57	8/35/57	
mRS 0-1	0.423	0.282	0.004	0.358	0.294	0.296
mRS 0-2	0.513	0.404	0.037	0.431	0.367	0.337
BI 95-100	0.519	0.410	0.200	0.431	0.330	0.078
GOS 0-1	0.462	0.333	0.016	0.385	0.303	0.176
NIHSS 0-1	0.365	0.205	0.001	0.266	0.220	0.499
Mortality	0.173	0.218	0.349	0.183	0.202	0.850
Symp Hem	0.051	0.000	0.013	0.083	0.009	0.027
Asym Hem	0.038	0.013	0.289	0.055	0.037	0.724

Post match results. Left Half: Male rtPA vs placebo. Right Half: Female rtPA vs placebo. No race matching. Ninety-day outcomes of post matched pairs compared by McNemar's test.

Supplement Table IIA. Post match results by race

	White rtPA	Black rtPA	p
Median NIHSS	15.0	15.0	0.899
Mean NIHSS	14.8±6.81	15.0±7.22	0.830
Age	67.5±10.1	66.4±10.6	0.528
Glucose	134±54.95	136±59.39	0.775
SV/LV/CE n	12/26/33	12/26/33	
SV/LV/CE %	17/37/46	17/37/46	
mRS 0-1	0.465	0.366	0.190
mRS 0-2	0.549	0.408	0.078
BI 95-100	0.563	0.437	0.169
GOS 0-1	0.479	0.394	0.286
NIHSS 0-1	0.324	0.282	0.663
Mortality	0.183	0.197	1.000
Symp Hem	0.042	0.028	1.000
Asym Hem	0.014	0.028	1.000

Post Match results: White Subjects treated with rtPA vs Black subjects treated with rtPA. No gender matching. Ninety-day outcomes of post matched pairs compared by McNemar's test.

Supplement Table IIB. Post-match results by race

	W rtPA	W Plac	p	B rtPA	B Plac	p
Median NIHSS	14.0	15.0	0.643	15.0	14.0	0.670
Mean NIHSS	14.4±6.81	14.8±6.82	0.649	14.8±7.28	15.3±6.46	0.676
Age	70.5±10.3	69.0±10.4	0.190	65.2±11.6	63.7±12.7	0.461
Glucose	140±54.07	142±54.88	0.761	142±65.77	142±65.68	0.953
SV/LV/CE n	15/70/78	15/70/78		13/27/34	13/27/34	
SV/LV/CE %	9/43/48	9/43/48		18/36/46	18/36/46	
mRS 0-1	0.448	0.276	0.000	0.365	0.270	0.248
mRS 0-2	0.552	0.374	0.000	0.419	0.378	0.700
BI 95-100	0.552	0.368	0.002	0.446	0.365	0.628
GOS 0-1	0.485	0.319	0.001	0.405	0.311	0.281
NIHSS 0-1	0.368	0.184	0.000	0.270	0.216	0.556
Mortality	0.153	0.215	0.165	0.189	0.162	0.814
Symp Hem	0.055	0.000	0.008	0.027	0.014	1.000
Asym Hem	0.037	0.025	0.724	0.027	0.014	1.000

Post Match results: Left half: White rtPA vs placebo. Right Half: Black rtPA vs placebo. No gender matching. Ninety-day outcomes of post matched pairs compared by McNemar's test.

Supplement Table III: Comparison of baseline variables between Matched White and Black Females. All treated with rtPA

Baseline Variables	White rtPA	Black rtPA	p
Weight	79.8±19.62	67.9±14.35	0.009
Time to treatment	117.7±37.94	132.5±41.06	0.151
Systolic BP	155.2±20.17	156.4±21.74	0.825
Diastolic BP	84.5±13.53	89.0±9.61	0.143
Hematocrit	40.2±4.20	39.7±4.30	0.644
BUN	22.6±12.31	17.0±7.93	0.041
Creatinine	1.2±0.71	1.1±0.39	0.351
Fibrinogen	359.4±83.4	350.4±104.71	0.723
History of Diabetes	0.10	0.47	<i>0.002</i>
History of Hypertension	0.67	0.77	<i>0.549</i>
History of Aspirin use	0.43	0.20	<i>0.118</i>
History of Athero	0.40	0.53	<i>0.503</i>
History of Smoking	0.33	0.40	<i>0.791</i>
History of Hyperlipid.	0.53	0.40	<i>0.424</i>
History of Cardiac Dis	0.57	0.43	<i>0.424</i>
History of MI	0.13	0.10	<i>1.000</i>
History of CHF	0.07	0.23	<i>0.125</i>

Supplement Table IV: Comparison of baseline variables and efficacy and safety outcomes for females pre-match, post-match and eliminated subjects

	Pre-Match			Post-Match			Eliminated		
	White rtPA	Black rtPA	p	White rtPA	Black rtPA	p	White rtPA Eliminated	Black rtPA Outliers	p
Median NIHSS	11.0	12.0	0.314	12.5	13.0	0.922	9.0	6.5	0.772
Mean NIHSS	11.9±7.79	12.7±7.21	0.375	12.8±7.04	12.9±7.07	0.902	10.9±8.56	10.0±9.07	0.786
Age	70.0±14.7	67.1±17.3	0.104	68.5±15.5	67.6±17.2	0.690	72.0±13.4	60.2±18.7	0.023
Glucose	139±59.77	154±94.08	0.077	138±62.45	138±62.37	0.951	140±56.55	371±176.03	0.000
Number	201	120		112	112		89	8	
mRS 0-1	0.284	0.208	0.147	0.304	0.205	0.054	0.258	0.250	1.000
mRS 0-2	0.358	0.333	0.717	0.357	0.339	0.864	0.360	0.250	0.709
Mort	0.114	0.075	0.336	0.071	0.071	0.803	0.169	0.125	1.000
S Hem	0.080	0.033	0.150	0.045	0.036	1.000	0.124	0.000	0.591

Supplement Table V: Comparison of baseline variables and efficacy and safety outcomes for males pre-match, post-match and eliminated subjects

	Pre-Match			Post-Match			Eliminated		
	White rtPA	Black rtPA	p	White rtPA	Black rtPA	p	White rtPA Eliminated	Black rtPA Outliers	p
Median NIHSS	10.0	10.0	0.795	11.0	10.5	0.967	10.0	6.0	0.731
Mean NIHSS	11.3±7.06	11.6±7.48	0.644	11.6±7.18	11.6±7.21	0.993	10.9±6.93	11.7±11.39	0.755
Age	64.8±14.6	62.3±13.9	0.102	62.7±13.4	62.6±13.9	0.946	67.3±15.6	58.0±13.7	0.085
Glucose	138±61.83	134±64.67	0.501	125±48.58	126±48.15	0.841	155±71.91	249±142.35	0.001
Number	247	145		136	136		111	9	
mRS 0-1	0.348	0.283	0.219	0.331	0.287	0.417	0.369	0.222	0.487
mRS 0-2	0.421	0.400	0.750	0.434	0.404	0.658	0.405	0.333	0.740
Mort	0.097	0.062	0.262	0.088	0.066	0.628	0.108	0.000	0.596
S Hem	0.024	0.062	0.098	0.015	0.059	0.114	0.036	0.111	0.327